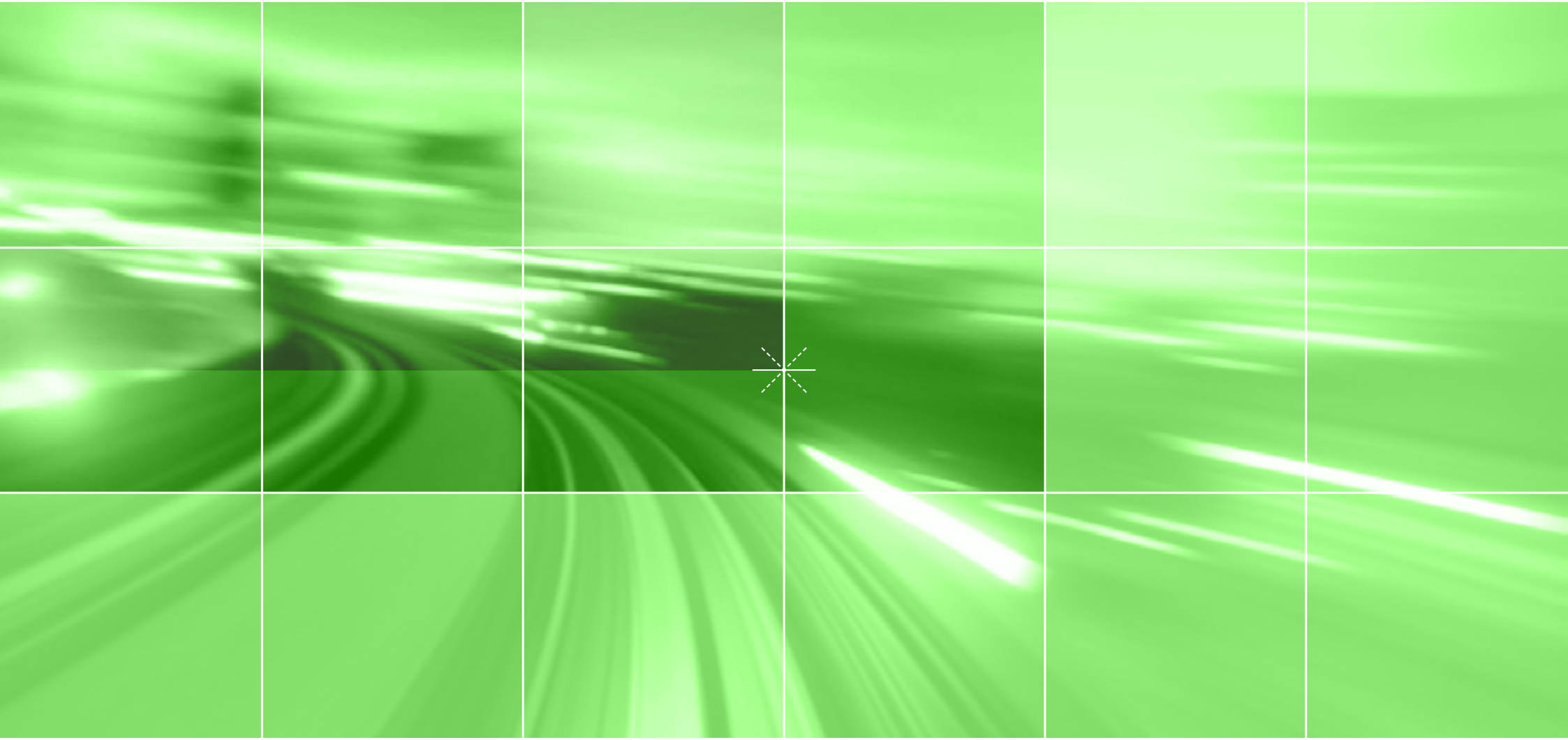
NSW GOVERNMENT | Transport for NSW

March 2013

Submissions Report
Stage 2 – Stations, Rail Infrastructure and Systems

Incorporating Preferred Infrastructure Report



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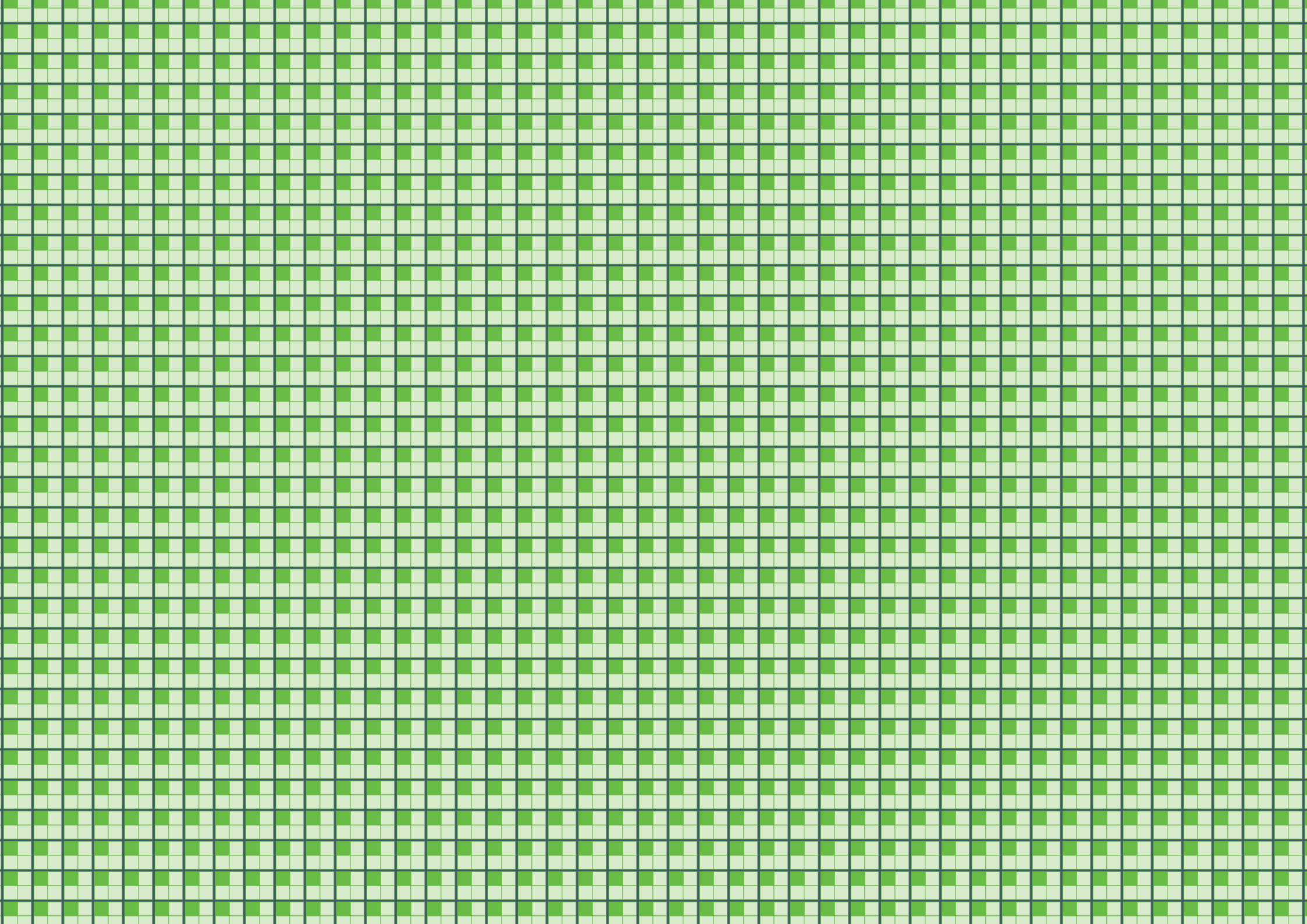

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northwestraillink

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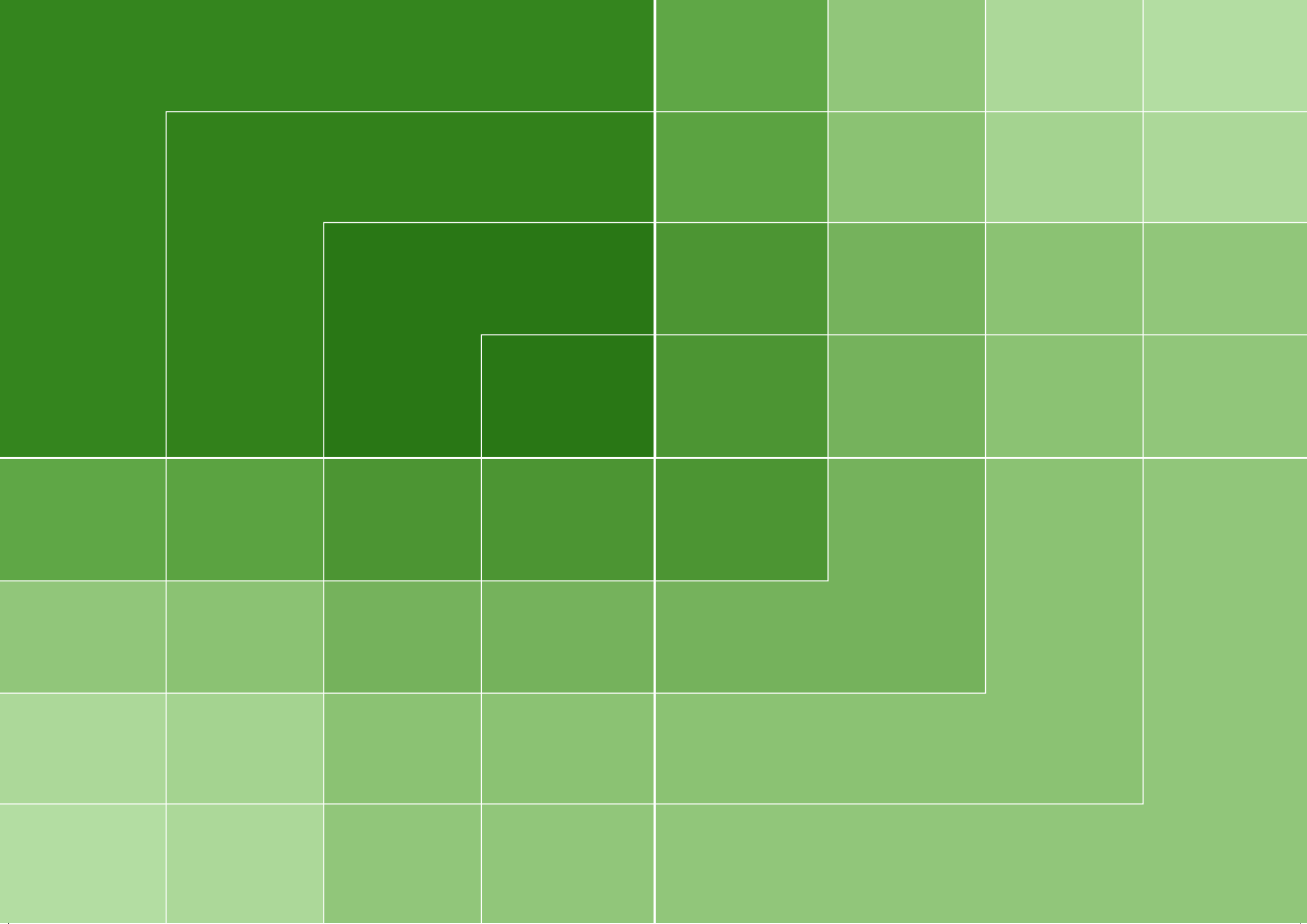

1 Introduction

1.1 The Project

The North West Rail Link (NWRL) Project has been identified by the NSW Government as a key priority railway transport infrastructure project. It is proposed to provide eight new stations and associated services over a 23 kilometre addition to the rail network from Epping to Rouse Hill in north west Sydney. Stations are planned at Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road. A stabling facility is proposed beyond the Cudgegong Road Station site in an area known as Tallawong Road. Bus, pedestrian and cycling access facilities are proposed for all stations, with a total of approximately 4,000 park and ride spaces to be provided at Cherrybrook, Showground, Bella Vista, Kellyville and Cudgegong Road Stations.

EIS 2 Stations, Rail Infrastructure and Systems described and assessed the operation of the railway as well as the construction of those elements not addressed by EIS 1 Major Civil Construction Works, including:

- Any additional land take for station precinct works (such as road works, pedestrian / cycle facilities and landscaping).
- Operation and construction of:
  - Stations.
  - Station precincts.
  - Services facilities.
  - Stabling facility at Tallawong Road.
  - Rail infrastructure and systems.

EIS 2 has been prepared to address:

- The environmental assessment requirements specified in the Concept Plan Approval / Staged Infrastructure Approval and supplementary environmental assessment requirements issued by the Director-General of the Department of Planning and Infrastructure (DP&I) on 31 August 2012.
- The Statement of Commitments included in North West Rail Link Supplementary Submissions Report (Transport Infrastructure Development Corporation, March 2008).
- The outcomes of on-going consultation with key stakeholders.

1.2 Purpose of this Report

This report has been prepared in accordance with Section 115Z – Environmental assessment and public consultation of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Sub section (6) specifies the following:

(6) The Director-General may require the proponent to submit to the Director-General:

a. a response to the issues raised in those submissions, and

b. a preferred infrastructure report that outlines any proposed changes to the State significant infrastructure to minimise its environmental impact or to deal with any other issue raised during the assessment of the application concerned.

This report presents the following information:

- A number of clarifications to EIS 2 in relation to Cherrybrook Station bus services and the Old Windsor Road / Balmoral Road / Miami Street intersection (Chapter 2).
- Details of the community involvement activities undertaken for the project (Chapter 3).
- A summary of the submissions received during the public exhibition period (Chapter 4).
- Responses to the submissions received during the public exhibition period (Chapters 5, 6 and 7).
- Design development of the NWRL, which has been ongoing throughout the EIS 2 public exhibition period, and in response to submissions. This has resulted in a change to the project at Bella Vista Station as described and assessed in a preferred infrastructure report (Chapter 8).
- Revised mitigation measure tables, resulting from submissions received and the preferred infrastructure report (Chapter 9).

1.3 Next Steps

The DP&I will, on behalf of the Minister for Planning and Infrastructure, review the environmental assessment and this submissions report. Once the DP&I has completed its assessment, a draft assessment report will be prepared for the Director-General of DP&I, which may include recommended conditions of approval.

The assessment report will then be provided to the Minister for Planning and Infrastructure for consideration. The Minister for Planning and Infrastructure may then approve the project (with any conditions considered appropriate) or refuse to give approval.

The Minister for Planning and Infrastructure's determination and the Director-General's report will be published on DP&I's website immediately following determination along with a copy of the submissions report.


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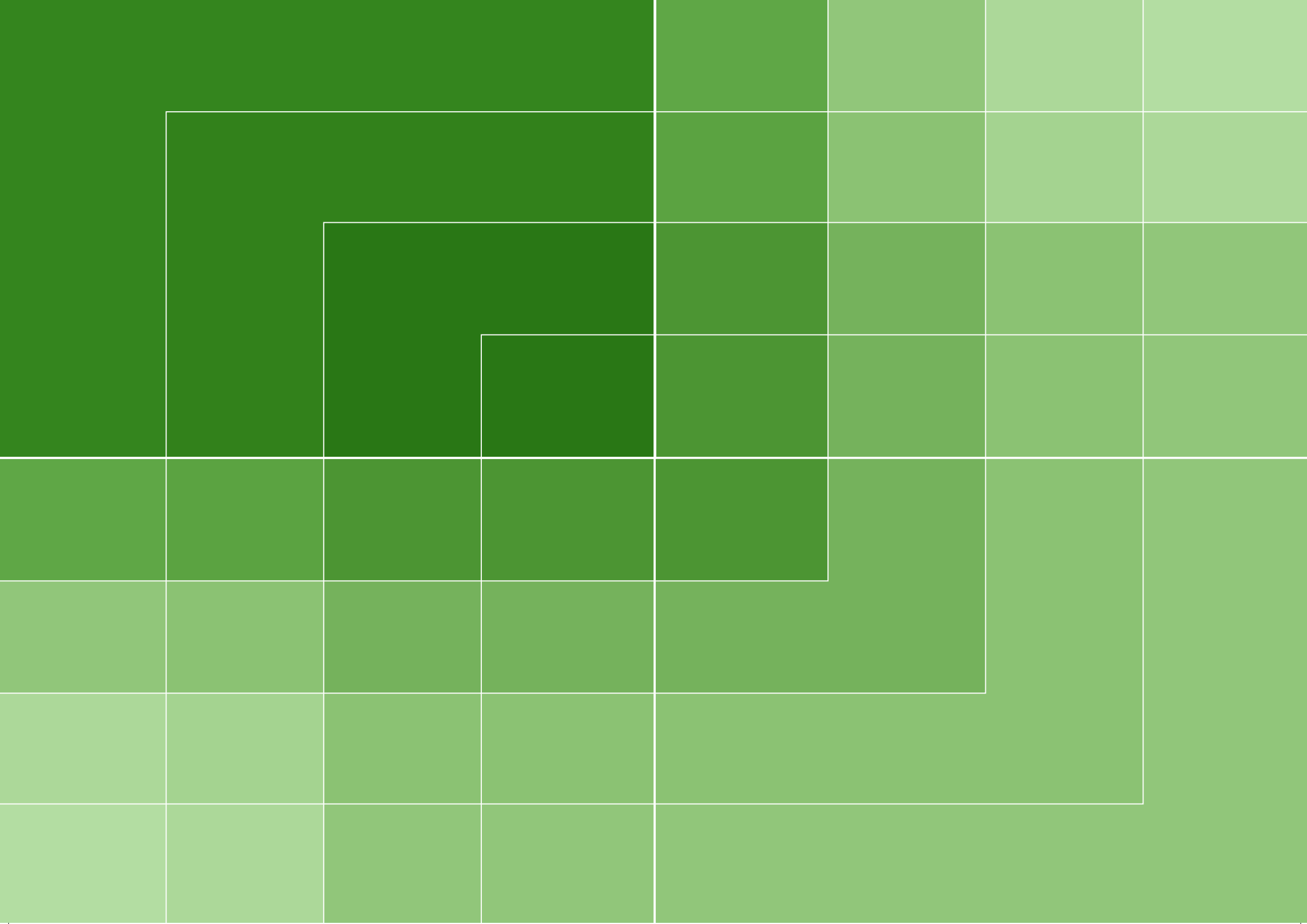


2 Clarifications

2.1 Old Windsor Road / Balmoral Road / Miami Street intersection arrangement

This Section describes the Balmoral Road rearrangement at the Old Windsor Road / Balmoral Road / Miami Street intersection located to the north of the proposed Bella Vista Station.

2.1.1 Old Windsor Road / Balmoral Road and Old Windsor Road / Miami Street intersections

The Old Windsor Road / Balmoral Road intersection currently allows limited movements, with left-in / left-out access available to and from Balmoral Road. The Old Windsor Road / Miami Street intersection is a signalised intersection which currently allows left-in / left-out access to and from Miami Street and right-in / right-out access to and from Old Windsor Road.

The two intersections limit road access between Glenwood and Bella Vista, and also between Old Windsor Road and the Balmoral Road Release Area. With this intersection configuration, traffic access to the proposed Bella Vista Station from Glenwood would be via a right turn movement from Miami Street on to Old Windsor Road and then left into Celebration Drive. Similarly, any traffic wishing to return towards Glenwood or the north via Old Windsor Road would need to travel south to Celebration Drive and then turn right on to Old Windsor Road to travel north again. The only other road access between Glenwood and Bella Vista Station would be via Meurants Lane, Norwest Boulevard and Lexington Drive. These two routes to the proposed Bella Vista Station pass through intersections and roads which are already congested during peak periods.

2.1.2 Proposed intersection arrangement

In response to ongoing design refinements and feedback received from Deliberative Research Forums, and in consultation with Roads and Maritime Services (RMS), improvements to the wider road network have been identified to better manage traffic and improve Bella Vista Station access over time.

The proposed arrangement at the Old Windsor Road / Balmoral Road / Miami Street intersection consists of realigning Balmoral Road approximately 30 metres to the north to provide a direct connection to Miami Street. The proposed intersection arrangement is illustrated in **Figure 2.2**.

The existing Balmoral T-Way stop would be relocated approximately 30 metres to the north. The location of the proposed Balmoral Road overbridge across the rail cutting would be moved slightly further north and its width would be increased to provide for two traffic lanes in each direction and pedestrian footpaths on each side of Balmoral Road.

Vertical clearance under the existing 132kV power lines and the need for transmission line infrastructure relocation or pole protection would be assessed during the detailed design stage.

The proposed intersection arrangement would be signalised and would allow for right turn movements on all approaches. The intersection would also have at-grade pedestrian crossings.

The proposed intersection arrangement would bring traffic and accessibility benefits including:

- The extension of the Bella Vista Station catchment on the western (Blacktown Local Government Area) side of Old Windsor Road by the provision of a new and more direct access route between Glenwood residential area and the proposed Bella Vista Station and precinct.
- The improvement of east-west connectivity between the Glenwood residential area and the Balmoral Road Release Area.
- Opportunities for more direct bus services from Glenwood to Bella Vista Station and the Norwest employment centre.
- An at-grade pedestrian access across Old Windsor Road and the T-Way which would complement the proposed pedestrian bridge over Old Windsor Road.

Figure 2.1 Bella Vista Station access from Glenwood – existing and proposed

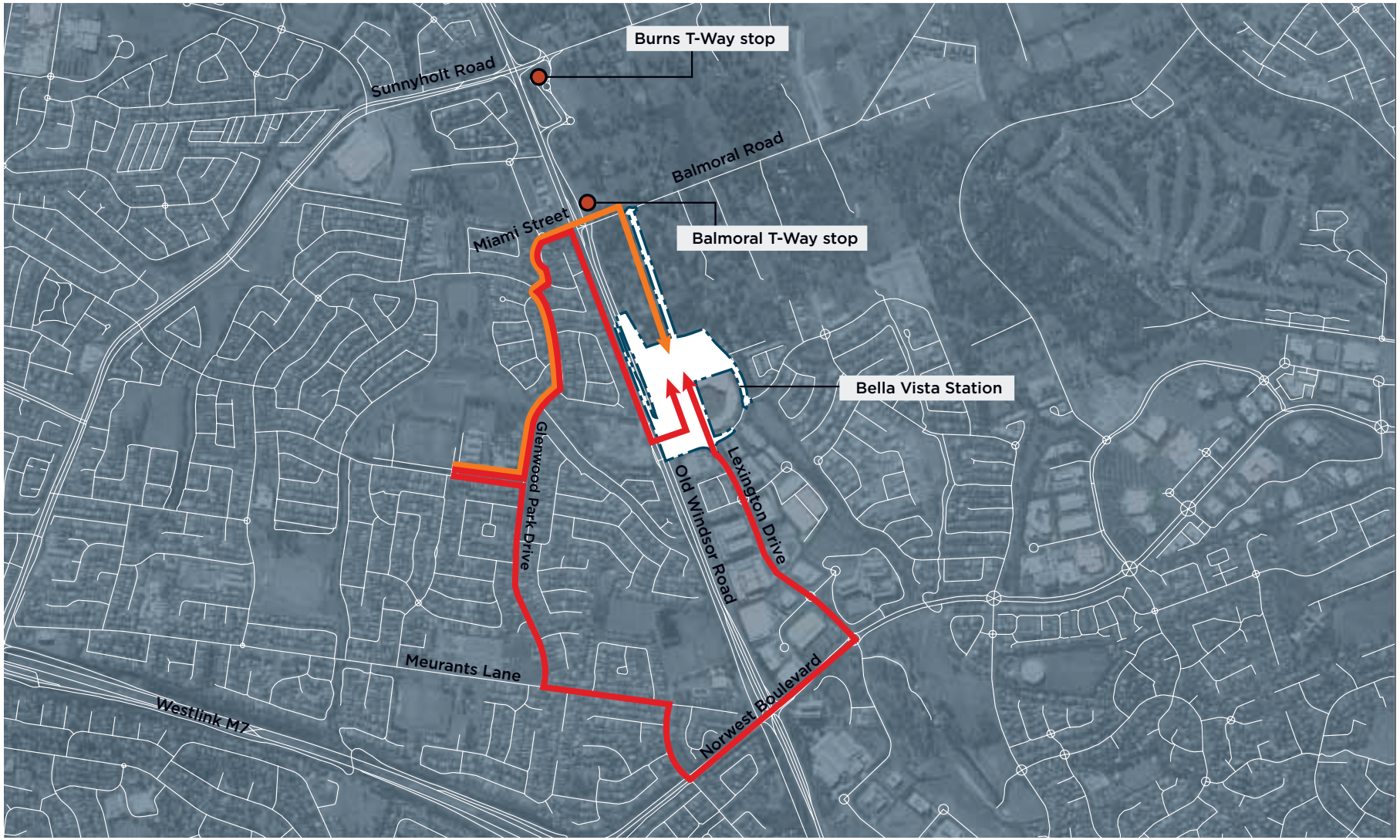
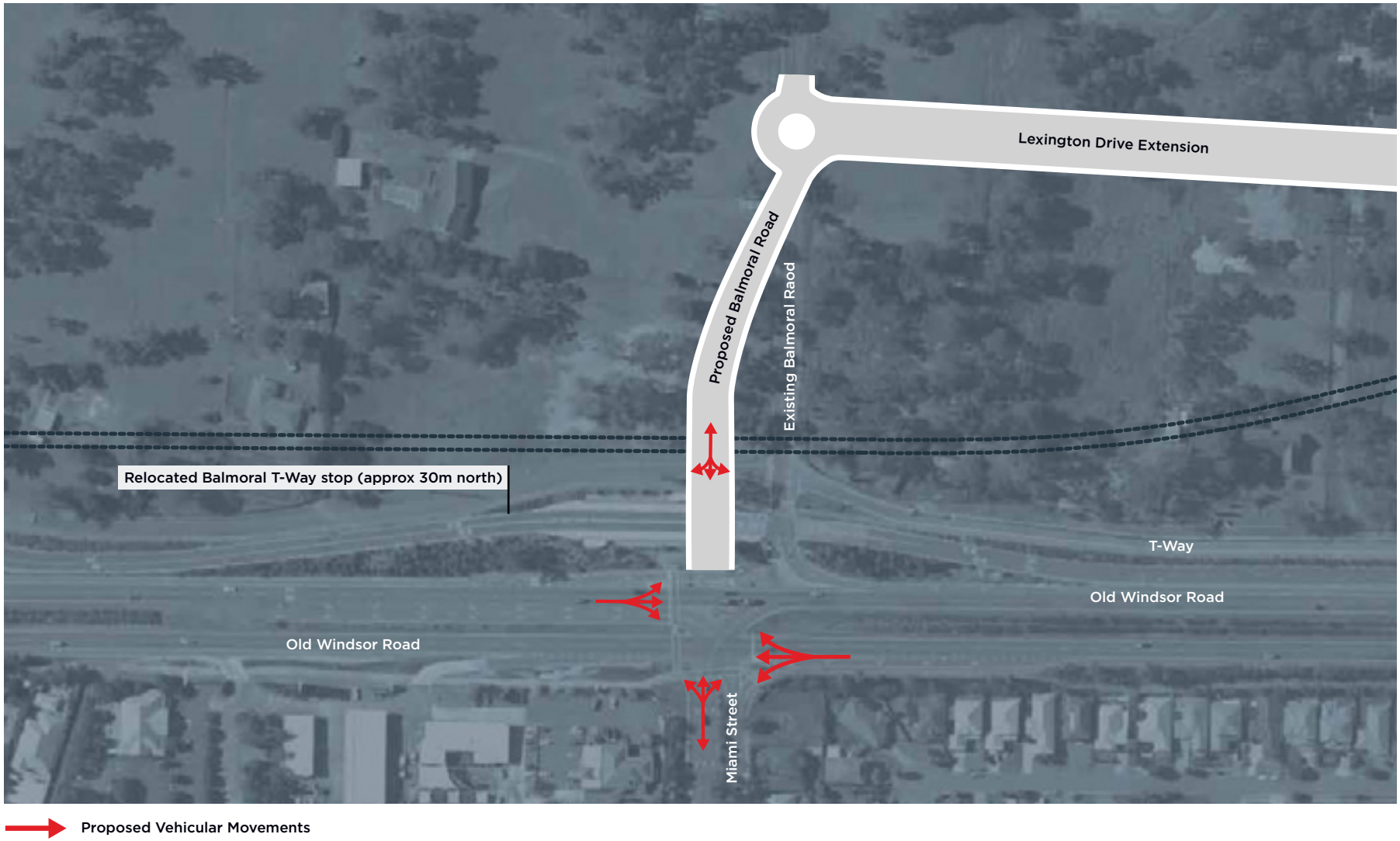


Figure 2.2 Bella Vista Station access from Glenwood with the proposed intersection arrangement



2.2 Cherrybrook Station bus routes

A number of submissions from individuals, community groups and Hornsby Shire Council, have raised concerns regarding the proposed future bus access arrangements to and from Cherrybrook Station presented in EIS 2, in particular, the use of Robert Road.

In its submission, Hornsby Shire Council expressed a preference for bus access to Cherrybrook Station via County Drive and Castle Hill Road.

Prior to exhibition of EIS 2, investigations, data analysis and consultation with Transport for NSW (TfNSW) (Planning & Programs Division), RMS and Hornsby Shire Council was undertaken to determine the most efficient bus routes to access Cherrybrook Station.

This process found that the diversion of existing bus services from John Road to Cherrybrook Station via Robert Road, the new access road and Franklin Road was the most efficient solution.

However, given the concerns raised in submissions received to the exhibited EIS 2, TfNSW has agreed to undertake a more detailed assessment of bus access options to and from Cherrybrook Station.

- The assessment would focus on criteria, such as:
- Safety.
- Transport access hierarchy.
- Customer focus – bus catchment.
- Customer focus – interchange.
- Customer focus – bus travel.
- Amenity – loss of parking.
- Amenity – traffic noise.
- Sustainability.
- Relative costs.

It is expected that detailed assessment would occur over the remainder of 2013, with a view to identifying a preferred solution for bus access to Cherrybrook Station. The outcomes would be communicated to the community and relevant stakeholders by the end of 2013.

These investigation would then feed into the broader network planning for Bus Region 4 (as identified in the NSW Long Term Transport Master Plan), which includes the area around Cherrybrook Station). Ultimately, bus access to Cherrybrook Station would be determined by TfNSW following the review of Region 4 bus services, due to occur as part of the restructure of Sydney's bus system. This review would determine the required service changes to the bus network within Region 4 in response to land use change, transport infrastructure upgrades, population increase and transport policy at the time of the review. The timing for the redesign of the bus network across Sydney has yet to be determined, but is expected to be undertaken and implemented prior to the opening of the NWRL.

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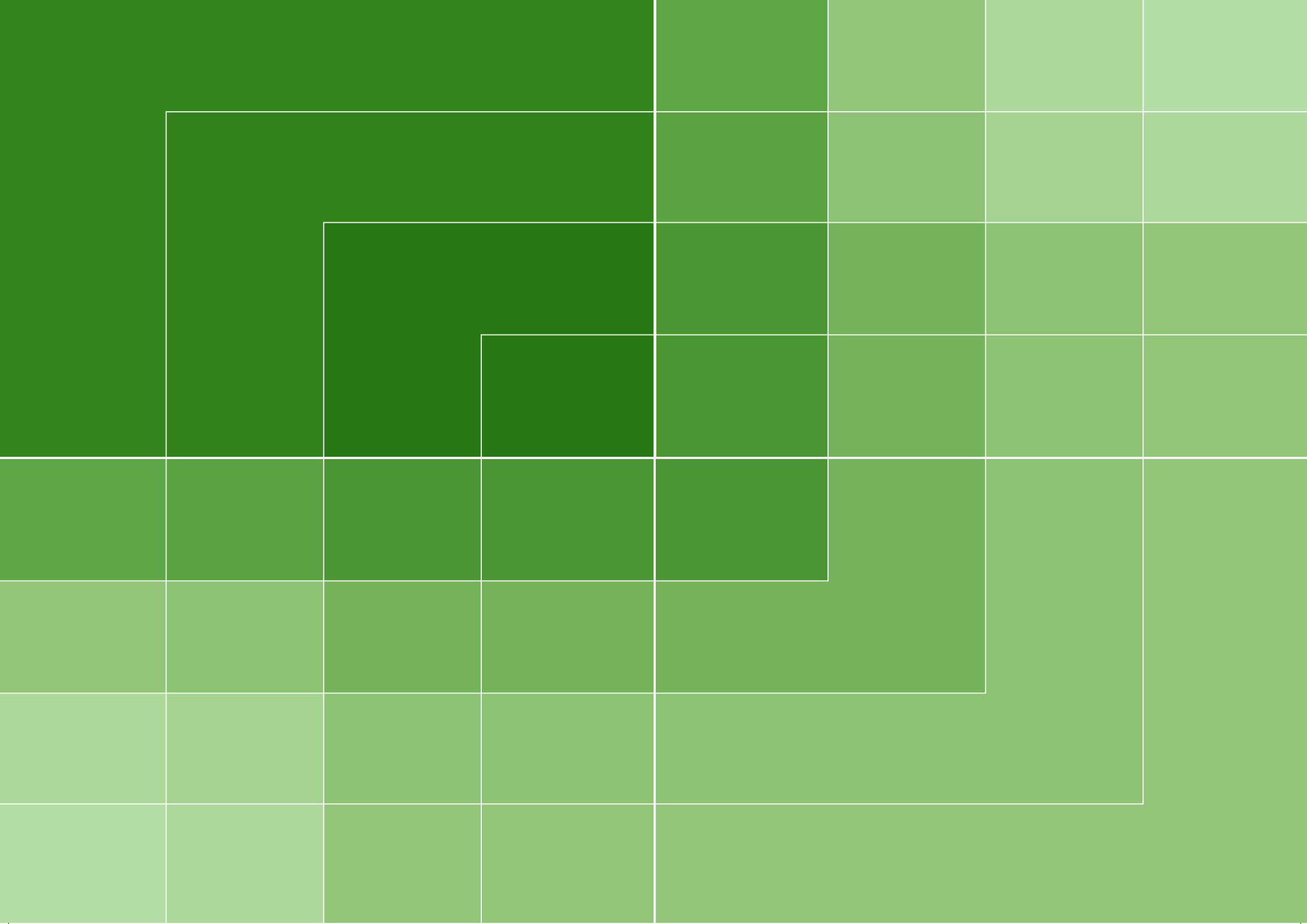

3 Community Involvement

3.1 Consultation overview

EIS 2 was publicly exhibited for a period of 34 days from Wednesday 31 October to Monday 3 December 2012. During this time, a range of consultation activities were held to engage stakeholders and the community on EIS 2, encourage participation in exhibition activities and provide guidance on the submissions process. Submissions on the project were received by the DP&I throughout the exhibition period. Responses to issues raised in submissions received during the public exhibition are outlined in Chapters 5, 6 and 7 of this report.

3.2 Pre EIS 2 Exhibition Consultation Activities

Consultation on the NWRL has been ongoing since 2002. Since then, consultation milestones have included:

- Publication of the initial Overview Report (2002).
- Consultation for the Environmental Assessment and Concept Plan (2005-2007).
- Publication of the Preferred Project Report (2007).
- Supplementary Submissions Report (2008).

Since the NSW Government announced its intention to proceed with the NWRL in March 2011, the following activities have been undertaken.

- Opening of the NWRL Community Information Centre (June 2011).
- Consultation about the Project Overview Report (July 2011).
- Place Managers appointed to liaise with residents, businesses and community organisations (October 2011).
- Establishment of a website with consultation forums.
- Dedicated 1800 number and email address.
- Regular leaflet drops along the alignment.
- Establishment by TfNSW of inter-agency reference groups to facilitate engagement across State government departments and agencies during the preparation of the Environmental Impact Statement Stage 1 – Major Civil Construction Works (EIS 1).
- Exhibition of EIS 1 (April 2012).
- Submissions Report 1 (July 2012 - in response to EIS 1 public exhibition).

EIS 1 was publicly exhibited from 4 April until 21 May 2012 and submissions were called for from the public. In EIS 1, TfNSW sought approval from the DP&I for the major civil construction works associated with the Project. Those works included:

- Excavation for two 15 km rail tunnels between Epping and Bella Vista.
- Excavation for underground railway stations.
- Above ground construction, including the 4 km skytrain between Bella Vista and Rouse Hill.

Prior to and during the exhibition of EIS 1, TfNSW consulted with residents, businesses and community organisations, as well as State government departments and agencies. Following the closure of the exhibition period and the receipt of 359 submissions, a report (Submissions Report 1) was presented to the DP&I for consideration, and published on the project website. EIS 1

and Submissions Report 1 can be found on the project website: www.northwestrail.com.au. A detailed summary of the consultation that was undertaken for EIS 1 can be found in Submissions Report 1.

The NSW Minister for Planning and Infrastructure approved EIS 1 for the North West Rail Link on 25 September 2012, subject to 100 conditions.

Preparation of Environmental Impact Statement Stage 2 – Stations, Rail Infrastructure and Systems (EIS 2) commenced in May 2012. A number of stakeholder and community consultation meetings and forums were held during the preparation of the EIS. Through the inter-agency reference group and specific technical meetings, TfNSW liaised with State government departments and agencies about project impacts and how they should be managed (see Section 5.4 of EIS 2 for an overview of the meetings held, their focus and how the issues raised have been addressed in EIS 2).

Meetings with key community groups, stakeholders, residents and businesses were also held throughout the preparation of EIS 2. Briefings and topic specific workshops were held with the three local councils, relevant government agencies and working groups. Ongoing meetings have also been held with potentially affected local businesses.

3.3 EIS 2 Exhibition Consultation Activities

A number of consultation activities were undertaken when preparing for and during the EIS 2 public exhibition, to provide the community and stakeholders with the opportunity to view project information and invite feedback.

3.3.1 Exhibition venues

The full EIS 2 and accompanying documents were made available to view on the DP&I website: **www.majorprojects.planning.nsw.gov.au**, the project website **www.northwestrail.com.au** and at the following locations:

- Department of Planning and Infrastructure Information Centre
  23–33 Bridge Street, Sydney.
- North West Rail Link Community lnformation Centre
  299 Old Northern Road, Castle Hill opposite Castle Towers.
- Nature Conservation Council
  Level 2, 5 Wilson Street, Newtown.
- Hornsby Shire Council
  296 Pacific Highway, Hornsby.
- Hornsby Shire Libraries:
  - Pennant Hills, corner Ramsay and Yarrara Roads, Pennant Hills.
  - Epping, Chambers Court, Epping.
  - Hornsby, 28–44 George Street, Hornsby.
- Hills Shire Council, 129 Showground Road, Castle Hill.
- Hills Shire Libraries:
  - Castle Hill, corner Castle and Pennant Streets, Castle Hill.
  - Vinegar Hill Memorial, 29 Main Street, Rouse Hill Town Centre.
  - Baulkham Hills, Railway Street, Baulkham Hills.
- Blacktown City Council
  62 Flushcombe Road, Blacktown.
- Blacktown City Council Libraries:
  - Blacktown, corner Flushcombe Road and Alpha Street, Blacktown.
  - Dennis Johnson Library, corner Stanhope Parkway and Sentry Drive, Stanhope Gardens.

3.3.2 EIS 2 Overview Report

A 100 page summary of EIS 2 was made available to provide an overview of the content presented in EIS 2. The document presented an overview of the EIS and the planning approval process, summarised proposed activities at each of the stations and services facilities, presented key issues and mitigation measures associated with the project, encouraged community participation, and detailed how to view the full copy of EIS 2.

3.3.3 Communication and publicity

Media

A media release posted on the project website on 30 October announced the commencement of the EIS 2 exhibition. The release from the Minister for Transport, The Hon. Gladys Berejiklian MP, provided an overview of the project and EIS 2, and encouraged the community to participate in the submissions process. The exhibition also received widespread television and radio coverage in local and State media.

Advertisements advising of the exhibition of EIS 2 were placed in the Sydney Morning Herald and the Daily Telegraph newspapers.

Website

The NWRL project website (www.northwestrail.com.au) was updated to coincide with the commencement of EIS 2 public exhibition. The website provided links to the full EIS 2 and EIS 2 overview report, and information was also made available regarding the community information sessions. Website visitors were offered guidance on how to make a submission to the DP&I. A link to the Department's website (**www.majorprojects.planning.nsw.gov.au**) was also provided.

All project communication material was posted on the website and hosted interactive forums were held in November 2012 (see below for more detail).

There were 23,265 unique visitors to the website during the exhibition period; the interactive journey component of the website was visited 3,787 times; and 27,009 documents were downloaded from **www.northwestrail.com.au**.

1800 Number, Project Email

Communication channels were available for the community and stakeholders to contact the project team and obtain information on the project. These included:

Project freecall number: 1800 019 989
Project email address: info@northwestrail.com.au

Throughout the EIS 2 exhibition period, 115 phone calls were received and responded to on the freecall project number and 122 emails were received and responded to. All phone calls and emails were assessed and logged prior to response or actioned as required.

Project updates were sent to community and stakeholders registered for email alerts.

NWRL Community Information Centre

The NWRL Community Information Centre (299 Old Northern Road, Castle Hill) opened in July 2011 and is staffed for five and a half days a week. During the EIS 2 public exhibition period, 171 stakeholders and community members visited the centre to obtain information about the project.

The centre opening hours are:

- Monday to Friday 10am to 6pm.
- Thursday 10am to 7pm.
- Saturday 10am to 2pm.

Project communication material

Several communication documents were distributed prior to and during the course of the exhibition period:

- Invitation to community information sessions.
- *'Have Your Say'* brochure.
- Place Manager brochures specific to each station location.
- *'Frequently Asked Questions About Tunnelling'* fact sheet.
- Information brochure handed out at shopping centres.
- Updated project information displayed at the Community Information Centre.
- In addition information posters and updated project information were displayed at Community Information Centre.

3.3.4 Community information sessions

The NWRL project team hosted five community information sessions where information in relation to EIS 2 was made available. The community was invited to attend these sessions where members of the project team were available to answer questions. Approximately 570 people attended the five sessions.

Community information sessions were held at the following dates, times and venues:

Table 3.1 Community Information Session Schedule

Location	Date and time	Time
Crowne Plaza Norwest 1 Columbia Court Baulkham Hills	Thursday 8 November	4pm–8pm
Cherrybrook Uniting Church 134 New Line Road Cherrybrook	Saturday 10 November	10am–2pm
Community Information Centre 299 Old Northern Road Castle Hill	Thursday 15 November	4pm–8pm
Rouse Hill Town Centre Level 1, Link Lane, off Main Street Rouse Hill	Saturday 17 November	10am–2pm
Epping Club 45–47 Rawson Street Epping	Thursday 22 November	4pm–8pm

An invitation to the community information sessions was issued by letterbox drop to around 45,000 households in the project area.

The community information sessions were advertised in local newspapers. The advertising schedule was as follows:

Table 3.2 Community Information Session Advertising Schedule

Community information session	Newspapers targeted	Date of publication (week commencing)
Norwest	Hills News, Hills Shire Times	Monday 5 November
Cherrybrook	Hills News, Hills Shire Times	Monday 5 November
Community Information Centre	Hills News, Hills Shire Times	Monday 5 November; Monday 12 November
Rouse Hill Town Centre	Blacktown Advocate, Rouse Hill Times	Monday 5 November, Monday 12 November
Epping	Northern District Times	Monday 5 November, Monday 19 November

People attending these sessions were able to have their questions answered by technical experts from the project team representing the following disciplines:

- Construction.
- Environment.
- Noise and vibration.
- Traffic.
- Property.
- Design.
- Stakeholder engagement.

At each event, approximately 32 information display boards were placed around the room and aerial maps of the proposed route were also made available. Hard copies of the EIS 2 Overview Report and CD copies of EIS 2 were made available. Two scaled models of Cherrybrook Station and Rouse Hill Station were also made available. Submission forms and envelopes were provided at the events and attendees were encouraged to make a submission via email or post. The display boards covered the following topics:

- About EIS 2.
- Project Overview.
- Indicative concept designs for stations.
- Artist's impressions of stations.
- Artist's impressions of station construction phases.
- Indicative construction site layouts.
- Artist's impressions of proposed track noise attenuation methods.
- Information on how to make a submission.

3.3.5 Meetings with stakeholders and community

During the EIS 2 public exhibition period, a number of meetings were held with stakeholders. The meetings provided stakeholders with a briefing on EIS 2 and the opportunity to discuss any particular issues. During the meetings, stakeholders were also encouraged to make formal submissions to the DP&I. **Table 3.3** shows the stakeholders with whom meetings were held.

Table 3.3 Stakeholder Organisations Consulted During Exhibition Period

Organisation	Stakeholder	Meeting
NSW State Government department / agency	TfNSW	1 November 2012 6 November 2012 13 November 2012 19 November 2012 20 November 2012
	RMS	30 October 2012 8 November 2012 23 November 2012
	DP&I	7 November 2012 19 November 2012 20 November 2012
	Landcom	8 November 2012
Local council officer / councillor briefings	The Hills Shire Council	5 November 2012 12 November 2012 13 November 2012 26 November 2012
	Hornsby Shire Council	5 November 2012 6 November 2012 23 November 2012
	Blacktown City Council	7 November 2012 27 November 2012
	Willoughby City Council	19 November 2012
Business / commercial	Sydney Business Park	5 November 2012
	Queensland Investment Corporation	8 October 2012
	Zerefos Group	9 November 2012
	Norwest Association	15 November 2012

Organisation	Stakeholder	Meeting
Community Group / Organisation	St Matthews Anglican Church	8 November 2012
	West Pennant Hills Valley Progress Association	9 November 2012
	Castle Hill & Hills District Agricultural Society	12 November 2012
	Beecroft Cricket Club	12 November 2012
	Beecroft Netball Club	12 November 2012
	Beecroft Football Club	12 November 2012
	Epping Baptist Church	13 November 2012
	Bike North	15 November 2012
	Bicycle NSW	15 November 2012
	Castle Hill RSL Sub-Branch	28 November 2012
	North West Disability Services	28 November 2012
	Kayla Way Residents Association	29 November 2012
School / early childhood	Carrington Road Preschool	30 November 2012
Property management group	Beaumont Strata Management	16 November 2012

3.3.6 Deliberative community forums

Five tailored deliberative community forums were held concurrent to the EIS 2 exhibition to seek community input into station precinct design and the skytrain. The opportunity was also taken to conduct additional research into knowledge, perceptions and intended use of the NWRL. The forums were conducted amongst people who live within a two-kilometre radius of the sites for Cherrybrook Station, Showground Station and Bella Vista Station, as well as those living along the skytrain corridor near the sites for Kellyville Station and Rouse Hill Station.

Forum participants showed strong support for the NWRL project and positive opinion generally increased when they were provided with more information. On average, at the beginning of the forums 74% of participants had a positive opinion of the project. This increased to an average of 92% at the end of the forums.

By the end of the forums the top three positive opinions expressed about the NWRL included:

- Modern train concept with five minute frequency and no timetable.
- Station designs were in keeping with participants' visions and the feel of their local areas.
- Participants felt they had seen evidence of thoughtful long term planning around the project and the station precinct plans.

The three main concerns related to local impacts:

- Parking: Insufficient spaces in the car parks, impact of parking on local streets.
- Increased traffic congestion on local roads.
- Safety at station precincts and the perceived possible threat of increased crime in the local area.

The forums were run in parallel to the public exhibition process. The issues raised are consistent with submissions received in response to exhibition of EIS 2 and have been responded to in this report when participants made formal submissions to DP&I.

3.3.7 Online Forums

The project website offered interactive forums during the EIS 2 public exhibition process allowing two way discussions on a variety of topics. Following are some questions from the forums:

- *Designing the skytrain – When designing the skytrain (above ground viaduct section of the North West Rail Link) what do you think it is important for us to consider?*
- *Thoughts on North West Rail Link station design – When designing a station and the area around it what do you think it is important for us to consider? Think about things that would make you more likely to use the North West Rail Link.*
- *Thinking about design benchmarks – What are some examples of really good station design you have seen either in Australia or overseas that you think could be incorporated into the North West Rail Link?*

The forums received a total of seven responses over the exhibition period. The comments raised during these forums have been considered by the project team and will inform consultation efforts going forward.

Place Managers

Place Managers were appointed to liaise with residents, businesses and community organisations in October 2011. During EIS 2 exhibition, the Place Managers proactively engaged affected individuals, businesses and community groups directly impacted by the construction sites through face-to-face (door knocks), phone calls, emails and one-on-one meetings. Place Managers attended the community information sessions and assisted impacted landowners and others who attended the sessions with their inquiries.

Place Managers visited around 900 households in the project area to notify them of the EIS 2 public exhibition and to provide information on each station or services facility in their area.

3.4 Ongoing Consultation

Consultation on the NWRL will continue as designs are refined. The detailed design, particularly of station precincts, will continue over time and be undertaken by TfNSW in partnership with the selected contractor(s) and the future operator of the rail infrastructure. As the design evolves, it may be influenced by new or alternative approaches derived from the greater knowledge of detailed design, safety refinements, innovation, new standards, materials and technologies as well as further input from stakeholders and the community.

Opportunities for ongoing consultation are identified at specific locations, such as Castle Hill, in EIS 2 and in response to specific submissions in this report. TfNSW will continue to guide and oversee future communications that involve the selected contractor(s) and the future operator of the rail infrastructure who will be obliged to consult with key stakeholders in delivering the new stations and rail infrastructure.

TfNSW will maintain a number of communication activities. The 1800 number and email address will continue to operate, and the website will be updated as the project progresses.

A Community Information Centre will also remain open, offering all community and stakeholders the opportunity to drop in and speak with project team members five and a half days a week.

Place Managers will continue to act as the key point of contact between the project and the community. Their contact details will be available at all construction sites as well as via the project website (**www.northwestrail.com.au**).

The priority is to ensure the community has an understanding of the proposed works and the points of contact for each of the proposed worksites.

Throughout construction, stakeholders and the community will be kept informed of significant events or changes that might affect individual properties, residences and businesses, including:

- Significant milestones.
- Work method changes.
- Changes to traffic conditions and road access arrangements.
- Construction operations that could have a direct impact including noisy works.
- Interruptions to utility services or work outside of normal hours.

In addition to the above initiatives, further conditions of approval are anticipated when EIS 2 is determined by the Minister for Planning and Infrastructure similar to the conditions of approval for EIS 1, which detailed a range of community information, reporting and auditing conditions that must be met.


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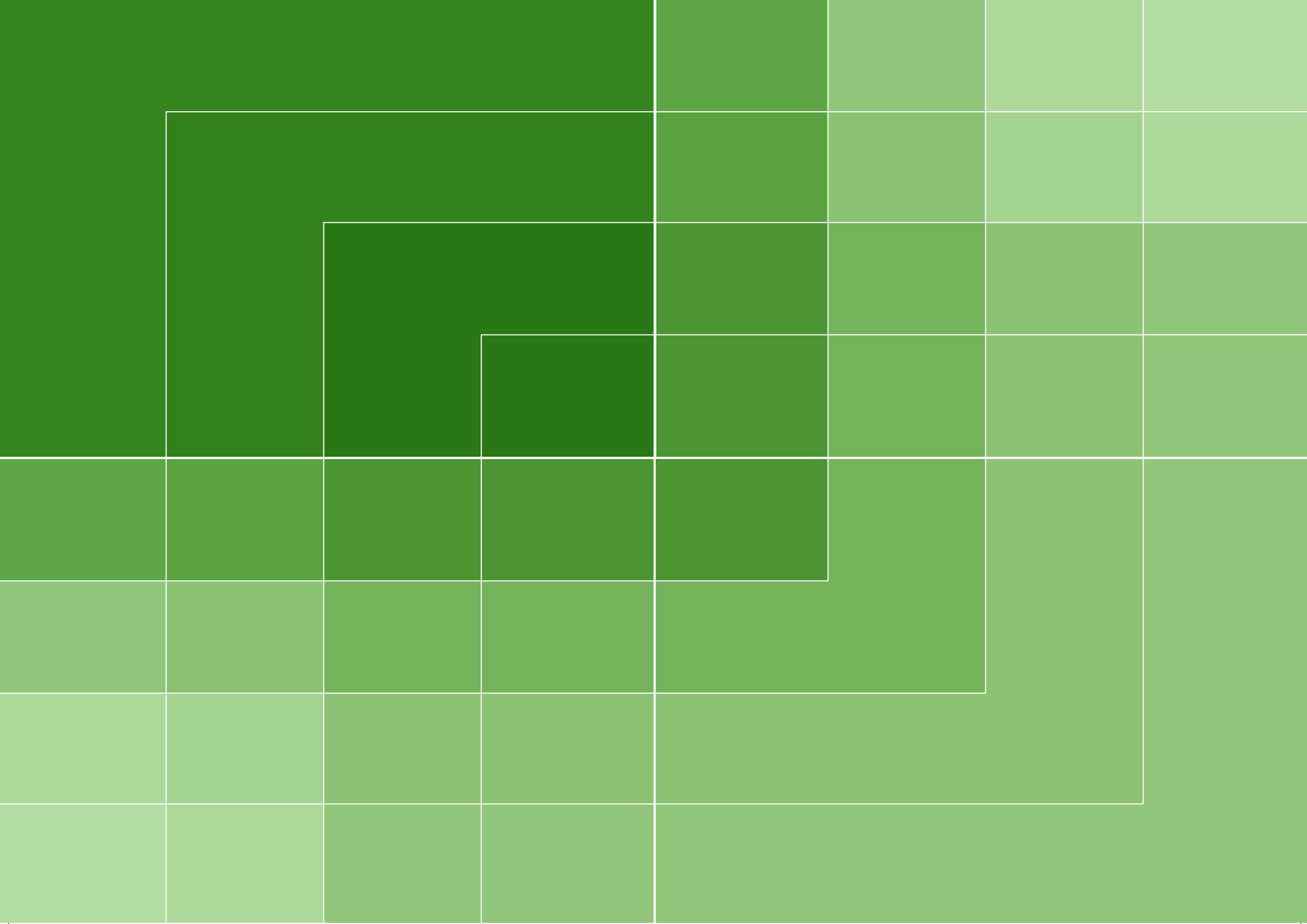

4 Submissions received

4.1 Submissions overview

The NWRL EIS 2 was exhibited for public comment between Wednesday, 31 October 2012 and Monday, 3 December 2012 (34 days). During this time, DP&I accepted submissions by:

- Electronic submission (online) – www.majorprojects.planning.nsw.gov.au
- Email - plan_comment@planning.nsw.gov.au
- Fax - (02) 9228 6355
- Post - Major Projects Assessment
  Department of Planning and lnfrastructure
  GPO Box 39, SYDNEY, NSW 2001

A total of 333 submissions were received in response to EIS 2 from the following sources:

Table 4.1 Total number of submissions received

Submission source	Number of submissions received
Individual	283
NSW State Government department / agency	6
Local council	4
Business / commercial*	12
Community group / organisation	17
School / early childhood	3
Property management group**	6
Other / anonymous	2

*Two submissions were received from QIC.
**Two submissions were received from Strata Plan 19086.

All submissions were analysed and issues identified for the purpose of providing a response in the submissions report. Issues were grouped by category and sub category, based on previous project consultation and feedback, and EIS 2 content.

Individual submission authors have not been identified in this report, other than where the submission was received from a State government department or agency, a local council or other key stakeholder. Submission authors have each been assigned a unique identification number referred to in this report as a stakeholder identification number.

Stakeholder identification numbers appear above the issue responses throughout the report, to enable individuals to locate the response to their submissions. Letters will be sent to each submission author (where contact details were provided / legible) to advise them of their stakeholder identification number and where to access this report. A total of 24 submission authors selected not to disclose their contact information and as a result these authors will not receive a letter informing them of their stakeholder identification number.

4.2 Key stakeholders

All group submissions, including those made by resident groups and community organisations, were treated as key stakeholder submissions and summarised and responded to in a separate table (see Chapters 5 and 6). A list of key stakeholders who made submissions is provided below. Of the 333 total submissions, six were from NSW State Government departments or agencies, four were from local councils and 40 were from other key stakeholders. Two key stakeholders (QIC Property Group and the Executive Committee Strata Plan 19086) made two submissions.

Table 4.2 Key stakeholders

NSW State Government departments and agencies
RailCorp
NSW Department of Education and Communities
NSW Environment Protection Authority
Heritage Council of NSW
Office of Environment and Heritage
Roads and Maritime Services
Local councils
Blacktown City Council
Parramatta City Council
The Hills Shire Council
Hornsby Shire Council
Businesses / commercial
BP Australia
McDonald's Pty Ltd
Budokan Judo Club
QIC Property Group
The GPT Group
Busways Group Pty Ltd
LMN Fuels Pty Ltd
Norwest Business Park
Lend Lease GPT (Rouse Hill) Pty Ltd

Hawkesbury Harvest
O.K. Caravan Park
Dexus Fund Management
Comfort Delgro Cabcharge
Community groups / organisations
Castle Hill Action Group
Robert Road Group
Robert Road Residents Group
Kayla Way NWRL Action Group
Arundel Way Neighbourhood Association
Castle Hill & Hills District Agricultural Society
Beecroft Netball Club
West Pennant Hills Valley Progress Association
Beecroft - Cheltenham Civic Trust
Beecroft Sports Club
Castle Hill Players
Action for Public Transport NSW
Bicycle NSW
Bike North
Inala
Schools and early childhood
Tangara School for Girls
Carrington Road Pre-School Kindergarten
Kindalin Childcare Centre
Property management groups
Executive Committee Strata Plan 19086
The Owners Corporation Northpoint Apartments
Beaumont Strata Management
Executive Committee of the Owners Corporation for 121 Olive Grove and Pichola Place, Castle Hill
Norwest Association Limited
Anonymous
Anonymous 1
Anonymous 2

4.3 Individual submissions

Of the 333 total submissions received, 283 were from individuals. Of these submissions:

- Seven were form letters (counted each time the form letter was received).
- Eight individuals made more than one submission (separate submissions with different issues / content).

No petitions were received (a submission with more than two signatures). Responses to issues raised in submissions received from individuals are presented in Chapter 7.

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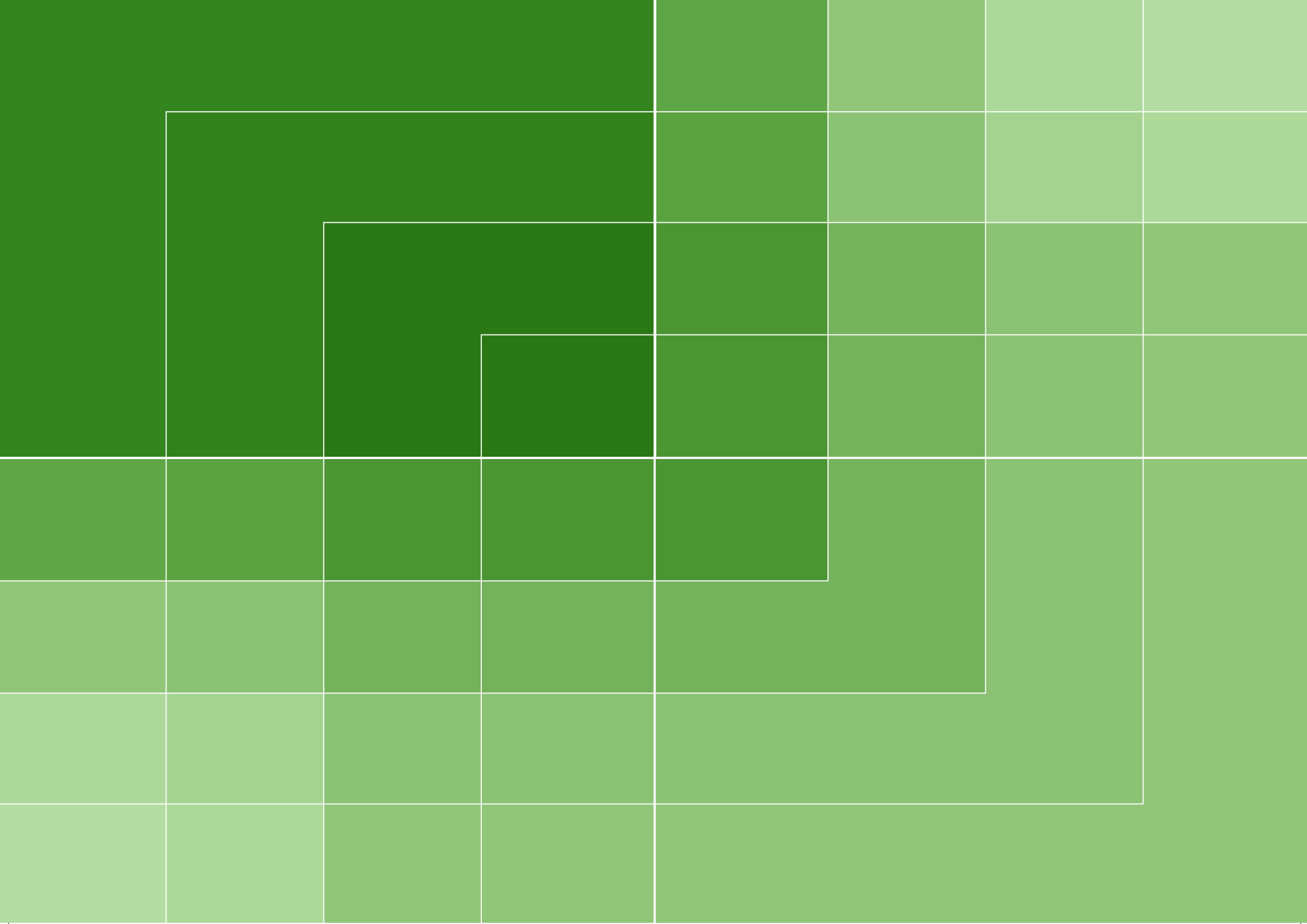


5 Government Department/Agency and Local Council Submissions

5.1 RailCorp

Transport – Rail integration

Issue 1

RailCorp supports the construction of NWRL as it would provide a beneficial linkage to the existing Epping to Chatswood Rail Link and the city.

Response 1

RailCorp's support for the NWRL is noted.

Communication – Consultation

Issue 2

RailCorp notes that interfaces with the existing RailCorp network at Epping and Chatswood require further consultation in upcoming phases of NWRL. The Epping to Chatswood Rail Link management transition would also require consultation with RailCorp.

Response 2

TfNSW would undertake ongoing consultation with RailCorp in relation to the interface with the existing RailCorp network at Epping and Chatswood and the transition of the Epping to Chatswood Rail Link.

5.2 NSW Department of Education and Communities

Communication – Consultation

Issue 1

EIS 2 nominates all educational facilities within 1600 metres of rail elements. The Department of Education and Communities appreciates the acknowledgement of these sensitive land uses and is keen to involve each of the school communities in the construction process to manage any construction and operational impacts. It is anticipated that this will involve notification to the school and negotiation of mitigation measures such as timing of works and relocation of sensitive class groups such as students sitting exams.

Response 1

TfNSW and the construction contractors would consult with local school communities in relation to noise mitigation measures and timing of works.

Construction and Operation – Noise and vibration

Issue 2

The Department of Education and Communities acknowledges that noise modelling has been undertaken as a component of EIS 2, with an Operational Noise and Vibration Management Plan to be prepared during the detailed design stage. It is important that measures be put in place to mitigate construction and operation noise and that monitoring continue to confirm the measures are successful. It has been noted that the noise barriers that were used during the construction of the M2 were effective, as well as attractive.

Response 2

Noise mitigation measures, including noise monitoring, as detailed in EIS 2 would be implemented during the construction and operational stages.

The Department of Education and Communities' positive comments regarding the noise barriers used during the construction of the M2 are noted.

Construction – Air quality

Issue 3

The construction impacts of dust and any impact on air quality will need to be addressed, including mitigation measures and monitoring once construction commences.

Response 3

Air quality monitoring and mitigation measures would be undertaken and implemented in accordance with the measures detailed in Table 19.4 of EIS 2 and the Construction Environmental Management Framework (Appendix B of EIS 2).

Construction – Public safety

Issue 4

It should be noted that the management of traffic and road safety will need to be carefully scrutinised to ensure that existing schools are able to continue to function during the construction phase.

Response 4

Mitigation measure T4 in Table 9.25 in EIS 2 provides for the safe management of pedestrians, cyclists and vehicles past construction sites. This would include areas where schools are located within the vicinity of construction sites.

Construction Traffic Management Plans and Traffic Control Plans, to be developed by the construction contractors, would include provisions to ensure safety of the public around construction sites.

Further consultation would be undertaken with existing schools prior to construction commencing within close proximity to any existing school.

Transport – Parking availability

Issue 5

Once construction is completed, it may be necessary to examine the parking restrictions that are imposed in and around school areas to manage any parking impacts caused by rail commuters. Schools rely upon management which allows for the movement of children and staff at peak periods for start and end of the school day, as well as availability of parking for visitors and parents throughout the day.

Response 5

Notwithstanding the identification and provision of commuter parking at selected stations, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance, this parking demand would be managed by the provision of suitable alternatives to driving to the station, such as good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, local councils may choose to implement measures to limit on-street parking by commuters.

Design – Ventilation

Issue 6

The location of any venting stacks from the underground stretches of the NWRL need to be identified and discussed with the school communities that are affected. Communication with the school community through the Parents and Citizens Association should be used to present the potential impacts and respond to any queries.

Response 6

Venting stacks would only exhaust air used to regulate temperature in the tunnels and stations. There would not be any detrimental health impacts associated with the air exhausted from the vents during operation.

Operation – Community facility

Issue 7

The position of existing enrolment boundaries may need to be amended as a result of the project where a barrier prevents access, or the transport provides an opportunity to use spare capacity. NWRL also presents the potential to provide for senior or selective school campus sites as a result of the accessibility provided by the project.

Response 7

The Department of Education and Communities' comment is noted.

Operation – Timetables / trip duration

Issue 8

Train timetables should align with bell times to promote the use of the NWRL by students, staff and community members. The timetable will need to include consultation regarding the bus timetable for a holistic review of this opportunity.

Response 8

The rapid transit trains would be a regular, un-timetabled service. Due to the frequency of train services, specific alignment with bell times and bus services would not be required.

Operation – Public safety

Issue 9

Schools will be required to review and possibly amend school emergency evacuation location and procedures as a result of the project.

Response 9

The Department of Education and Communities' comment is noted.

Construction and Operation – Noise and vibration

Issue 10

The proximity of the sky train route to Kellyville Public School raises potential concern in relation to noise from both the construction and operation of the railway.

Response 10

TfNSW would continue to consult with affected local school communities in relation to noise mitigation measures and timing of works. In accordance with the *Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects* (DECC, 2007), noise monitoring would be carried out after the rail line is in operation to verify the modeled noise predictions, ensure the effectiveness of noise mitigation measures and to ensure that no additional noise mitigation is required.

Detailed construction and operational noise modelling has been undertaken by specialists to determine noise impacts at all sensitive receptors. In addition noise mitigation measures to manage potential noise impacts are detailed in EIS 2 and are reproduced in Chapter 9 of this report.

It is noted that Kellyville Public School is over 2 km from the viaduct and construction sites.

Planning – Future growth

Issue 11

The development of the North West Rail Link will provide the catalyst for new urban development as well as increasing densities in existing localities. It is noted that the Department of Education and Communities is already facing critical capacity issues at facilities in the Northern Sydney Region, with Castle Hill High School and Cherrybrook Technology High School unable to accept any further enrolment now. The construction of the rail stations will trigger the

development of housing and increase the demand for educational facilities where capacity is already minimal or non-existent. It is requested that the Department of Planning and Infrastructure convene and lead a technical working group comprised of agency and local government members to plan for the infrastructure that will be required to service the population of the station precincts. It is essential that the infrastructure demands of the future station precincts be identified and a strategy be developed to meet these demands.

Response 11

The Department of Education and Communities' comment is noted.

5.3 NSW Environment Protection Authority

Construction – Noise and vibration

Issue 1

Tunnel support sites - construction hours

The EIS indicates that works at tunnel support sites will need to take place 24 hours a day, seven days a week. The locations where these activities will occur have not been clearly stated in the construction noise assessment in Chapter 10 of the EIS. The Construction Noise Management Levels (NMLs) for individual sites are provided for day, evening and night periods, however the predicted NML exceedances for each site do not indicate whether exceedances are predicted during day, evening or night periods. The EPA considers that this issue should be addressed in the Submissions Report to enable the community to understand any local cumulative noise impacts and the development of appropriate conditions of approval.

Response 1

Track work, tunnel systems and tunnel rail systems works are proposed to take place on a 24 hour basis as the below ground nature of these works means adverse noise impacts are not expected. The 24 hour tunnel support sites are identified in Table 7.2 of EIS 2. These supporting activities would be reviewed during the preparation of the site-specific Construction Noise and Vibration Management Plans.

As stated in EIS 2, the majority of Stage 2 construction works will be undertaken within standard construction hours. Unless specifically stated, NML exceedances are predicted and reported for the daytime only.

In relation to Stage 2 construction works, the only works which would be undertaken outside of standard construction hours without any further approval are:

- Works which are determined to comply with the relevant NML at the nearest sensitive receiver.
- Works required to be undertaken during rail possessions.
- Works required to be undertaken by RMS outside the standard hours
- The delivery of materials outside of approved hours as required by the Police or other authorities (including RMS) for safety reasons.
- Where it is required to avoid the loss of lives, property and / or to prevent environmental harm in an emergency.
- Where agreement is reached with affected receivers.

Issue 2

Construction Noise Management Plan

The EPA recommends the following requirements to be incorporated into a condition of approval requiring preparation of a Construction Noise Management Plan:

a. Identification of each work area, site compound and access route (both private and public).
b. Identification of the specific activities that will be carried out and associated noise sources at the premises and access routes
c. Identification of all potentially affected sensitive receivers.
d. The construction noise and vibration objectives identified in accordance with the *Interim Construction Noise Guideline and Assessing Vibration: a technical guideline.*

e. Assessment of potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in (d).
f. Where the objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts.
g. Description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of operational noise control barriers.
h. Procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity.
i. Measures to monitor noise performance and respond to complaints.

Response 2

TfNSW considers the conditions of approval for the NWRL Stage 1 Major Civil Construction Works provide an appropriate condition for the development of a Construction Noise and Vibration Management Plan (see condition E46(b)).

Issue 3

Traffic Noise Assessment
The EIS (2) states that a detailed assessment of potential traffic noise impacts and mitigation measures would be undertaken during the detailed design stage. The EPA recommends that this be included as a condition of approval.

Response 3

Mitigation measure OpNV13 in Table 10.47 of EIS 2 identifies the commitment to undertake a detailed assessment of the road traffic noise impacts, including identification of preferred mitigation measures for the station access roads at Cherrybrook Station and Kellyville Station during the detailed design stage.

Issue 4

Traffic Noise Management Study
The EPA recommends the following condition of approval regarding traffic noise management:

A Traffic Noise Management Strategy (TNMS) shall be developed by the proponent, prior to commencement of construction and operational activities, to ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied, that include but are not necessarily limited to the following;

- Driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receivers.
- Best noise practice in the selection and maintenance of vehicle fleets.
- Movement scheduling where practicable to reduce impacts during sensitive times of the day.
- Communication and management strategies for non-licensee/proponent owned and operated vehicles to ensure the provision of the TNMS are implemented.
- A system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimisation procedures) and assesses the implementation and improvement of the TNMS.
- Specific procedures for drivers to minimise impacts at identified sensitive receivers.
- Clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

Response 4

TfNSW does not consider a Traffic Noise Management Strategy to be required for construction or operation of the NWRL. Construction noise impacts are addressed in the Construction Noise and Vibration Strategy and in the site specific Construction Noise and Vibration Impact Statements.

Mitigation measure NV1 in Table 10.47 of EIS 2 requires that noise and vibration mitigation measures described in the Construction Noise and Vibration Strategy would be implemented during construction (refer Appendix J of Technical Paper 2).

Operational noise impacts have been assessed in EIS 2 in accordance with the relevant EPA guidelines.

Mitigation measure OpNV13 in Table 10.47 of EIS 2 identifies the commitment to undertake a detailed assessment of the road traffic noise impacts, including identification of preferred mitigation measures for the station access roads at Cherrybrook Station and Kellyville Station during the detailed design.

TfNSW is committed to implementing these mitigation measures and, as such, does not consider a specific condition of approval necessary.

Issue 5

Highly noise affected receivers – construction
The EPA notes that predicted noise levels during construction exceed the 'highly noise affected' levels within the *Interim Construction Noise Guideline*. The EPA recommends a condition of approval requiring that appropriate mitigation measures must be implemented to reduce noise impacts to these highly affected receivers, including respite periods.

Response 5

EPA's comment is noted. The Construction Noise and Vibration Strategy (Appendix J of Technical Paper 3) identifies a process for the implementation of additional mitigation measures where receivers are 'highly noise affected'.

Issue 6

Additional sensitive receivers - construction
The EPA has identified two sensitive receivers that are likely to be impacted by construction of the NWRL that have not been included in the EIS. These receivers are located at the corner of Carlingford Road and Beecroft Road (down side of existing line) and 'The Oxford' corner of Oxford Street and Cambridge Street (up side of existing line). The EPA considers that any future compliance monitoring should ensure that these sensitive receivers are included in the assessment.

Response 6

Construction impacts on the residential upper levels of the Carlingford Road / Beecroft Road receiver have not been quantified at this stage. These receivers are located approximately 90 metres from the site. The impacts are expected to be less than the impacts on residential receivers in Areas F and G due to the greater set back distance (20 metres and 5 metres respectively). The impacts on these residential receivers will be quantified during the preparation of the site-specific Construction Noise and Vibration Impact Statements for the Epping Services Facility using the residential NMLs.

The Oxford Apartments are over 200 metres from the construction site boundary. Exceedances of the construction NMLs are not expected at this receiver location.

Issue 7

The EPA recommends that condition of approval E19(b) of the Stage 1 Approval also be applied to this approval. In addition, the EPA recommends a condition of approval requiring that where vibration values exceed the acceptable vibration dose values in the *Assessing Vibration: a technical guideline*, feasible and reasonable mitigation measures must be considered. Where measures cannot be implemented to reduce vibration levels to below the maximum vibration dose values, the proponent should negotiate with the community, in accordance with *Assessing Vibration: A technical guideline*.

Response 7

TfNSW agrees that it is appropriate to include condition E19(b) of the Stage 1 approval in the conditions of approval for the Stage 2 works. Where vibration levels are predicted to exceed the acceptable dose values, TfNSW would implement all feasible and reasonable mitigation measures.

Operation – Noise and vibration

Issue 8

Additional sensitive receivers - operation

The EPA has identified two sensitive receivers that are likely to be impacted by operation of the NWRL that have not been included in the EIS. These receivers are located at the corner of Carlingford Road and Beecroft Road (down side of existing line) and 'The Oxford' corner of Oxford Street and Cambridge Street (up side of existing line). The EPA considers that any future compliance monitoring and the Operational Noise and Vibration Review should ensure that these sensitive receivers are included in the assessment.

Response 8

The operational ground-borne noise and vibration assessment included these receivers. Noise and vibration impacts at these sensitive receivers are predicted to comply with the design goals.

Issue 9

Viaduct structure radiated noise

The EIS states that designing the viaduct structure to minimise structure-radiated noise may be a suitable mitigation measure to minimise operational noise impacts on the community. The EPA considers that the design of the viaduct structure is critical in reducing noise impacts on the surrounding community and recommends a condition of approval requiring the final viaduct design to incorporate appropriate methods and materials that will reduce radiated noise from the structure.

Response 9

The operational noise mitigation measures (Table 10.6 and Table 10.47 of EIS 2) contain a number of mitigation measures to reduce structure-radiated noise. TfNSW is committed to implementing these measures.

Issue 10

Noise mitigation

The EPA notes that the EIS identifies a number of reasonable and feasible noise mitigation measures during construction and operation of the NWRL, but does not contain any commitment to specific measures. The EPA therefore recommends a condition of approval requiring the proponent to apply reasonable and feasible mitigation measures that will result in noise mitigation of a standard equivalent or better than measures recommended in the EIS.

Response 10

Table 10.47 and Table 10.48 of EIS 2 contain a number of specific measures in relation to operational and construction noise respectively.

Issue 11

PA systems

The EPA notes that the EIS states that public address (PA) systems at stations will be designed in order to meet the requirements of the Industrial Noise Policy, however the EPA recommends a condition of approval requiring PA systems to be designed and installed in accordance with best practice for PA systems in order to minimise impacts to surrounding sensitive receivers while achieving its operational objectives.

Response 11

Mitigation measure OpNV11 (in Table 10.47 of EIS 2) states that noise sources at stations such as PA systems, air conditioners, substations and mechanical plant would be designed to meet the INP noise criteria.

Issue 12

Train stabling yard operational noise

In order to minimise noise impacts on residents surrounding the train stabling yard during operation of the NWRL, the EPA recommends a condition of approval specifying that noise from maintenance activities conducted in the stabling yards (eg wheel machining) shall not exceed a level of the rating background level (RBL) +5dBA.

Response 12

Table 10.47 of EIS 2 identifies a number of mitigation measures relating to noise during operation of the Tallawong Stabling Facility. Mitigation measure OpNV8 provides that the design of the sheds and equipment for the train wash and wheel lathe facility would include mitigation as required to comply with the applicable noise criteria at the nearest sensitive receiver.

Mitigation measures OpNV9 and OpNV10 provide for further investigations to reduce noise from brake air release and from auxiliary train equipment.

Issue 13

Operational noise and vibration goals

The EPA recommends a condition of approval requiring the proponent to design and operate the rail line components with the objective of not exceeding the airborne and ground-borne noise trigger levels at existing developments, at each stage of the project, as presented in the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECC, 2007). This must include investigating and applying reasonable and feasible mitigation measures where required. For the purpose of this condition of approval, existing development includes all existing development (built and approved) adjacent to the rail corridor, and development (including subdivisions) approved prior to the determination of this project.

Response 13

EPA's comment is noted.

Issue 14

Operational Noise and Vibration Review

The EPA recommends the following conditions of approval:

1. The proponent shall prepare an Operational Noise and Vibration Review (ONVR) to confirm noise (air and ground-borne) and vibration control measures that would be implemented for the project. The ONVR shall, as a minimum:
   a. Identify the appropriate operational noise and vibration objectives and levels for adjoining development, including existing sensitive receivers.
   b. Predict the operational noise and vibration impacts at adjoining development based on the final design of the project.
   c. Examine all feasible and reasonable noise and vibration mitigation measures.
   d. Identify specific physical and other mitigation measures for controlling noise and vibration at the source and at the receiver (if relevant) including location, type and timing for the erection of permanent noise barriers and / or other noise mitigation measures.
   e. Include a consultation strategy to seek feedback from directly affected property owners (including educational institutions) on the noise and vibration mitigation measures.
   f. Include procedures for operational noise and vibration complaints management, including investigation and monitoring (subject to complainant agreement).
2. Operational noise targets shall be reviewed within 5 years of the date of any approval of the ONVR and at any subsequent time as required. The review shall have regard to the status of land use planning, any land use changes and the background noise environment within areas adjacent to the fixed facilities at the time of the relevant review. Any proposed changes to the noise targets as a result of the review shall be included in a revised ONVR.
3. The ONVR is to be independently verified by a noise and vibration expert. The verification must be undertaken at the proponent's expense. The ONVR and independent review is to be submitted for approval prior

to commencement of the construction of physical noise mitigation structures, unless otherwise agreed.

4. The proponent shall implement the identified noise and vibration control measures and make the ONVR publicly available.

Response 14

The need for an operational noise and vibration review is acknowledged. However the details of this review require further discussion with DP&I.

TfNSW considers that operational noise targets should not be altered as a result of changes in land use planning after approval of the project.

Issue 15

Operational Noise and Vibration Compliance Assessment

The EPA recommends the following condition of approval:

The proponent shall undertake a noise and vibration compliance assessment to confirm the predictions of the noise assessment referred to in the ONVR. This shall be undertaken within three months of the commencement of operation of the project, or as otherwise agreed. If the assessment indicates an exceedance of the noise and vibration targets identified in the ONVR, the proponent shall implement further reasonable and feasible measures (where required) to mitigate these exceedances in consultation with the affected property owners.

Response 15

Technical Paper 3 Noise and Vibration identifies the requirement to undertake compliance monitoring to confirm operational noise predictions for both airborne and ground-borne noise. This includes identification of appropriate monitoring locations and procedures.

The need for operational noise and vibration compliance monitoring is acknowledged. However the details of this monitoring requires further discussion with DP&I.

Issue 16

Fixed Facilities

The EPA recommends the following condition of approval:

1. The proponent shall, prior to the lodgement of the ONVR, derive operational noise targets for fixed facilities (including substations and the train stabling facility) and associated activities and identify these noise targets in the ONVR.
2. The proponent shall design and operate fixed facilities, including the substations and the train stabling facility with the objective of not exceeding the noise targets. The proponent shall apply mitigation at existing receivers where the noise targets cannot be achieved.

Response 16

Stations and Services Facilities

Section 10.9 of EIS 2 provides a discussion of operational noise predictions for the stations and ancillary facilities. Stations and ancillary facilities would be designed in order to meet the applicable operational noise criteria. The noise modeling predicts exceedances of the criteria for car parks at Cherrybrook Station and Showground Station. Potential mitigation measures to reduce these impacts are discussed in Section 10.9 of EIS 2 and in mitigation measure OpNV12 in Table 10.47 of EIS 2.

Stabling Facility

Table 10.47 of EIS 2 identifies mitigation measures relating to noise management during operation of the Tallawong Stabling Facility. Mitigation measure OpNV8 provides that the design of the sheds and equipment for the train wash and wheel lathe facility would include mitigation as required to comply with the applicable noise criteria at the nearest sensitive receiver.

Mitigation measures OpNV9 and OpNV10 provide for further investigations to reduce noise from brake air release and from auxiliary train equipment.

TfNSW is committed to implementing these reasonable and feasible mitigation measures.

Issue 17

Noise compliance monitoring -fixed facilities

To determine compliance:

a. With the $L_{eq(15\ minute)}$ noise targets, the noise measurement equipment must be located:
   - Approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
   - Within 30 metres of a dwelling facade, but not closer than 3 metres, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or
   - Where applicable, within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

b. With the $LA1_{(1\ minute)}$ noise targets, the noise measurement equipment must be located within 1 metre of a dwelling facade.

c. With the noise targets, the noise measurement equipment must be located:
   - At the most affected point at a location where there is no dwelling at the location; or
   - At the most affected point within an area at a location prescribed by (a) or (b).

A non-compliance will still occur where noise generated from the premises in excess of the appropriate limit is measured:

❖ At a location other than an area prescribed by (a) (b); and/or
❖ At a point other than the most affected point at a location.

For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW *Industrial Noise Policy* must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

Response 17

The details of operational compliance monitoring for fixed facilities would be incorporated into the Operational Noise and Vibration Management Plan to be developed by the operator prior to the commencement of operations.

Issue 18

Sensitive land uses

The EPA recommends the inclusion of condition of approval E11 from the Stage 1 Approval, with the amendment that the land use survey also include critical areas sensitive to operational noise and vibration, as well as construction noise and vibration.

Response 18

TfNSW does not object to the inclusion of a condition similar to condition E11 from the Stage 1 approval. It is noted, however that the survey required to be undertaken by condition E11 of the Stage 1 approval could fulfill both requirements.

Issue 19

Operational vibration

The EPA recommends the following condition of approval:

The proponent shall design and operate the project with the objective, where feasible and reasonable, of not exceeding the vibration goals for human exposure for existing receivers, as presented in *Assessing Vibration: a technical guideline* (DECC, 2006).

NWRL Stage 1 condition of approval recommended to apply to Stage 2

The EPA recommends that the following noise and vibration conditions of approval from the NWRL Stage 1 Approval should also be included in the approval for Stage 2:

❖ E12, E14, E15, E16, E18, E19(b), E20, E21, E22, E23, E24, E46(b)

Response 19

In relation to operational vibration, modeling undertaken as part of EIS 2 predicts compliance with the human comfort criteria for all residential receivers and the majority of other receivers. For receivers with highly vibration sensitive equipment, three minor exceedances of the screening levels have been predicted. It is noted, however, that these establishments

would already be subject to relatively high levels of ambient vibration due to their location adjacent to major roads.

TfNSW does not object to the conditions recommended by the EPA from the Stage 1 approval being included as relevant to the Stage 2 construction works approval.

Construction – Groundwater

Issue 20

Existing groundwater quality
Information regarding groundwater quality along the alignment and also at known or suspected areas of contamination is not adequate. The EPA therefore recommends a condition of approval requiring further delineation of groundwater quality in areas where groundwater quality is unknown or inconclusive prior to construction works beginning.

Response 20

Existing known areas of contamination along the alignment are described within EIS 2, with acknowledgement that further additional contamination and ground condition assessment may be required prior to and as part of construction activities.

A groundwater monitoring plan is a requirement of the construction phase (see mitigation measure SG17 in Table 8.7 of EIS 2).

Operation – Groundwater

Issue 21

Operational water discharge volumes
The EPA is concerned that the proponent has not committed to construct the NWRL tunnels as undrained tunnels. The volume of groundwater generated within tunnels has the potential to have a significant impact on the surrounding environment throughout the life of the NWRL, and the EPA recommends that the conditions of approval require that the tunnel construction methods ensure that groundwater inflows will be minimised as far as possible throughout the operation of the NWRL.

Response 21

It is currently proposed to construct undrained tunnels.

A comparison of potential groundwater inflow between drained and undrained tunnels is provided in Section 2.3.2 of the EIS 1 Submissions Report. Treatment to an acceptable standard would be required prior to discharge of captured groundwater from either the drained or undrained tunnel options.

Mitigation measure SG22 in Table 8.7 of EIS 2 states that 'All feasible and reasonable measures would be implemented during construction, to limit operational groundwater inflows to stations and crossovers. Any inflows would be collected and treated prior to discharge.'

Issue 22

Sustainable reuse of tunnel inflow
The EPA recommends a condition of approval requiring that water of suitable quality be reused on site in preference to potable water. A condition similar to condition of approval E34 in the Stage 1 Approval would be appropriate.

Response 22

Mitigation measure OpSG5 in Table 8.6 of EIS 2 states that *'All feasible and reasonable opportunities would be identified for the reuse of captured groundwater.'*

Operation – Surface water

Issue 23

Operational water quality
The EIS states that the predicted water volumes during operation of the NWRL could be accommodated by the Lady Game Drive Water Treatment Plant (WTP) as long as existing water quality standards can be maintained. No information is provided in the EIS regarding alternative options for disposal of water during operation of the NWRL, should these standards not be met. The EPA therefore recommends a condition of approval requiring that all water discharges during operation of the NWRL must comply with

section 120 of the *Protection of the Environment Operations Act 1997,* or use of condition C6 from the Stage 1 Approval.

In order to ensure that the Lady Game Drive water treatment plant is capable of treating NWRL tunnel water to an appropriate standard, the EPA recommends a condition of approval requiring a commissioning water monitoring program during the initial period when the water treatment plant begins treating NWRL tunnel water.

Response 23

EIS 2 clearly states that the Lady Game Drive WTP is capable of treating captured groundwater. Mitigation measure OpSG3 in Table 8.6 of EIS 2 states that groundwater monitoring would be subject to testing. Mitigation measure OpSG4 in Table 8.6 of EIS 2 confirms that incremental increase in volume from the NWRL would be accommodated within the existing capacity of the Epping to Chatswood Rail Link (ECRL) facility as long as water quality criteria can be met.

Construction – Surface water

Issue 24

Construction water quality

As identified in the EPA's submission regarding the adequacy of the EIS for public exhibition, the EIS does not contain adequate information regarding the treatment, discharge locations, volume and quality of groundwater to be discharged from the site during construction. The EPA considers that this information should be provided in the Submissions Report to enable an assessment of any possible impacts from water discharge during construction, and development of appropriate condition of approval to manage any impacts.

The EPA recommends a condition of approval requiring that all water discharged from NWRL construction sites must comply with section 120 of the *Protection of the Environment Operations Act 1997*, unless otherwise approved through an Environment Protection Licence, or alternatively, use of condition of approval C6 from the Stage 1 Approval.

Response 24

Section 8.5.3 of EIS 2 describes groundwater disposal to the environment. Mitigation measure OpSG3 in Table 8.6 of EIS 2 states that groundwater monitoring would be subject to testing. Where it does not meet licence requirements, it would be treated prior to discharge.

The NWRL project will comply with section 120 of the *Protection of the Environment Operations Act 1997.* A condition of approval is therefore not considered necessary.

Issue 25

Water quality monitoring

The EPA recommends a condition of approval requiring water quality monitoring to be carried out, including similar requirements to those detailed in Condition C11 of the Stage 1 Approval.

Response 25

Water quality monitoring requirements would be included within relevant construction environmental documentation such as the Construction Environmental Management Plan (CEMP). Existing requirements for a Groundwater Monitoring Plan are included within Section 7.2b of the Construction Environmental Management Framework (Appendix B of EIS 2).

Issue 26

NWRL Stage 1 condition of approval recommended to apply to Stage 2

The EPA recommends that the following conditions of approval relating to surface water management from the Stage 1 Approval are also included in the conditions of approval for Stage 2:

- E33, E45, E46(d), E47

Response 26

TfNSW does not object to the conditions recommended by the EPA from the Stage 1 approval being included as relevant to the Stage 2 construction works approval. Relevant surface water management measures are to be included in the Construction Environmental Management Plan, as described in Section 16 of the Construction Environmental Management Framework (Appendix B of EIS 2).

Construction – Spoil and waste management

Issue 27

In order to minimise unnecessary disposal of spoil that could be reused onsite or at alternative locations, the EPA recommends a condition of approval requiring reuse options at offsite locations to be investigated, prior to disposing of excess spoil material to landfill, in accordance with the waste hierarchy established under the *Waste and Resource Recovery Act 2001*.

Response 27

EPA's comment is noted.

Issue 28

The EPA recommends conditions of approval similar to C15 and C16 in the Stage 1 Approval be included in the Stage 2 consent.

Response 28

EPA's comment is noted.

Construction – Air quality

Issue 29

In order to minimise air quality impacts during construction, the EPA recommends that condition of approval E1 and E46(g) from the Stage 1 Approval also apply to Stage 2.

Response 29

EPA's comment is noted.

Construction – Cumulative impact

Issue 30

Internal cumulative impacts

As indicated in the letter from the EPA to DP&I regarding the adequacy of the EIS for public exhibition, the EPA considers that the cumulative impacts associated with noise and vibration from Stages 1 and 2 of the project have not been adequately addressed in the EIS, as required by the Supplementary EARs for the SSI Application. Table 20.3 of the EIS identifies a number of sensitive receivers where noise levels will exceed project NMLs during both Stage 1 and 2 construction works, and states that the cumulative impact would be experienced for a period of 4 to 5 years, depending on the location. The EPA considers that the level of detail provided regarding internal cumulative noise impacts is not adequate and that the Submissions Report should include the predicted noise levels at each location, and the duration that these noise levels will be experienced (for example using a construction program diagram similar to that in Table 7-4).

Response 30

Predicted noise exceedances for each receiver area at each location are presented in Section 10.7 of EIS 1 and Section 10.11.7 of EIS 2.

Noise exceedances would be experienced only when specific construction activities take place (eg earthworks, site establishment or concrete pouring). Noise exceedances would not be experienced continuously during the length of the Stage 1 and Stage 2 construction works but sometime within the construction timeframe.

Noise levels presented in Section 10.7 of EIS 1 and Section 10.11.7 of the EIS 2 are representative of the worst case impacts for each scenario. The occurrence, frequency and duration of a noise exceedance event would ultimately depend of the work method chosen by the construction contractor and therefore cannot be illustrated using a construction program diagram similar to the diagram shown in Table 7-4 of EIS 2.

Issue 31

External cumulative impacts

The EIS indicates that cumulative impacts associated with construction of the Epping to Thornleigh Third Track (ETTT) project are possible, but that the location of construction compounds for the project was not known during EIS preparation. In the recently exhibited ETTT EIS, a construction compound was shown to be located near the former bus flyover to the south of the M2, in close proximity to the NWRL Epping Services Facility. Given the high likelihood of cumulative noise impacts on residents in this area, the EPA recommends that the Submissions Report consider cumulative impacts from the NWRL and ETTT construction works in this location, and document any negotiations / communications with the ETTT project team regarding minimising community impacts.

The EIS has identified a number of external projects that will occur concurrently with the NWRL construction works. The EPA recommends a condition of approval requiring the proponent to regularly consult with surrounding projects with the objective of minimising impacts to the local community during construction works, particularly regarding noise impacts.

Response 31

Figure 5.2b of the Epping to Thornleigh Third Track (ETTT) Environmental Assessment Report shows the ETTT construction compounds located in close proximity to the NWRL Epping Services Facility. This reconfirms the impacts identified in Chapter 20 of EIS 2 in terms of cumulative noise and vibration impacts from the construction activities and construction traffic on sensitive receivers along Beecroft Road.

The ETTT and NWRL projects have in place mitigation measures and commitments to manage noise and vibration impacts on these receivers. TfNSW as the proponent for these two projects will ensure project teams deliver the construction stage of these projects in a coordinated matter in order to minimise any noise and vibration cumulative impacts. TfNSW agrees with the proposed condition of approval as per the following condition imposed for Stage 1:

E.24. During construction, Proponents of other construction works in the vicinity of the SSI shall be consulted, and reasonable steps taken to coordinate works to minimise impacts on, and maximise respite for, affected sensitive receivers.

5.4 Heritage Council of NSW

Planning – Approvals process

Issue 1

The European Heritage Report (EHR) and EIS make recommendations regarding potential heritage impacts associated with the various construction sites. A number of these are considered acceptable in both documents. The following comments relate to those sites / impacts that are considered to have not been adequately addressed.

The proponent has not produced an EIS that comprehensively addresses the impacts associated with the current stage of works (EIS 2) and is relying on the earlier document (EIS 1). The recommendations of the earlier document should be carried through into the current EIS. It is not considered appropriate that the proponent has ignored some of the earlier proposed mitigation measures.

Response 1

As the footprint of the project assessed in EIS 2 is the same as that assessed for EIS 1, no new heritage impacts were identified, therefore an additional Heritage Technical Paper was determined to be unnecessary.

The EIS 2 European Heritage assessment was undertaken in the context of a post-Stage 1 construction environment, ie the existing environmental conditions were assumed to be those that exist upon the completion of the major civil construction works (as assessed in EIS 1). As such, not all of the EIS 1 mitigation measures are relevant to the Stage 2 construction works.

Issue 2

Table 11.1 of the EIS states that a number of items from the Statement of Commitments have been met as follows:

- Additional research would be undertaken to determine the history and potential heritage significance of the sites identified in Castle Hill.
- Site-specific archaeological assessments would be undertaken for the two archaeological sites identified along Old Windsor Road and Windsor Road.
- A view analysis would be undertaken to and from Rouse Hill House and its estate and the Glenhope property. If required, appropriate mitigation measures would be identified.

However, the EIS does not include them. Although an undertaking to complete the archaeological assessment has been made there has been no undertaking to complete the view analysis and meet this commitment.

A condition of consent should be included to ensure that commitments 30, 31 and 32 in the Statement of Commitments are met.

Response 2

Statement of Commitments 30 and 31 have been addressed in Section 11.5 of EIS 1, as indicated in Table 11.1 of EIS 2.

An assessment of the visual impacts of the proposed works on the Glenhope property and Rouse Hill House and Farm is provided in Table 11.3 of EIS 2 in accordance with Statement of Commitment 32. In addition, Table 11.3 of EIS 2 states that a visual assessment of the proposed operations and construction on Rouse Hill House and Farm are provided in Chapter 16 Visual Amenity of EIS 2. TfNSW is committed to ensuring that the Statements of Commitments are met.

Issue 3

The current EIS is not considered to be a sufficiently adequate document as it continues to state that further assessment will be undertaken at a future stage. If approval is issued without these assessments, then it is unclear as to when the proponent will undertake these assessments. The missing studies make it difficult for the Heritage Council to fully assess the potential impacts of this project.

Response 3

These investigations, where required, would be undertaken prior to the commencement of any Stage 2 construction works that have the potential to impact on the identified heritage items.

Environment – Heritage

Issue 4

Epping Services Facility (Site 1) – Causeway over Devlins Creek
Page 15 of the European Heritage Report (EHR) notes that the convict built Stone Causeway over Devlins Creek *will not be affected by the works but in the next sentence says there is the possibility of indirect impacts on the causeway from erosion and sedimentation associated with the construction works.* These two statements are contradictory but it appears that the author of the EHR has chosen to support the latter statement as Table 4.2 says that no mitigation measures are necessary for the causeway.

Due to the importance of the convict built Devlins Creek causeway there should have been some specific assessment of the potential impacts and some attempt to identify site specific measures to be undertaken. In the absence of these it must be assumed that the causeway will be impacted and that mitigation is required to be undertaken.

A condition of consent should be included to ensure the proponent identifies specific mitigation to ensure that the Devlins Creek causeway is not impacted by construction works. This must include flagging the site, installation of sediment control barriers and the implementation of a monitoring regime. The CEMP must make a commitment to undertake these measures.

Response 4

The indirect impacts on the stone causeway over Devlins Creek from erosion and sedimentation associated with the construction works were assessed as part of EIS 1. The potential impacts described in the European Heritage Report to the stone causeway over Devlins Creek were based on the use of Construction Site 2 Epping Decline Site as described in EIS 1. This construction site was deleted from the project as part of the EIS 1

Submissions and Preferred Infrastructure Report. As such, the causeway is located outside the NWRL footprint and would therefore not be affected by the NWRL construction or operations (ie EIS 2).

Erosion and sedimentation control measures relevant to Construction Site 1 Epping Services Facility, located upstream of the causeway over Devlins Creek, are detailed in Chapter 18 of EIS 2 and these measures are referenced in Table 11.3 of EIS 2. These control measures would be further detailed in the CEMP.

Issue 5

Cherrybrook Station (Site 4) – Archaeology on Franklin Road
Page 71 of the European Heritage Report (EHR) states that in order to determine any required mitigation this site requires further assessment / research to determine its archaeological potential / significance as there will be a moderate adverse impact. Page 11-6 of the EIS states that no impact on archaeological remains is anticipated. This is the complete opposite conclusion to that identified in the EHR with no reasons given as to how this conclusion has been reached. It does not appear that the further archaeological research recommended has been undertaken.

Response 5

As explained in Section 3.3.3 of the European Heritage Report, the potential archaeological remains (House site, Franklin Road, Cherrybrook) would be located within the perimeter of the proposed deep excavations for the construction of Cherrybrook Station, therefore the proposed earthworks required for the station would result in the removal of any potential archaeological resource that may have survived at the site. These construction activities were assessed and have been approved subject to conditions as part of EIS 1 Major Civil Construction Works (Stage 1).

As the EIS 2 European Heritage assessment was undertaken in the context of a post-Stage 1 construction environment (ie after the above mentioned excavations have occurred), no impact on these archaeological remains is anticipated.

Issue 6

Castle Hill Station (Site 5) – Arthur Whitling Park Tramways
Page 71 of the European Heritage Report (EHR) states that the removal of any surviving tramways would be mitigated by archaeological monitoring and recording. Page 11-6 of the EIS states that no impacts on potential archaeological remains are anticipated. It is not known how the EIS could make this conclusion when the location and / or presence of the potential archaeology is not known.

Although the presence of the tramways at Arthur Whitling Park is not definite, the EIS should include mitigation/procedures to be followed should they be identified; the blanket statement that there will be no impacts is unsupported.

A condition of consent should be included requiring that site specific measures be identified for the potential discovery of tramways beneath Arthur Whitling Park. These measures must include stop-work procedures and the level of archaeological monitoring and recording that is to be undertaken.

The mitigation measures in Table 11.4 omits EH15 from EIS 1 that requires archaeological monitoring, recording and potential interpretation of any surviving Parramatta to Castle Hill tramways associated with Site 5; this recommendation should be included in the Stage 2 EIS.

These mitigation measures must be included in the CEMP for this project with Mitigation Measure EH15 from EIS 1, requiring archaeological monitoring, recording and potential interpretation of any surviving Parramatta to Castle Hill tramways associated with Site 5, also included.

Response 6

As explained in Section 3.3.4, the potential archaeological remains associated with the tramway are located within the perimeter of the proposed deep excavations for the construction of Castle Hill Station, therefore the proposed excavations would result in the removal of any potential archaeological remains.

As the EIS 2 European Heritage assessment was undertaken in the context of a post-Stage 1 construction environment (ie after the above mentioned excavations have occurred), no impact on these archaeological remains is anticipated. For this reason, any mitigation measures regarding the tramway detailed in EIS 1 or the European Heritage Report are not relevant to the EIS 2 heritage assessment.

Issue 7

Showground Station (Site 6) - House sites off Carrington Road, Kellyville Station (Site 11) – Archaeological Site, Old Windsor Road to White Hart Drive (Site 13) – former Swan Inn

The European Heritage Report (EHR) states that the following archaeological sites should have further assessment undertaken at:

- House sites off Carrington Road (relating to archaeology on Franklin Road).
- Kellyville Station.
- Old Windsor Road to White Hart Drive – former Swan Inn (the EHR states that the archaeological remains of the former Swan Inn will be adversely impacted and that further assessment of this site is required. Based on those results, archaeological excavation, recording and the development of an interpretation strategy may be required at this site).

It is considered a weakness of the Stage 2 EIS that rather than actually undertaking the recommended archaeological assessments it states that they should be done before commencement of construction. Any further assessment identified in the Stage 1 EIS and EHR should have been undertaken as a part of the Stage 2 EIS.

Response 7

These investigations, where required, would be undertaken during the construction planning phase prior to the commencement of Stage 1 construction works which have the potential to impact on the identified items and would therefore be concluded prior to Stage 2 works commencing.

Issue 8

The framework for the CEMP relating to heritage contains broad statements about how heritage will be managed and the heritage management objectives to be included in the CEMP; these principles are generally appropriate.

Section 11.6 states that should any unexpected archaeological objects be located stop-work procedures would be implemented and the Heritage Branch of OEH notified. This commitment is also contained within the framework for the CEMP and is considered positive.

A condition of consent should be included that ensures that all the recommendations outlined in Sections 10.1, 10.2 and 10.3 of the CEMP framework are included in the final CEMP.

Response 8

The Heritage Council's support for the Construction Environmental Management Framework (CEMF) is noted.

TfNSW is committed to undertaking the mitigation measures outlined in the CEMF.

Issue 9

A majority of the issues with the EIS involve the fact that the recommended further studies have not been undertaken. This has arisen because the proponent has re-issued the EHR Report undertaken for Stage 1 of this project. Although it is understood that much of the information is going to be the same or similar, the re-issuing of the Stage 1 information is considered a weakness of the EIS.

A condition of consent should be included to ensure that all the further archaeological assessments recommended in the EHR are undertaken. An additional condition should be included to state that the results of these assessments and identified mitigation must be assessed and endorsed by the Department prior to construction commencing.

Response 9

As the footprint of the project assessed in EIS 2 is the same as that assessed for EIS 1, no new heritage impacts were identified, therefore an additional Heritage Technical Paper was determined to be unnecessary.

The EIS 2 European Heritage assessment was undertaken in the context of a post-Stage 1 construction environment, ie the existing environmental conditions were assumed to be those that exist upon the completion of the major civil construction works (as assessed in EIS 1). As such, not all of the EIS 1 mitigation measures are relevant to the Stage 2 construction works.

These investigations, where required, would be undertaken during the construction planning phase prior to the commencement of Stage 1 construction works which have the potential to impact on the identified items and would therefore be concluded prior to EIS 2 works commencing.

TfNSW is committed to undertake the mitigation measures outlined in the European Heritage Report and EIS reports.

Environment – Flora and fauna

Issue 10

Epping Services Facility (Site 1) – Bushland

The European Heritage Report (EHR) identifies the remnant native forest located along Beecroft Road as being of local significance and states that the works will have a *major adverse impact* on the bushland. The EIS refers back to the original Major Civil Construction Works EIS (EIS 1) for this project noting that document identified all construction impacts. EIS 1 contained a mitigation measure that was *to rehabilitate removed areas of bushland following completion of construction works*. No explanation is provided as to why this recommendation was not included in the EIS prepared for the Stations and Infrastructure.

A condition of consent should be included to ensure that the rehabilitation of removed bushland associated with works to Site 1 be undertaken. The CEMP should make a specific commitment to undertake this rehabilitation.

Response 10

As the EIS 2 Heritage Assessment was undertaken considering a post-Stage 1 construction context, no heritage-listed bushland would be removed, therefore the associated mitigation measure is not required.

The potential impacts to bushland along Beecroft Road was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 11

Many of the mitigation measures include the term 'if feasible' when referring to the reinstatement of vegetation. Since the documentation does not identify how it defines 'reasonable' this creates a situation where no mitigation is committed to and none may occur if the proponent does not consider reinstatement of removed bushland a 'reasonable action'.

The conditions of consent should require that any mitigation measures that include the term 'where feasible' should be modified to remove these words. This would ensure that regeneration / replanting is to be undertaken at all sites and place the onus on the proponent to argue why it would not be reasonable / feasible on a site by site basis.

Response 11

The terms "feasible and reasonable" are defined in the EIS 1 conditions of approval as:

Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.

Where requested by the Director General, the Proponent shall provide evidence as to how feasible and reasonable measures were considered and taken into account.

It is anticipated that the EIS 2 conditions of approval would contain the same definition of "feasible and reasonable".

5.5 Office of Environment and Heritage

Construction – Cumulative impacts

Issue 1

The EIS provides no additional assessment of the cumulative impacts associated with Aboriginal Heritage of the proposal.

Response 1

Chapter 20 of EIS 2 provides an assessment of the potential internal cumulative impacts (the interactions between impacts associated with Stage 1 Major Civil Construction Works and Stage 2 Stations, Rail Infrastructure and Systems works), and the potential external cumulative impacts (the interaction between the NWRL and other construction works in the vicinity). The review found Stage 2 works would not result in incremental or cumulative impacts on Aboriginal heritage.

Environment – Heritage

Issue 2

The long-term storage and curation arrangements for Aboriginal objects recovered from the investigation program and triggers for Phase 2 investigations have not been provided.

Response 2

The Construction Environmental Management Framework (Appendix B of EIS 2) details the heritage management objectives to be included in the Heritage Management Plan. These objectives include procedures for archival recordings undertaken of any heritage item and provisions for unexpected Aboriginal Heritage finds. Details regarding storage and curation agreements would also be included in the Heritage Management Plan.

Operation – Public safety (flooding)

Issue 3

EIS 2 appears to follow acceptable floodplain risk management practice and is considered reasonable, subject to the below clarification:

An increase in flood level up to 0.5 metres in PMF flood events in Old Windsor Road and the Transit-way near the intersection with Samantha Riley Drive is indicated (pages 37 to 38 AECOM Surface Water and Hydrology – EIS 2, 18 October 2012). Although the overall flood extent would not increase significantly in the PMF, it should be noted that vehicle stability would be of concern in the above two locations during larger floods. Such points of interest should be identified within an emergency response plan in consultation with the State Emergency Services.

Response 3

Due to the conceptual nature of the station precinct layouts at this stage, flood modelling and assessment of the proposed precinct works was undertaken to provide an upper bound estimate of potential flood impacts and thus identify areas where mitigation measures will be required. In the

absence of design levels within the precincts, proposed works within the floodplain were assumed to be located above existing flood levels for the purposes of flood modelling and assessment.

The assessment presented in Chapter 18 of EIS 2 has identified that for the area of the Kellyville Station precinct north of Samantha Riley Drive, development of design surface levels would need to make provision for overland flows to reduce the potential impacts on Old Windsor Road and its associated function as a flood emergency access. Any residual impacts would be identified within a future emergency response plan to be prepared in consultation with the State Emergency Services.

Operation – Soils / groundwater (flooding)

Issue 4

A conservative precautionary approach should be adopted and appropriate mitigation measures identified to offset potential flood impacts arising from the future development of the North West Growth Centre.

Response 4

Masterplanning information for the North West Growth Centre was used to identify future ultimate development conditions for the catchments and floodplains traversed by the project and thus incorporate these conditions into the assessment of impacts and mitigation measures. Refer to Chapter 18 for further details.

Issue 5

A strategy to maintain the 100 year peak discharge flows for the final development condition to existing discharge is acknowledged (pages 40 to 41 AECOM Surface Water and Hydrology – EIS 2, 18 October 2012), however more frequent floods such as a two year ARI flood should be considered in the on-site detention strategy.

Response 5

The on-site detention strategy would be supplemented with appropriate Water Sensitive Urban Design measures such as grassed swales, bioretention systems and use of rainwater harvesting at buildings to provide a holistic system that caters for both larger (100 year) and more frequent (2 year) storm events. This would be addressed in accordance with relevant requirements during the detailed design phase.

5.6 Roads and Maritime Services

Construction – Traffic and transport

Issue 1

The design and construction of any new construction site accessing any classified road shall be in accordance with Austroads, AS2890.1 - 2004, AS2890.2 - 2002 and RMS requirements.

Response 1

RMS's comment is noted.

Operation – Traffic impacts

Issue 2

In relation to the Stage 2 Environmental Impact Statement, RMS will require participation in an enhanced Transport and Traffic Liaison Group (similar to that required in Application SSI-5100, to broaden the temporary/construction phase and include the permanent traffic and transport measures required to accommodate functionality at all NWRL stations, service facility precincts and related intersections, at the day of opening.

Response 2

Mitigation measure T12 in Table 9.25 of EIS 2 identifies that the Traffic and Transport Liaison Group would continue to function during Stage 2 construction works.

Issue 3

The design and construction of any permanent vehicular access to any classified road shall be in accordance with Austroads, AS2890.1 - 2004, AS2890.2 - 2002 and RMS requirements.

Any proposed road infrastructure works, road restoration works, vehicular access roads or signalised intersections located along the classified State road network, including any new signalised intersections and / or other modifications to existing traffic signals on the local road network, shall be designed to meet RMS requirements. The design requirements shall be in accordance with Austroads, RMS supplements and technical directions, and other Australian Codes of Practice. The certified copies of the civil, structural and traffic signal design plans shall be submitted to RMS for consideration and acceptance prior to commencement of any Stage 2 NWRL works.

Response 3

RMS's comment is noted.

Communication – Consultation

Issue 4

RMS supports Transport for NSW's collaborative approach to the further development of the State Significant Infrastructure (SSI) reference design to meet Whole-of-Government transport objectives and operational requirements.

Response 4

RMS's comment is noted.

Planning – Approval process

Issue 5

RMS has reviewed the Stage Two Environmental Impact Statement and notes that a number of conditions stipulated within the SSI-51 00 Approval would be equally applicable to the current proposal (SSI-5414).

These are as follows:

- Schedule C - Environmental Performance: Condition numbers C23 through to C32.
- Schedule E - Construction Environmental Management: Condition Numbers E25, E31, E35 through to E37, E39, E40, E45, E46c and E47.

Response 5

RMS's suggested approval conditions are noted.

Construction – Cumulative impacts

Issue 6

Condition E45e should be modified to include the following additional environmental performance issue - (xii) Cumulative Impacts:

"As part of the CEMP, the proponent would consult with RMS to identify all other significant developments occurring in the vicinity of the construction sites and identify environmental impacts to be monitored during construction which have the potential for cumulative effects to occur. Any new impacts identified during construction would be addressed appropriately to reduce the cumulative effects and reported."

Response 6

Consultation with RMS regarding cumulative impacts would primarily be undertaken via the Traffic and Transport Liaison Group required by the Stage 1 approval condition C28 (and any equivalent condition of approval for Stage 2). The addition of a requirement to condition E45e, which requires the Construction Environmental Management Plan to address environmental performance issues, is not considered necessary or reasonable.

5.7 Blacktown City Council

Construction – Access

Issue 1

The relocation of Cudgegong Road will need to incorporate access to the existing properties on the east side, particularly given the proposed Endeavour Zone Substation. Ownership of the proposed landscape area (Figure 6.39) will need to be resolved.

Response 1

The need for access to be maintained from the relocated section of Cudgegong Road is acknowledged. The details of this access would be provided in the Construction Traffic Management Plan.

Construction – Surface water and flooding

Issue 2

The location of the Tallawong Road Stabling Yard will need to be co-ordinated with the proposed Schofields Road extension and upgrade, particularly at the Schofields Road – Hambledon Road intersection. Stormwater detention is to service the entire site to attenuate post-development flows to no higher than pre-development flows for the full range of ARI from 1 in 1-year to 1 in 100-year (Figure 6.43).

Response 2

Liaison is occurring and will continue to occur with RMS regarding the proposed Schofields Road upgrade and extension.

An holistic approach to stormwater management will be provided that includes stormwater detention and Water Sensitive Urban Design measures such as grassed swales, bio-retention systems and use of rainwater harvesting at buildings. These measures will be designed in accordance with relevant requirements to manage increases in peak flows within the downstream systems for storms up to the 100 year ARI event. Due to the location of the site within the middle reaches of First Ponds Creek catchment, the stormwater detention measures considered in the detailed design will need to be designed to consider the interaction of site discharges with the broader catchment flows in First Ponds Creek.

Issue 3

Any encroachment of the Tallawong Road stabling yards into the existing First Ponds Creek extents should have no adverse impacts on the existing flooding conditions, including flood storage.

Response 3

Section 18.5 of EIS 2 states that Tallawong Stabling Facility is located outside the First Ponds Creek catchment. Apart from appropriate drainage design, no additional flood mitigation measures would be required.

Issue 4

The Precinct Planning for the Riverstone East Precinct has not commenced, therefore the proposed strategy for stormwater management is not yet known. If the NWRL project was to rely on a future regional detention strategy, then financial contributions to that scheme should be included as part of the project costs. However, given the uncertainty on timing and the need to ensure no impact on drainage lines, full on-site detention as part of the project is expected to be the most practical outcome for the Tallawong Road stabling yard site drainage to First Ponds Creek.

Response 4

TfNSW will liaise with Blacktown City Council through the detailed design process to identify the most appropriate stormwater management solution. Refer also to the response to issue 2.

Issue 5

Appropriate stormwater quality and Water Sensitive Urban Design measures should be implemented in the detailed design. These measures should be located within the project footprint.

Response 5

The requirement to incorporate sustainability initiatives, such as Water Sensitive Urban Design, is included in the design principles listed in Section 6.5.3 of EIS 2.

Construction – Heavy vehicle movements

Issue 6

Access to the Windsor Road Viaduct construction site for heavy vehicles is proposed via two access points, Windsor Road and Schofields Road. At the Schofields Road access point, all vehicle movements are proposed. Movements at the Schofields Road access point should be limited to right in and left out only such that the amenity of the local road network is not compromised.

Response 6

Scope exists to restrict movements of NWRL construction traffic via the proposed access to Schofields Road (in the vicinity of Terry Road) in order to limit access along that section of Schofields Road west of the access point. This would be further investigated and detailed as part of the Construction Traffic Management Plan process and via the Traffic and Transport Liaison Group.

Issue 7

The alternative (left in, right out) access proposed for inbound and outbound heavy vehicles at the Tallawong Stabling Facility along Schofields Road should be removed.

Response 7

Scope exists to restrict movements of NWRL construction traffic via that section of Schofields Road west of the access point. This would be further investigated and detailed as part of the Construction Traffic Management Plan process and via the Traffic and Transport Liaison Group.

Construction – Traffic and transport

Issue 8

A number of local road upgrades and signalisation of intersections are proposed. Request for detailed design of proposed works to be made available for review and comment.

Response 8

TfNSW will liaise with Blacktown City Council regarding local road upgrades and signalisation of intersections through the Construction Traffic Management Plan process and the Traffic and Transport Liaison Group.

Issue 9

Request for further details on the proposed establishment of a local road system parallel to the rail line and connecting Cudgegong Road and Tallawong Road as part of the development of the Cudgegong Road Station.

Response 9

TfNSW would liaise with Blacktown City Council regarding NWRL construction traffic access through the Construction Traffic Management Plan process and the Traffic and Transport Liaison Group.

Operation – Traffic impacts

Issue 10

Support for the proposed upgrade of the Samantha Riley Drive / Newbury Avenue / Old Windsor Road intersection through provision of an additional right turning lane on Newbury Avenue and a through lane in each direction on Old Windsor Road. Existing performance of this intersection is inadequate.

Response 10

Blacktown City Council's comment is noted.

Construction and operation – Noise and vibration

Issue 11

Noise and vibration assessment identifies a number of exceedances above the noise management levels for properties in Kilbenny Street, Farrier Way, Kellyville Ridge, Bentwood Terrace and Stanhope Gardens (predicted to have minor or marginal exceedances above the noise trigger levels for future scenario). Proposed noise mitigation options are considered satisfactory, however noise monitoring should be carried out to ensure that the proposed mitigation measures are effective in reducing noise impacts.

Response 11

The noise and vibration technical paper (Technical Paper 3) of EIS 2 identifies that compliance monitoring for airborne and ground-borne noise during operations will be required to ensure the effectiveness of noise mitigation measures and to ensure that no additional noise mitigation is required.

Issue 12

For the Train Stabling Facility at Tallawong Road, exceedances of the noise criterion are predicted for both the at-opening scenario and for the future scenario for adverse weather conditions. As such, noise monitoring should be carried out to ensure that the proposed mitigation measures have been effective in reducing noise impacts.

Response 12

The noise and vibration technical paper (Technical Paper 3) of EIS 2 includes details of compliance monitoring for airborne and ground-borne noise during operations to ensure the effectiveness of noise mitigation measures and to ensure that no additional noise mitigation is required.

Construction – Community facility impacts

Issue 13

Any impact on open space provision and quality, notably within and around the Area 20 Precinct of the North West Growth Centre, needs to be resolved in accordance with the Department of Planning and Infrastructure's engaged community and open space needs assessment.

Response 13

The NWRL is proposed within the identified transport corridor within Area 20 as identified in the Indicative Layout Plan. The decision to operate the project on a viaduct would not preclude compatible activities, such as open space and local access; rather, it would provide opportunities. Potential impacts on open space provision and quality will be discussed in detail with DP&I and Blacktown City Council. It is acknowledged that DP&I's previous needs assessment will be an important component of any discussions.

Transport – Pedestrian and bicycle access

Issue 14

Support for the proposed pedestrian bridges providing access to Bella Vista, Kellyville and Cudgegong Stations. These bridges should be constructed as part of the NWRL project at no cost to Council or the community as part of any Section 94 Contribution Plan for adjacent residential precincts.

Response 14

It is TfNSW's intention that these bridges would be constructed as part of the NWRL project and at no cost to Blacktown City Council.

Operation – Public safety

Issue 15

Lighting to be provided along the pedestrian bridges at Old Windsor Road at both Bella Vista Station and Kellyville Station to improve visibility at night.

Response 15

Appropriate lighting would be provided on all pedestrian bridges constructed as part of the NWRL project.

5.8 Parramatta City Council

Construction – Sites

Issue 1

Upon review of the EIS documentation for Stage 2 of the NWRL, it would appear that there are no works included within the Parramatta Local Government Area (LGA). However, the Epping Services Facility will be located within several hundred metres and therefore has a potential to impact upon both stakeholders, and the natural and built environments of the Parramatta LGA. In this respect it is requested that appropriate mitigation measures be included during construction and operation, to minimise the impacts of this facility in line with relevant legislation, Australian Standards and other best practice guidelines.

Response 1

A wide range of4 mitigation measures are proposed in EIS 2 that would minimise the impact of the Epping Services Facility during Stage 2 – Stations, Rail Infrastructure and Systems construction and operation. These mitigation measures are reproduced in Chapter 9 of this report.

Planning – Long term transport planning

Issue 2

Council supports the extension of the rail alignment to allow the future Parramatta to Epping Rail Link. Consideration should be given to the potential impact on the NWRL of future infrastructure such as the potential future F3 Freeway to M2 Motorway link.

Response 2

Any future Parramatta to Epping Rail Link or F3 Freeway to M2 Motorway link have been considered in the project presented in EIS 2. The relationship with other major infrastructure initiatives will continue to be considered in the ongoing planning and detailed design of the NWRL.

Construction – Traffic and transport

Issue 3

With respect to additional traffic movements during construction of the Epping Services Facility, appropriate mitigation measures shall be put into place with respect to noise and vibration, traffic management, and pedestrian / cyclist safety, particularly at the intersections of Beecroft Road / Carlingford Road and Ray Road / Rawson Street / Carlingford Road. Car parking for construction workers should be provided on site where possible to minimise on-street car parking impacts within Epping Commercial Centre and surrounding residential areas.

Response 3

A number of mitigation measures are proposed in EIS 2 that would minimise impacts associated with construction traffic at the Epping Services Facility. Some workforce parking would be provided within the Epping Services Facility Construction Site. The Construction Contractor/s would also investigate the need for remote parking locations with shuttle bus services to the construction sites (refer to mitigation measure T10 in Table 9.25 of EIS 2). These mitigation measures are reproduced in Chapter 9 of this report.

Planning – Land use planning

Issue 4

Figure 14.1 in EIS 2 refers to existing land use and community facilities. It is noted that the area nominated as 'Commercial' within the Parramatta LGA reflects the 'B2 Local Centre Zoning' however; existing residential properties are located within this area.

Response 4

Noted. Land use categories in the land use maps in EIS 2 are general and do not always take into account multiple land uses in one locality.

Issue 5

Figure 6.49 in EIS 2 indicates part of the Epping Service Facility Site being subject to a future Master Plan. Any redevelopment of the site should have regard to the existing and desired built form character of the locality, including existing planning controls included within the Parramatta LGA.

Response 5

Future planning of the Epping Services Facility site will be undertaken with appropriate reference to planning controls within the Parramatta LGA. Any future development not directly related to the project would require separate planning approvals under relevant local / State planning controls.

Issue 6

Section 14.5.1 of EIS 2 refers to the *Hornsby Shire Council Epping Town Centre Study*. It is noted that this study was undertaken jointly on behalf of Parramatta City Council, Hornsby Shire Council and the Department of Planning and Infrastructure and is known as the *Epping Town Centre Study*. Parramatta City Council did not formerly adopt the Study. At its meeting of 20 June 2012, Hornsby Shire Council considered a report on *Epping Town Centre Study* and resolved (in part) that:

Council endorse progression of a planning proposal for Epping Town Centre generally in accordance with the *Epping Town Centre Study* subject to a review of the following:

a. Proposed East Epping and Essex Street Heritage Conservation Area boundaries.
b. Proposed Rosebank Avenue Heritage Conservation Area boundaries and the relationship of the area with the Cliff Road residential precinct.
c. Boundaries and heights within adjacent residential intensification precincts in response to a review of the draft Heritage Conservation Areas, existing property capitalisation and issues raised in submissions.
d. Potential heritage and archaeological significance of individual nominated sites.
e. Consideration of alternate urban form, including building heights and envelopes nominated in landowner submissions for properties within the Town Centre Core.
f. Acquisition of the Epping Bowling Club.
g. Short and long term impacts of the North West Rail Link on the Town Centre Core including implications for building heights for properties fronting Beecroft Road.

The relevant positions of each Council should be noted in referencing the *Epping Town Centre Study*.

Response 6

Noted. Future references to the *Epping Town Centre Study* will include appropriate references to each council's position on the study.

Environment – Visual impact

Issue 7

Figure 6.50 in EIS 2 provides an artist's impression of the service facility from Ray Road. However, the facility will be highly visible from Beecroft Road and the Northern Railway Line. Consideration needs to be given to providing adequate landscape screening of the facility from all frontages.

Response 7

The high visibility of Epping Services Facility from Beecroft Road is acknowledged and assessed in Chapter 16 of EIS 2. Opportunities for screening will be sought in accordance with the mitigation measures outlined in Table 16.8 of EIS 2. These mitigation measures are reproduced in Chapter 9 of this report.

Design – Station precincts

Issue 8

While Epping Railway Station is existing, opportunity is available to make provision for upgrades to this station as part of the works program for the NWRL with respect to place making. Such improvements could include better access to the Station from Beecroft Road and the commercial centre (west side) and improving the public domain interface between the Station / Railway Line and Beecroft Road.

Response 8

Upgrades to Epping Station precinct are beyond the scope of the NWRL.

Issue 9

It is noted that Precinct Planning Working Group referred to in Section 14.5 of the document fails to reference Parramatta City Council as a participating member as it relates to Epping. Parramatta City Council supports continued consultation in this respect.

Response 9

The Precinct Planning Working Group was established to consider the new stations on the NWRL (Section 14.5 of EIS 2). As Parramatta City Council is not located in the vicinity of any new stations, its involvement is not referenced.

TfNSW notes Parramatta City Council's interest in Epping Town Centre and would continue to involve council in discussions regarding the impact of the Epping Services Facility on Epping Town Centre.

Construction – Noise and vibration

Issue 10

Noise and vibration would appear to present the greatest environmental impact at Epping. Of particular concern is the potential for Epping to be impacted by construction noise and vibration.

Response 10

The potential for construction noise and vibration impacts at Epping are acknowledged in EIS 2 (and EIS 1). A range of mitigation measures are proposed in Table 10.48 of EIS 2 in order to reduce and manage these impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 11

In Table 10.19 and corresponding Figure 10.8 in EIS 2, the area nominated as 'Area D' is identified as a 'commercial receiver'. It is noted that this is incorrect as the development on the southern corner of Beecroft Road and Carlingford Road comprises an existing mixed use residential and commercial development and recommend that the impact on 'Area D' be reassessed as a 'residential receiver'. It is also noted that the impact upon these existing residential units should not exceed relevant noise level criteria for 'residential receivers' during construction.

Response 11

Construction Impacts on the residential upper levels of the Carlingford Road / Beecroft Road receiver have not been quantified at this stage. These receivers are located approximately 90 metres from the site. The impacts are expected to be less than the impacts on residential receivers in Areas F and G due to the greater set back distance (20 metres and 5 metres respectively). The impacts on these residential receivers will be quantified during the preparation of the site-specific Construction Noise and Vibration Impact Statement for the Epping Services Facility using the residential NMLs.

Issue 12

Mitigation measures must be implemented to minimise noise and vibration impacts upon existing residential and commercial properties during construction. The following recommendations are made:

a. Adoption of recommendations made by SLR Consulting during the detailed design phase of the project in order to address noise and vibration impacts.

b. Setting of performance-based noise and vibration specifications as part of the construction contract.
c. Development of separate Noise and Vibration Management Plans for the construction phase of the NWRL.

Response 12

Proposed noise mitigation measures during construction are listed in Table 10.48 of EIS 2. Various noise management plans will be required to be prepared prior to construction as identified in the Construction Environmental Management Framework (Appendix B of EIS 2). Noise management performance will be regulated via Environment Protection Licences issued by the EPA under the *Protection of the Environment Operation Act 1997*. These mitigation measures are reproduced in Chapter 9 of this report.

Operation – Noise and vibration

Issue 13

Noise and vibration would appear to present the greatest environmental impact at Epping. Of particular concern is the potential for Epping to be impacted by operational ground-borne noise and vibration and operational air-borne noise from the Epping Services Facility.

Response 13

The potential for operational noise and vibration impacts at Epping are acknowledged in Chapter 10 of EIS 2 (and EIS 1). A range of mitigation measures are proposed in Table 10.47 of EIS 2 in order to reduce and manage these impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 14

In Table 10.19 and corresponding Figure 10.8 in EIS 2, the area nominated as 'Area D' is identified as a 'commercial receiver'. It is noted that this is incorrect as the development on the southern corner of Beecroft Road and Carlingford Road comprises an existing mixed use residential and commercial development, and recommend that the impact on 'Area D' be reassessed as a 'residential receiver'. It is also noted that the impact upon these existing residential units should not exceed relevant noise level criteria for 'residential receivers' during operation.

Response 14

The operational ground-borne noise and vibration assessment included these receivers. Noise and vibration impacts at these sensitive receivers are predicted to comply with the design goals.

Issue 15

Mitigation measures must be implemented to minimise noise and vibration impacts upon existing residential and commercial properties during operation. The following recommendations are made:

a. Adoption of recommendations made by SLR Consulting during the detailed design phase of the project in order to address noise and vibration impacts.
b. Development of separate Noise and Vibration Management Plans for the operational phase of the NWRL.

Response 15

Proposed noise mitigation measures during construction are listed in Table 10.48 of EIS 2. Noise management during the operational phase would be managed as part of an Operational Environmental Management Plan as detailed in Section 10.12 of EIS 2. These mitigation measures are reproduced in Chapter 9 of this report.

Environment (construction) – Waterways

Issue 16

Impacts from poor soil and sediment control during construction are possible, including a nuisance from dust on surrounding properties and the potential for discharge of sediments to waterways, causing water pollution. The following recommendation is made:

a. Development of a Construction Environmental Management Plan which includes mitigation strategies for preventing pollution of air and waterways.

Response 16

A CEMP will be prepared by each Principal Contractor during construction as identified in Construction Environmental Management Framework (Appendix B of EIS 2). This will include management strategies for air and water pollution.

Environment (construction) – Sustainability

Issue 17

Council supports the objectives and development of initiatives and targets under the NWRL Sustainability Strategy, particularly in relation to the adoption of renewable energy technologies and the possibility of achieving 100% non-potable water requirements from non-potable supply. There is no reference to whether the use of sustainable building materials has been considered during construction. The following recommendations are therefore made:

a. Development of water quality targets for stormwater runoff and implementation of Water Sensitive Urban Design (WSUD) measures (not just rainwater capture for reuse).
b. Consideration of measures to reduce the urban heat island effect and operational energy costs (e.g. landscaping/ shading elements could be linked to WSUD).
c. Use of sustainable building materials (where possible) during construction / fit out of structures.

Response 17

Sustainability principles are being embedded throughout the project's design and contractual documentation.

Where practical, targets that are currently qualitative will be quantified during the detailed design phase.

Environment (construction) – Flora and fauna

Issue 18

The project will involve the clearing of a small patch of Sydney Turpentine-Ironbark Forest (STIF) at its southern extent at Epping, however it is noted that much of this vegetation is already considered to be in poor condition and that the clearing is unlikely to fragment the STIF community at this location. Devlin's Creek (Lane Cove catchment) is in the vicinity of Epping and is also considered highly disturbed riparian and aquatic habitat as the creek is mostly a concrete or brick lined channel in this area.

Excelsior Creek drains to Parramatta River Catchment, however the Ecological Assessment prepared as part of this EIS states that: *Excelsior Creek is considered to have no existing aquatic habitat or riparian value.*

Notwithstanding this, the following recommendations are made:

a. Investigate and implement opportunities to improve terrestrial and aquatic habitat through undertaking weed control, bush regeneration and implementing WSUD opportunities along the alignment of the NWRL.
b. Consider the cumulative impact of the loss of existing vegetation on the broader vegetation corridor.

Response 18

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

A range of mitigation measures are proposed in Chapter 15 of EIS 1 in relation to weed management and riparian restoration. The total loss of vegetation associated with the NWRL is taken into account in the project's Biodiversity Offset Strategy.

5.9 The Hills Shire Council

Communication – Consultation

Issue 1

Essential that project delivery incorporates engagement activities that allow the community to be involved in the project's actual delivery. This will help manage the impacts on residents by providing an opportunity for them to influence and feel part of the project. Community liaison or reference groups that include key staff would provide a successful model.

Response 1

TfNSW is committed to ongoing community engagement through detailed design and construction. Refer to the project's Construction Environmental Management Framework (Appendix B of EIS 2) for details of the project's Communication and Consultation Strategy.

Issue 2

It is recommended that TfNSW involves Council through on-going consultation and involvement as part of the further planning for the NWRL and the railway station precincts.

Response 2

TfNSW is committed to the ongoing involvement of The Hills Shire Council (and other Councils) in future planning and design stages.

Issue 3

TfNSW should continue to consult Council on the potential implications of the project on the Balmoral Road Release Area.

Response 3

Any implications for the Balmoral Road Release Area will be discussed as part of ongoing consultation with The Hills Shire Council.

Issue 4

TfNSW should ensure that appropriate consultation is carried out with residents and land owners within the vicinity of the railway corridor and railway station sites that will be affected by the construction and operation of the NWRL.

Response 4

TfNSW is committed to ongoing community engagement through detailed design and construction. Refer to the project's Construction Environmental Management Framework (Appendix B of EIS 2) for details of the project's Communication and Consultation Strategy.

Operation – Public safety

Issue 5

Details of fire-fighting, passenger evacuation and rescue arrangements along the entire route of the NWRL should be referred to the relevant emergency services (Fire and Rescue NSW, Rural Fire Service, Police Service, Ambulance Service, State Emergency Service) for their consideration and endorsement prior to the commencement of operations.

Response 5

Appropriate consultation has commenced and will continue to be carried out with emergency services through the detailed design and construction of the project.

Operation – Maintenance

Issue 6

Heavy vehicle access should be provided at ground level along the route of the elevated Skytrain for maintenance and emergency vehicle access.

Response 6

Adequate access for maintenance would be provided for the rail infrastructure along the Skytrain route. It is noted that maintenance access may not be required at ground level (therefore avoiding the need for significant heavy vehicle roads). It is also noted that the emergency response strategy allows for passengers to disembark trains onto the viaduct, with emergency egress and access at all stations.

Issue 7

A detailed Maintenance Management Plan for all above ground facilities should be prepared in consultation with the relevant Councils, to ensure that all structural and landscaped assets are maintained by the NWRL operators to a high standard. Particular attention is to be given to graffiti and litter removal, and soft and hard landscaping maintenance.

Response 7

Maintenance and management responsibilities and the maintenance regime, for publicly accessible above ground facilities will be determined by the operator in consultation with relevant agencies.

Issue 8

Operation spoil and waste management mitigation measures are considered satisfactory.

Response 8

The Hills Shire Council's comment is noted.

Transport – Bus integration

Issue 9

Detailed designs of bus interchanges should be undertaken in consultation with the relevant bus operators with such designs to include appropriate amenity facilities for bus drivers.

Response 9

Detailed design of bus interchanges will be undertaken by TfNSW in consultation with relevant stakeholders including bus operators.

Environment – Sustainability

Issue 10

Expressed under the commitment to leadership in the Sustainability Policy is a commitment to 'explore new benchmarks for the transport infrastructure sector by requiring high standards from our designers, contractors and suppliers'. This commitment is the key principle to assure the success of the project in the context of sustainability. Specifications for further work and design parameters must demonstrate innovation and leadership in the pursuit of the best practical sustainability outcome to assure the overall impacts of the project are acceptable in the community and that the benefits of the project are optimised.

Response 10

TfNSW agrees with The Hills Shire Council's view regarding sustainability. Sustainability principles are being embedded throughout the project's design and contractual documentation.

Issue 11

A number of the sustainability initiatives and targets are not yet quantified. Clear targets should be adopted to establish clear performance standards for project deliverables and future contractors' specifications. For example, offsets for electricity needs of 100% of the operation and 20% of the construction phase of the project should be a commitment rather than undertaking to merely explore options.

Response 11

Table 4.2 of EIS 2 provides a commitment to explore options to offset 100% of the electricity needs for the operational phase of the Project.

Where practical, targets that are currently qualitative will be quantified during the detailed design phase.

Issue 12

A climate change adaptation response should be implemented with particular reference to design specifications for the trains' air conditioning systems and adequate emergency and evacuation procedures should be implemented to adequately address the high (unacceptable) likelihood of heat stress related health impacts on customers associated with failure of train air conditioning units.

As many of the adaptation responses relate to active / energy consuming systems, a commitment to green power for the rail project should be made to assure that Climate Change adaptation actions are not contributing to further intensification of the impacts of climate change.

Similarly the future operator of the rail should be bound to strict greenhouse gas emissions targets consistent with the NSW Government Sustainability Policy.

Response 12

Table 17.6 of EIS 2 identifies a number of typical climate change adaptation responses including responses relating to the thermal comfort of passengers and the train's air conditioning systems.

Table 4.2 of EIS 2 provides a commitment to explore options to offset 100% of the electricity needs for the operational phase of the Project.

Environment – Soils and geology

Issue 13

Mitigation measures proposed in EIS 2 for operational impacts for groundwater and construction impacts for soil erosion are considered satisfactory.

Response 13

The Hills Shire Council's comment is noted.

Issue 14

A post construction monitoring program for ground movement should be established for land slip areas.

Response 14

This issue was addressed and approved as part of Stage 1: Major Civil Construction Works.

A range of mitigation measures (SG2 – SG7) were included in EIS 1 that relate to ground settlement and monitoring of ground settlement above tunnelled areas.

Operation – Traffic impacts / volumes

Issue 15

Mitigation measures proposed in EIS 2 for operational traffic and transport impacts are considered satisfactory.

Response 15

The Hills Shire Council's comment is noted.

Operation – Noise and vibration

Issue 16

With regard to airborne operational noise, it has been assumed that all the noise from the trains will be from the noise of the metal wheels on the metal rails. EIS 2 does not provide consideration of noise from elsewhere from the trains such as squeaks and rattles.

Response 16

The source noise levels used in EIS 2 are based on measurements of all noise during a train passby. While the L_{Aeq} or 'average' noise levels are typically dominated by rolling noise, other short-term higher sounds such as squeaks and rattles are included in the L_{Amax} or 'maximum' noise levels.

Issue 17

It is recommended that a cautious approach be taken in deciding where vibration attenuation is not needed. Where there is any doubt about the impact of vibration, attenuation measures should be applied.

Response 17

The ground-borne noise and vibration modelling process incorporates a +5 dB safety factor to the predictions of ground-borne noise and vibration to accommodate uncertainty such as atypical ground conditions and / or abnormal building construction methods which could lead to higher than anticipated levels.

Issue 18

The adopted residential trigger or planning goals for night time noise should be 50 dB(A) rather than the proposed 55 dB(A) in consideration of the area in which the train line is proposed. Further the draft Rail Infrastructure Noise Guideline recommends 50 dB at night for light rail. It provides 55 dB at night for heavy rail which is defined as operating passenger and / or freight trains. No freight trains are proposed. The Industrial Noise Policy also recommends general planning goals of 45 or 50 dB(A) as the maximum for an urban area at night.

Response 18

The applicable guideline for operational rail noise is the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP). IGANRIP is the current NSW operational rail noise guideline and its use is mandated by the Director General's Requirements for the application. The IGANRIP trigger levels for a new rail line at night are 55 dBA $L_{Aeq(9h)}$.

The *Rail Infrastructure Noise Guideline* (RING) has been released as a draft for consultation but is not applicable to this project. Nevertheless, the RING trigger levels applicable to the NWRL would be the heavy rail trigger levels which are the same as the IGANRIP triggers. The RING states that "Heavy rail operates at higher speeds and has a higher carrying capacity than light rail" and " Light rail refers to a passenger transport system that generally operates at a lower speed and capacity than heavy rail, does not use locomotives to haul the carriages and may operate on shared roadways with other road vehicles". The NWRL rolling stock is expected to be 8-car train sets, operating at up to 130 km per hour in a dedicated corridor. These characteristics along with the passenger capacity are generally similar to existing heavy rail passenger trains on the Sydney Network.

With reference to the *Industrial Noise Policy* (INP), Section 1.3 of the INP specifically states that noise from transportation corridors is not dealt with by the INP.

Issue 19

Continuous welded rail should be provided to reduce noise impacts.

Response 19

Continuously welded rail would be provided, consistent with current practice for new rail line construction.

Issue 20

A schedule of periodic noise modelling of the operation of the rail line (at least every two years) is required as noise attenuation methods will largely be reliant upon noise dampeners and noise absorption materials which can perish and wear over time resulting in gradual increases in noise levels.

Response 20

Rail dampers are designed to last for the life of the rail. The durability of absorptive materials varies with different products. The operator will be required to conduct ongoing maintenance as required to maintain performance.

EIS 2 identifies the requirement for noise monitoring to be undertaken after opening to assess compliance. Longer term compliance monitoring would be conducted if required by the Conditions of Approval. This is a matter for consideration by the Department of Planning and Infrastructure.

Environment – Heritage

Issue 21

Views to Mungerie House from Windsor Road must also be considered in the design and placement of the viaduct and its piers.

Response 21

While there are fundamental engineering requirements that will drive the location of the viaduct and pier configuration, the importance of views to and from Mungerie House is acknowledged. There may be some flexibility to adjust pier locations to be sensitive to these views. Landscape treatments in this area would also be focussed on minimising the impact of the viaduct on Mungerie House.

Mitigation measures EH10, EH11 and EH12 provide specific requirements related to Mungerie House.

Issue 22

During the detailed design for the viaduct and consideration of view corridors, TfNSW should consult the Mungerie House Conservation Management Plan (2007) prepared for Lend Lease by Tanner Architects and endorsed by Council as it contains important information regarding views corridors and the setting of Mungerie House.

Response 22

The Conservation Management Plan for Mungerie House will be referred to in the detailed design process together with mitigation measures EH10, EH11 and EH12.

Issue 23

Mitigation measures proposed in EIS 2 for indigenous heritage impacts are considered satisfactory.

Response 23

The Hills Shire Council's comment is noted.

Issue 24

Negotiations should continue with Council and the Castle Hill RSL Sub-Branch regarding the relocation of the war memorial and other historic monuments within Arthur Whitling Park. TfNSW should also consult with the Hills District Historical Society with regard to the railway heritage and war memorial monument within the Arthur Whitling Park.

Response 24

This issue was addressed and approved as part of Stage 1: Major Civil Construction Works.

TfNSW will continue to consult with a range of relevant stakeholders during detailed design, regarding the heritage items in the vicinity of Arthur Whitling Park.

Construction – Business impacts

Issue 25

NSW Small Business Commissioner should be encouraged to assist in the education of business operators with construction issues that may impact their business. Putting in place business continuity strategies now could help them manage the impacts of this major infrastructure project in the future.

Response 25

Condition of approval E32 for Stage 1: Major Civil Construction Works requires the preparation of Business Management Plans.

Section 4.5 of the Construction Environmental Management Framework (Appendix B of EIS 2) identifies a range of activities that would be undertaken to minimise impacts on businesses. This includes the development of a Business Management Plan by each Principal Construction Contractor. TfNSW has met with the office of the NSW Small Business Commissioner and will continue to liaise with this agency.

TfNSW has established a relationship with Industry Capability Network (ICN) to identify local business opportunities for Australian and New

Zealand Small and Medium Enterprises (SMEs). The project will be listed on the ICN gateway website and SMEs will be able to register through the gateway. Listing would promote the project and provide key transaction milestones to Tier 2 and Tier 3 suppliers and contractors.

Issue 26

Businesses should be encouraged to prepare well in advance for any impacts caused by the construction of the NWRL. Consideration should be given to how staff and customers might be impacted, eg travelling to and from business premises, especially close to construction zones such as Castle Hill, Carrington Road and Norwest Boulevard.

Response 26

Condition of approval E32 for Stage 1: Major Civil Construction Works requires the preparation of Business Management Plans.

These factors would be considered as part of the measures listed in Section 4.5 of the Construction Environmental Management Framework (Appendix B of EIS 2).

Issue 27

An awareness campaign regarding the Small Biz Connect program, which is delivered in partnership with the University of Western Sydney, could provide comprehensive business continuity education for small businesses affected by the NWRL.

Response 27

This suggestion is noted, and will be passed onto Principal Construction Contractors for consideration of inclusion in Business Management Plans.

TfNSW has established a relationship with Industry Capability Network (ICN) to identify local business opportunities for Australian and New Zealand Small and Medium Enterprises (SMEs). The project will be listed on the ICN gateway website and SMEs will be able to register through the gateway. Listing would promote the project and provide key transaction milestones to Tier 2 and Tier 3 suppliers and contractors.

Issue 28

Small Business Commissioner to commence a study into the structural adjustment and support required for specific small businesses directly affected by the construction work.

Response 28

TfNSW has met with the office of the NSW Small Business Commissioner and will continue to liaise with this agency.

Planning – Land use planning

Issue 29

Offset sites should be identified and procured prior to works commencing that involve the removal of ecology. It is requested that specific priority be given to securing offset sites as near to the location of the impact / loss as possible, to assist with the preservation of the specific endemic community of the area and assure that the ecological and amenity benefits of retaining endemic vegetation remain within the Local Government Area.

Response 29

The process of securing ecological offsets has commenced with a number of sites being identified. Offset sites will be secured in the Sydney Metropolitan Catchment Management Authority and Hawkesbury Nepean Catchment Management Authority regions.

Issue 30

Request for TfNSW to work with Council as part of the planning for key development sites around the future railway stations which may occur prior to the completion of the precinct planning process. On-going consultation is imperative to ensure that any future development at these key sites integrates with the future railway stations and supports the on-going operation of the NWRL.

Response 30

The Department of Planning and Infrastructure is leading a precinct planning process that will guide the planning of the area surrounding proposed stations. Consultation with Councils is a fundamental component of this process.

Issue 31

TfNSW should continue to consult Council on the potential implications of the project on the Balmoral Road Release Area.

Response 31

Any implications for the Balmoral Road Release Area will be discussed as part of ongoing consultation with The Hills Shire Council.

Operation – Light spill

Issue 32

Lighting for the Skytrain should be designed to minimise light spill.

Response 32

Light spill from the project, including the skytrain, is dealt with in mitigation measure OpV2 (Table 16.7 of EIS 2). This mitigation measure is reproduced in Chapter 9 of this report.

Construction – Spoil and waste management

Issue 33

Construction spoil and waste management mitigation measures are considered satisfactory.

Response 33

The Hills Shire Council's comment is noted.

Project – Need for project

Issue 34

The successful completion of the NWRL project will provide a critically important public transport option for existing and future residents of The Hills Shire and the North West Growth Centre.

Response 34

The Hills Shire Council's comment is noted.

Design – Alternatives

Issue 35

As recommended in EIS 1, Council maintains its position on the entire project being built underground.

Response 35

The Hills Shire Council's position is noted. The rationale for locating sections of the alignment above ground in parts is provided in the Staged Infrastructure Modification Assessment (Chapter 6 of EIS 1).

Environment – Visual impact

Issue 36

EIS 2 is still silent on the ultimate design of the viaduct, however, it is expected that the detailed design stage will give particular consideration to making the structure interesting and visually appealing. The ultimate design should incorporate measures to reduce the visual impact and where possible use engineering art to decorate and provide visual interests where landscaping cannot be adequately provided.

The possible use of the viaduct for advertising is an ongoing concern for Council.

Response 36

Section 6.20 of EIS 2 includes a number of design principles that will form the basis of detailed design of the viaduct structure. Many of these principles are concerned with the visual quality of the structure.

At this stage, the use of the viaduct for advertising has not been proposed or assessed and therefore does not form part of the SSI project.

Construction – Surface water and flooding

Issue 37

All site staff should be engaged through toolbox talks or similar with appropriate training on soil and water management practices.

Response 37

Toolbox training of staff in relation to soil and water management would be a fundamental requirement of construction contractors.

Issue 38

A stormwater management plan which identifies the appropriate design standard for flood mitigation based on the duration of construction, proposed activities and flood risks for each construction site should be developed.

Response 38

NWRL Principal Construction Contractors would develop and implement a Soil and Water Management Plan for their scope of works as required by Section 15.2 of the Construction Environmental Management Framework (Appendix B of EIS 2). In addition, NWRL Principal Construction Contractors would develop and implement progressive erosion and sediment control plans (ESCPs) for all active worksites in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) (known as the "Blue Book").

Issue 39

An evacuation plan for flooding events should be developed which includes procedures that ensure threats to human safety and damage to infrastructure are not exacerbated during the construction period.

Response 39

Appropriate evacuation procedures for construction will be developed in the pre-construction phase of the project.

Design – Station design

Issue 40

The Hills Shire Council requests that the station known as "Showground" in the exhibited EIS2 documentation be renamed as "Sydney Hills" station.

Response 40

TfNSW has determined that "Showground" will be used as the working name of this station as it best represents its precise location.

Prior to opening the NWRL, an application would be made to the Geographic Names Board seeking formal approval for each station name (in accordance with the *Geographical Names Act 1966*).

Operation – Soils / groundwater

Issue 41

A post construction monitoring program for groundwater levels should be established for land slip areas.

Response 41

Mitigation measures SG17 and SG18 (Table 8.7 of EIS 2) require groundwater to be monitored at appropriate locations along the project alignment. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 42

A management plan should be implemented for the reuse of captured groundwater.

Response 42

Mitigation SG24 (Table 8.7 of EIS 2) identifies that groundwater captured during construction would be used for construction purposes where reasonable and feasible.

Mitigation measure OpSG5 (Table 8.6 of EIS 2) identifies that feasible and reasonable opportunities would be identified for the re-use of captured groundwater during operations.

These mitigation measures are reproduced in Chapter 9 of this report.

5.10 Hornsby Shire Council

Design – Ventilation

Issue 1

The EIS identifies that ventilation shafts will be provided within underground stations to allow for effective natural ventilation and supplementary mechanical ventilation and that a number of service buildings would be required within each station precinct. These facilities would supply fresh air to stations and tunnels and discharge air from the tunnels and station environment. The systems would also provide ventilation in the event of fire to ensure suitable conditions in the tunnel for safe egress of passengers and safe access for the emergency service personnel. In the event of fire, smoke-laden air would be discharged to the atmosphere.

Whilst the EIS indicates that emissions would not affect air quality, it is unclear whether discharge during normal operation and during the event of fire will result in restrictions on adjoining land uses or if the setback requirements will be wholly accommodated within the development site.

Response 1

There would be minimal impacts on adjacent land uses during normal operations. The presence of smoke during a fire is unlikely to result in restrictions on land uses, however there may need to be consideration of the possibility of smoke from the project in detailed design of new buildings close to a ventilation outlet, such as in the specific location of inlets for building services, and the location of fire stairs and exits.

Design – Community facilities

Issue 2

The following are requested at Cheltenham Oval:

- An amenities building with canteen, change rooms, toilets, showers, a clubroom and storage space for club and council equipment is required.
- A rectangular paved area with capacity for four netball courts is to be provided.
- The netball court area should be configured so that some courts could be used for car parking instead of courts.
- A children's playground with a direct line of sight to the oval proper and the replacement netball courts is desirable.

Response 2

These specific requests from Hornsby Shire Council are acknowledged and will be considered further during detailed design. TfNSW would undertake ongoing consultation with relevant stakeholders including Hornsby Shire Council to determine the final outcome for the replacement of community facilities at Cheltenham.

Planning – Land use planning

Issue 3

Future land use planning measures must take into account the rail link and include relevant mitigation measures in relevant design / planning requirements. To enable Council to have regard to the potential impact of the rail network on adjacent land uses, current information must be provided to Council to enable the

approved tunnel location to be determined in respect of property cadastre. In this respect, the latest shape file data of the tunnel is requested.

Response 3

This information has previously been provided to all relevant local councils and will be provided to Hornsby Shire Council and updated as appropriate.

Issue 4

The clustering of land uses around public transport nodes are supported, including the clustering of retailing, mixed use and residential functions within the station precinct to encourage sustainable transport modes and reduce the need for private vehicle use. However, with respect to Cherrybrook Station, Council's current and draft planning instruments do not facilitate development within the precinct.

With respect to the walkable catchment, Council notes that the NWRL operation is predicted to stimulate development within the area surrounding this station, particularly medium density housing. The EIS notes that this would increase the dwelling stock and choice and would increase the population density within the area over the longer term. However, with respect to Cherrybrook Station, Council's current and draft planning instruments do not facilitate development within the walkable catchment.

Although Council is currently participating in structure planning activities with the Department of Planning and Infrastructure, land owners within the walkable catchment are requesting that Council progress the rezoning of land within these areas ahead of the release of any Structure planning investigations. Council does not support the rezoning of these lands ahead of the Department's release of the Structure Planning activities for Cherrybrook. It is requested that the State Government provide advice to Council and the public with respect to when the draft structure plan will be made public so that Council can appropriately program the potential rezoning and delivery of development within these precincts into its strategic planning and infrastructure provision programs.

Response 4

The draft precinct structure plans are proposed to be exhibited in the first half of 2013. These will provide the relevant councils with information to progress investigations for future land use zones.

Construction – Noise and vibration

Issue 5

The noise and vibration assessment within the EIS includes the identification of mitigation and management measures to minimise construction noise and vibration impacts. It is requested that the mitigation measures and protocols proposed are strictly imposed and enforced. Reporting of compliance measurements should be made available to the public on a regular basis.

Response 5

Mitigation measures during construction would be enforced through a number of means, including by the EPA through the issue of Environment Protection Licences. Environmental monitoring and compliance records would be made publicly available as required by an Environment Protection Licence or conditions of approval.

Issue 6

Concerns are raised in relation to predicted noise exceedances of more than 20 dB of the Noise Monitoring Levels (NMLs) at the Cherrybrook site. Exceedances of this level are predicted for the construction of the car park at residential areas adjacent to the site.

Further to this, minor exceedances are predicted at residential areas during the station platform supporting structure and station building construction. Similarly, minor exceedances are predicted at residential areas during the installation of rail systems equipment.

Response 6

The predicted exceedances of the NMLs at Cherrybrook Station during car park construction are the result of the close proximity of the works to adjacent residential areas. As stated in the *Interim Construction Noise Guideline*, some noise from construction sites is inevitable. NWRL is committed to implementing all feasible and reasonable construction noise mitigation measures at Cherrybrook Station and elsewhere, managed using the procedures described in the Construction Noise and Vibration Management Strategy.

Issue 7

Construction traffic noise increases are assessed in Chapter 10 of EIS 2.

Response 7

Hornsby Shire Council's comment is noted.

Construction – Cumulative impacts

Issue 8

The EIS identifies the impacts that would affect the operation of local businesses as a result of the operation of the NWRL including:

- Businesses such as Accommodation, Cafes and Restaurants in the surrounding station precinct may potentially experience increased competition as new businesses are established to meet the growth in demand.
- Increased patronage and demand from existing and passing trade may result in upward pressure on rental cost to businesses due to increased demand for shop spaces (eg local food eateries, take away outlets, cafes or convenience stores).
- The project's implementation at Epping would provide enhanced accessibility for skilled professionals residing in the north western suburbs. This is expected to support existing and new business activity as an increasing number of patrons use the existing Epping Station (ie Property and Business Services and Finance and Insurance Businesses in Epping).
- Reduced accessibility, including loss of parking from construction vehicles.
- Poorer visibility, either through reduced passing traffic or through obstruction of views by construction sites and materials.
- Reduced operational quality (noise, air vibration disturbance).
- As detailed in the vibration and acoustic section, a number of businesses in the vicinity and adjoining Epping Services Facility and Cherrybrook Station may experience a significant reduction in amenity.

Cumulative impacts from Stage 1 and Stage 2 construction works on local businesses in the Hornsby Shire such as changes to accessibility, reduced visibility and reduced operating amenity may be prolonged for a greater period of time as a result of Stage 1 and Stage 2 construction activities and traffic generated (refer to Chapter 9 of EIS 2). The cumulative impact would last between 4 and 5 years depending on the site. Council requests that measures to mitigate the cumulative impact of works on local business continue to be monitored. Information regarding contact details for construction complaints should be made available to Council and the public. The singular source for the recording and documenting of responses should be made public and should be monitored by the authority with government overview of the monitoring of the cumulative impacts of the NWRL and Third Track projects.

Response 8

The cumulative impact of the two project stages on businesses is acknowledged. The proposed processes for managing impacts on businesses and for managing complaints are identified in the Construction Environmental Management Framework (Appendix B of EIS 2).

TfNSW has established a relationship with Industry Capability Network (ICN) to identify local business opportunities for Australian and New Zealand Small and Medium Enterprises (SMEs). The project will be listed on the ICN gateway website and SMEs will be able to register through the gateway. Listing would promote the project and provide key transaction milestones to Tier 2 and Tier 3 suppliers and contractors.

Issue 9

Concern raised regarding the extent of potential cumulative impacts associated with the NWRL and the Northern Sydney Freight Corridor Epping to Thornleigh Third Track project. Council requests that opportunities for reducing potential cumulative impacts from the two projects be investigated and implemented.

Response 9

TfNSW will ensure liaison occurs between the project teams of these two projects to minimise cumulative impacts.

Construction – Spoil and waste management

Issue 10

Council requests that the protocols for the assessment of contaminated water and the disposal of wastewater are strictly regulated, imposed, and enforced on all operators and sub-contractors to ensure that waste water is disposed of to authorised sites.

It is unclear whether it is intended that wastewater be disposed of through Council's stormwater system and / or into local watercourses. Strategic Planning suggests that the Bushland and Biodiversity Team may wish to address this matter further. This may potentially require consultation with Council and / or directions for stormwater to be disposed of to Council's stormwater system and / or into local watercourses.

Response 10

Stormwater from within construction sites would generally be reused onsite, transported from site or discharged to local watercourses after appropriate treatment. This would be regulated via Environment Protection Licences associated with each major construction contract. Stormwater during the operational phase would be discharged to local waterways after appropriate treatment on-site through the application of water sensitive urban design principles.

Issue 11

It is not clear how groundwater is to be dealt with during the NWRL construction phase.

Section 8.5.3 states that "Discharge from the plant at this location (Lady Game Drive, Lindfield) occurs near the confluence of the Lane Cove River and Blue Gum Creek. The plant at this location on the Lane Cove River is considered preferable to other potential discharge locations such as Cattai Creek".

This suggests that Blum Gum Creek is the only creek to be used as a discharge point during the operation of the NWRL, however Table 8.7 detailing mitigation measures during the construction of the NWRL states under SG27 "Where water salinity is found to be too high for discharge to creeks, brackish water reverse osmosis would be undertaken". It is requested that further details be provided in relation to whether any discharge will occur to local creeks within Hornsby Shire.

If discharge to Hornsby Shire local creeks is proposed, discharge points and methods of treatment should be notified to Council.

Response 11

Discharge of groundwater to local creeks during construction would be subject to the provisions of the relevant Environment Protection Licence.

The existing water treatment plant at Lady Game Drive is proposed to treat and discharge groundwater from NWRL during the operational phase.

Construction – Traffic and transport

Issue 12

Construction traffic accessing Epping and Cheltenham Oval Service facilities will use local roads like Ray Road, Kirkham Street and perhaps Kandy Avenue. Proposed hours of work is 7am – 6pm Mon-Fri, 8am –1pm Saturdays. This will have a significant impact on weekday peak hour traffic conditions particularly at the Carlingford Road / Ray Road / Rawson Street and Beecroft Road / Kirkham Street intersections. Construction traffic may result in damage to road pavement.

Response 12

Construction traffic impacts are assessed in Chapter 9 of EIS 2. The assessment indicates that the introduction of construction traffic at these sites would not have a significant impact on the performance of any surrounding intersection. Construction traffic mitigation measures are identified in Table 9.25 of EIS 2 and reproduced in Chapter 9 of this report.

Mitigation measure T18 in Table 9.25 of EIS 2 requires a dilapidation survey to be undertaken for local roads prior to construction.

Construction – Air quality

Issue 13

Construction traffic may result in an increase in general levels of dust.

Response 13

Dust generated by construction traffic and other construction activities would be managed via the mitigation measures A1 to A10 listed in Table 19.4 of EIS 2. These are reproduced in Chapter 9 of this report.

Construction – Community facility impacts

Issue 14

The following temporary measures are requested at Cheltenham Oval:

- Retain access to the oval proper for maintenance vehicles and ambulance.
- Provide basic temporary amenities including a canteen, toilets and a small area for changing and some storage for club equipment.
- The existing small old building to the north west of the ground could be retained instead of demolished and it might provide some of the temporary amenities.
- Storage containers may fit on the eastern extremity of the oval proper, outside the fence.
- Soccer could remain operational throughout the construction period through the provision of the abovementioned amenities.
- Cricket could remain operational as above and if the existing cricket nets are permanently relocated in the south-western corner of the oval proper, outside the existing fence.
- Netball will require two courts in another location for temporary operation for the duration of construction.
- Cheltenham Sports Club or Cheltenham Girls High School have existing courts that could be used for netball training if floodlights are provided.
- A footpath on Castle Howard Road will be required to allow access during construction due to the loss of off-street parking at the ground.

Response 14

These specific requests at Cheltenham Oval from Hornsby Shire Council are acknowledged and will be considered during detailed construction planning. Discussions with local sports group will be undertaken to determine the need for alternate netball facilities during construction. Additional footpaths on Castle Howard Road are not proposed as part of the NWRL project.

Transport – Rail integration

Issue 15

Under the planned NWRL, the existing Epping to Chatswood Rail Line will be modified for single deck trains exclusively. As a consequence, this line will no longer be compatible with the current double deck network. Passengers from Cheltenham, Beecroft, Pennant Hills, Normanhurst and Thornleigh will have to catch three trains to access stations between Chatswood and Milsons Point instead of the one direct route that is now provided. This will increase their travel times and may consequently force more cars back onto the roads in these areas.

A commitment should be provided to ensure that the Metro system is extended throughout the North Shore to Sydney CBD as soon as possible.

Response 15

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

Sydney's Rail Future: Modernising Sydney's Trains introduces single deck, rapid transit transport trains on the NWRL project.

The NWRL has been identified as a key priority railway transport infrastructure project which would provide a significant expansion to Sydney's rail network in an area of future population and jobs growth.

Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods), will be operated with new generation single deck trains, advanced signalling and dedicated track. Over time, as demand increases, service frequency could increase up to 20 trains an hour – or one every three minutes.

The NWRL will introduce single deck, rapid transit trains on the Epping to Chatswood Rail Link. Sydney will also have a second crossing under the Harbour linking to a new CBD line and new stations, which will use rapid transit services that will also eventually operate on the Bankstown line and to Hurstville on the Illawarra line.

This plan will eventually enable Sydney Trains to carry another 90,000 to 100,000 people per hour in the peak.

The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Passengers travelling from stations between Hornsby and Epping to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Passengers travelling from stations between Hornsby and Epping to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Transport – Pedestrian and bicycle access

Issue 16

Traffic volumes, pedestrian activity and other multi-modal activities will increase around the proposed Cherrybrook Station precinct once it is operational. The vehicular activity around the station precinct will create conflict with pedestrians and cyclists.

Currently no dedicated cyclist facilities or continuous pedestrian network is available in the vicinity of the proposed Cherrybrook Station. A small number of cyclists currently use Castle Hill Road.

Improvements will need to be made in the following areas:

- Cycling paths, both to and through the station precincts.
- Integration of cycling paths to broader RMS and council cycle networks.
- Detail of cycle parking and other end of trip facilities.
- Landscaping treatment to deter the pedestrian set down or pick up directly from Castle Hill Road, which will be a road safety issue.

The proponent should provide these works as part of the project.

Response 16

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

The station precincts would provide shared pedestrian and cycle paths, off-road and / or designated on-road cycle paths depending on the station. Shared paths would be generous enough to accommodate not only growth in walking and cycling, but also the increasing use of mobility scooters and electric wheelchairs.

Station access for bicycles would be guided by the following urban design guidelines:

- Provide clear, direct bicycle routes throughout precincts and to associated facilities such as to shops, schools.
- Fully integrate bicycle paths into the precinct-wide circulation strategy, and into the bicycle network beyond the precincts; consult with relevant stakeholder groups.
- Provide clear markings or pavement types to separate pedestrians and cyclists on shared paths. Eliminate conflicts between pedestrians and cyclists at high activity zones, eg station entries and retail areas.
- Ensure cycle access routes and lanes are comfortable to use, with even and well-drained surfaces and places to rest.

Transport – Parking availability

Issue 17

Construction traffic may result in loss of on-street parking.

Response 17

The potential loss of some on-street parking during construction in the vicinity of some construction sites is acknowledged. Where sufficient workforce parking is unable to be provided within the construction sites, the Principal Construction Contractors would be required to investigate the option of remote parking location and shuttle bus services to the construction sites (refer to mitigation measure T10 in Table 9.25 of EIS 2). These mitigation measures are reproduced in Chapter 9 of this report.

Issue 18

The proposed Cherrybrook Station would reduce the parking demand at Beecroft, Cheltenham, Pennant Hills and Thornleigh Railway Stations and would save travel time for Hills residents who are currently using these stations. 400 commuter parking spaces and 14 kiss-and-ride spaces will be provided at Cherrybrook Station.

The EIS has not provided any justification for providing the proposed quantum of parking. Since no commuter parking will be provided at the Castle Hill Station, there is a high likelihood that the actual NWRL commuter catchment area for Cherrybrook Station will extend outside the local area. As with almost every station on the Sydney rail network, some of those accessing the station by park-and-ride will park on-street, at distances ranging up to around one kilometre. Parking management over this area is beyond Council's resources. Council will require additional financial assistance to manage increased parking demand in adjoining residential streets and around the station precinct.

Response 18

The number of commuter car parking spaces at Cherrybrook has been determined based on consideration of anticipated demand, land uses and road network constraints. The rationale for the distribution of parking across the NWRL stations is provided in the EIS 2 Technical Paper 2 Section 6.8.

Notwithstanding the identification and provision of commuter parking at selected stations, there may, as occurs at most stations across the rail network, still be a degree of commuter parking on local streets surrounding the stations. In the first instance, this parking demand would be managed by the provision of suitable alternatives to driving to the station, such as good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere is Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Financial assistance for local parking enforcement or the administration of parking schemes is beyond the scope of the NWRL project.

Transport – Bus integration

Issue 19

Council would prefer to see bus and private vehicle access via County Drive and Castle Hill Road in which case road connectivity between the new station precinct road and Robert Road / Franklin Road may be restricted.

If bus access via Robert Road and Franklin Road is necessary, "buses excepted" turn restrictions can be provided with cameras to deter private vehicle access.

Currently three bus routes use John Road between County Drive and Castle Hill Road – including the route from Castle Hill to Pennant Hills Station and the route from Dural to Sydney CBD via the M2. The EIS proposes that these routes will be rerouted to the station via Robert and Franklin Roads. Buses would operate two-way in both Robert and Franklin Roads as far as John Road and Neale Avenue respectively. Parking would need to be banned from both sides of both Robert and Franklin Roads to allow for safe bus operation. A review of bus timetables indicates that the number of bus movements per peak hour will approximately double from 15 currently to 28, and this may rise further with later timetable adjustments.

Council objects to buses being diverted via Robert Road and Franklin Road because –

- Any issues with delays at the intersection of County Drive and Castle Hill Road is a matter for RMS to address. Such delays should not be an opportunity to divert additional traffic onto local residential roads.
- Residential amenity along Robert Road and Franklin Road will be significantly reduced with the loss of on street parking required due to the narrow road widths. As well as the noise and vibration impacts of buses using these narrow roads, the loss of parking will lead to increased vehicle speeds generally.
- Buses on Franklin Road will be in conflict with parent and pedestrian traffic accessing Tangara School and Inala Special School. Even if additional footpaving, traffic management and pedestrian crossings were provided, the congestion during school peaks will affect bus services.

- The impact of running more buses in Robert and Franklin Roads will significantly reduce the life of the road pavement on these roads and Council will require assistance with maintenance funding.

Council considers that the existing route along John Road / Franklin Road / Neale Avenue / Edward Bennett Drive should be retained for local bus patrons and County Drive used for other services.

If buses are to use Robert Road and Franklin Road then parking needs to be retained on street, which may require road widening and / or alternating parking on either side of the street to create a chicane effect.

Response 19

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Operation – Traffic impacts / volume

Issue 20

Traffic volumes on local roads will increase with the proposed Cherrybrook Station. Vehicle access between the station precinct and Robert Road and Franklin Road should be isolated as much as possible. Council would prefer to see bus and private vehicle access via County Drive and Castle Hill Road in which case road connectivity between the new station precinct road and Robert Road / Franklin Road may be restricted.

The proposed left turn slip lane into Franklin Road is not supported. Vehicles using the left turn slip lane will restrict visibility of drivers attempting to egress Franklin Road and this effect will be exacerbated by the bend.

If full vehicle access is permitted between the new station precinct road and local roads, the proposed traffic signals at Castle Hill Road / Robert Road intersection will create a 'rat run' for through traffic. In order to reinforce the proposed intersection arrangement at the new access road, the right turn out of Robert Road into the new road may have to be restricted during peak periods. This will encourage private vehicle access via County Drive which is a higher order road than Robert Road.

Response 20

Access for private vehicles to the station has been designed to give priority to access off Castle Hill Road over Robert Road.

The station access road / Robert Road intersection has been designed with Robert Road impact mitigation in mind as well as providing flexibility in the possible future rationalisation of traffic movements if required. Scope does exist to monitor and revisit the need for peak period right turn access out of Robert Road as suggested by Hornsby Shire Council post NWRL opening. Traffic counts show that there is a very low demand for left turn movements at County Drive, Robert Road and Franklin Road. The installation of traffic signals is unlikely to change these low demands for left turn movements with effectively no 'rat running'. However there will be some additional traffic generated by right turning traffic into Robert Road. The PM through traffic component will be similar to the existing very low left turning movements in the AM peak.

Operation – Noise and vibration

Issue 21

Concerns are raised in regards to the predicted ground-borne vibration exceedances within the Hornsby Shire Local Government Area, particularly the Veterinary Hospital located at 138 Castle Hill Road, West Pennant Hills. Specific mitigation measures should be incorporated into the Operational Noise and Vibration Management Plan for this area.

Response 21

A potential exceedance of the design objective for receivers which may contain highly vibration sensitive equipment has been identified at 138 Castle Hill Road. At this stage it has been conservatively assumed that all medical or veterinary facilities may contain highly sensitive equipment such as

lithography or optical / electronic inspection equipment with a resolution down to 1 micron. Where potential exceedances have been predicted, consultation will be undertaken with the affected receivers in the detailed design stage to establish their actual sensitivity to vibration. The predicted levels are below the vibration levels that would be perceptible to humans, and in many cases are below the typical level of vibration generated by busy roads (such as Castle Hill Road).

Issue 22

It is noted that Table 10.47 states that options would be investigated as part of the detailed design to reduce noise impacts from the operational car parks at Cherrybrook Station. It is recommended that prior to the implementation of feasible and reasonable noise and vibration mitigation measures, Council is consulted with recommendations incorporated into the detailed design.

Response 22

Ongoing consultation with affected stakeholders including Hornsby Shire Council and nearby residents into mitigation measures for noise from car parks at Cherrybrook Station will take place during the detailed design phase. The Operational Noise and Vibration Management Plan (to be prepared prior to commencement of operations) will describe the consultation undertaken and the solution to the identified issues.

Issue 23

The noise and vibration assessment within the EIS includes the identification of mitigation and management measures to minimise operational noise and vibration impacts. It is requested that the mitigation measures and protocols proposed are strictly imposed and enforced. Reporting of compliance measurements should be made available to the public on a regular basis.

The EIS notes that with respect to future development that the control of noise and vibration issues resulting from rail traffic should be the joint responsibility of the rail operator and of surrounding land users.

Response 23

Mitigation measures during operation would be enforced through a number of means. Environmental monitoring and compliance records would be publicly available as required by any Environment Protection Licence or conditions of approval.

Issue 24

It is recommended that noise complaint management is incorporated into the noise response procedures – the Operational Noise and Vibration Management Plans.

Response 24

An operational noise complaint management process would be detailed in the relevant Operational Environmental Management Plan.

Environment – Flora and fauna

Issue 25

Revisions since EIS 1:

- The Epping site is being developed within an existing commercial development and should not result in the loss of any vegetation.
- The Cheltenham site has been modified to exclude the use of the existing walking trail off Castle Howard Road. The access road off Kirkham Street is proposed to be temporary, to be revegetated upon completion of construction. Permanent access is to be provided off Castle Howard Road via the existing entrance and car park adjacent to the netball courts and changing rooms. This will require the removal of additional trees within the traffic island on Castle Howard Road.
- The Cherrybrook Station is within the original footprint and setback from remnant Blue Gum High Forest to the north.
- Biodiversity Offset Package is to be produced within 12 months of start of construction. This package may include site specific Vegetation Management Plans.

Cherrybrook Station:

- There is a footpath to the northern part of the site that proceeds towards the remnant Blue Gum High Forest on privately owned land. It would be a good opportunity to incorporate this footpath into the adjoining Blue Gum High Forest as part of a public reserve.
- Development of the offset package should investigate the acquisition of Blue Gum High Forest in the near vicinity. The offset package should also look at providing funds for the long term restoration of Blue Gum High Forest reserves within Hornsby Shire LGA where the impacts on Blue Gum High Forest occur. Council needs to be consulted during the development of the offset package.

Cheltenham:

- Temporary access off Kirkham Road with bushland to be revegetated at completion of works. It is assumed that the revegetation works will form part of the Vegetation Management Plan for the site. As the manager of bushland in the area, and with the presence of Bushcare volunteers in the reserve, Council should be consulted during the development of the revegetation proposal and VMP to meet the requirements of Council's Vegetation Management and Restoration Guidelines – Level 3 Plan for 5 Years.
- It appears the majority of land affected by the temporary access off Kirkham Road passes through land owned by the RTA with minor intrusions into the bushland reserve. The activity is not consistent with the current Plan of Management. The land upon which the netball courts occupy and also the bushland reserve are Community land and may not be able to have a lease / licence / easement placed upon them as stated in Section 46 of the *Local Government Act 1993*. NWRL proponents need to advise Council as to how they will legally acquire rights to undertake the works on Community land.
- Permanent access to the site is to be provided off Castle Howard Road using the existing access into the car park and netball courts. This will require the removal of an additional 5 trees from the traffic island. These trees need to be offset as part of the Offsets package and may be offset within the landscaped area surrounding the proposed new netball courts.
- The access along Castle Howard Road will be used to access the site during emergencies. The western section of the road is relatively narrow with significant trees in the road reserve. Is it likely that this section of the road needs to be widened, and as such trees removed, due to the requirements of emergency vehicle access? Any additional long-term impacts upon the remnant trees in the road reserve will require inclusion in the offset package.
- The Beecroft-Cheltenham link trail contains interpretive and directional signs. During the construction period these signs will need to be amended or replaced with suitable signs advising users of the changed track route away from the service facility. Options may include removal of existing signs and replacement of amended signs or placing a temporary sticker over the current signs. The Beecroft-Cheltenham link trail brochures will also be required to be amended.

General:

- Mitigation measures (page 15-15) – EIS 2 should also include appropriate Phytophthora and Myrtle Rust procedures.

Response 25

Hornsby Shire Council's suggestions will be discussed as part of Council consultation in the detailed design phase.

In relation to the rights to undertake works on Community Land, section 46 of the *Local Government Act 1993* states that a lease, licence or other estate in respect of community land may be granted for the provision of public utilities and works associated with or ancillary to public utilities. The definition of a public utility undertaking provided in the *Standard Instrument (Local Environmental Plans) Order 2006* states:

> "public utility undertaking means any of the following undertakings carried on or permitted to be carried on by or by authority of any Government Department or under the authority of or in pursuance of any Commonwealth or State Act:

a. railway, road transport, water transport, air transport, wharf or river undertakings"

As such, the NWRL is appropriately defined as a public utility undertaking and can be granted a lease over community land.

An additional mitigation measure was incorporated in the Submissions Report (Preferred Infrastructure Report) for Stage 1 Major Civil Construction Works EIS relating to the management of Phytophthora and Myrtle Rust.

Environment – Heritage

Issue 26

EIS 2 confirms that the Epping and Cheltenham Services Facility and Cherrybrook Station sites will impact on listed heritage items, primarily with respect to the removal of existing vegetation approved under EIS 1. Some replanting will occur as part of the final works.

Cheltenham Services Facility
No additional vegetation, other than that assessed in EIS 1, should be removed for the proposed construction works. Materials, details and finishes should be incorporated into the design of the Facility that respond to the heritage conservation area values of the site to ensure that the operation of the Facility would have a minor visual impact on the conservation area.

Epping Services Facility
Epping Services Facility is described in the EIS as disturbed with a high level of ground surface impact arising from the processes of urban development and provision of transport infrastructure. It is unclear whether replacement tree planting will occur within the site.

Cherrybrook Station
The Cherrybrook Station site currently provides a landscape setting for heritage items within the vicinity. Whilst Council acknowledges that the land use of the site will change significantly as a result of the proposal, the site still provides opportunities for replacement planting to provide landscape setting for items within the vicinity. It is unclear whether replacement tree planting will occur within the site, what species will be provided and whether the planting will provide a commensurate landscape setting.

Response 26

Replacement of trees and other landscape treatments will be considered during the detailed design phase, both from a heritage and an overall visual amenity perspective.

Environment – Visual impact

Issue 27

The *Epping Services Facility, Cheltenham Services Facility and Cherrybrook Station* are all located within areas of high visibility that contribute positively to the visual qualities of the site and the adjoining locality.

The construction timelines provided in the EIS indicate that the boundary walls around the perimeter of the sites (3 metres at Epping and Cheltenham Services Facilities, 6 metres at Cherrybrook Station), along with the 15 metre high acoustic sheds within the sites, are likely to be retained for 2 years after tunnelling has been completed. Although these structures are temporary, they will have a significant impact on the visual qualities of the sites and surrounding localities during the construction period, including impacting on views and vistas from the public domain (M2 corridor and rail corridor) for the following reasons:

- The anticipated period of construction is a considerable length of time.
- The scale and siting of the temporary structures is incongruous with both existing and anticipated future development within the site and within the locality.
- The structures will provide increased opportunities for graffiti.
- The visual impact of these structures will be exacerbated by the removal of existing vegetation screening within the construction sites and within adjoining land to facilitate access.

The EIS indicates that appropriate measures should be incorporated to mitigate the visual impact of the temporary structures, including:

- Incorporating architectural treatment and detailing of finishes within key elements of temporary structures that reflect the context within which the construction sites are located. For example, the Epping Service Facility could include public art depicting key activities and functions within the Town Centre Core and the Cheltenham Service Facility could include public art depicting key activities and functions within the adjoining recreation area.
- The provision of temporary landscaping/planter boxes, where appropriate, to soften views of the construction sites from adjoining sensitive areas.

Response 27

The importance of appropriate management of visual amenity of construction sites is a priority for TfNSW. The Construction Environmental Management Framework (Appendix B of EIS 2) requires visual and landscape management to form part of the Construction Environmental Management Plan documentation for major construction contracts. Additionally Table 16.8 of EIS 2 identifies a number of visual amenity mitigation measures to be implemented during Stage 2 Stations, Rail Infrastructure and Systems construction. These are reproduced in Chapter 9 of this report.

Issue 28

Although landscaping of the proposed Cherrybrook Station, Epping Services Facility and Cheltenham Services Facility sites is proposed as part of the EIS, consideration should be given to planting species that will provide landscaping contribution similar in height and crown to that landscaping currently on site.

Response 28

The replication of existing landscape character will be considered during detailed design. Other considerations will include the need for screening and / or maintenance of views.

Issue 29

The Epping Services Facility, Cheltenham Services Facility and Cherrybrook Station are all located within areas of high visibility that contribute positively to the visual qualities of the site and the adjoining locality. Appropriate measures should be incorporated to mitigate the visual impact of the permanent structures at these sites, including:

- Incorporating architectural treatment and detailing of finishes within key elements of the structures that reflect the context within which the operational sites are located. For example, the Epping Services Facility could replicate the pattern of fenestration and built form that might otherwise have occurred within the commercial site within the Town Centre Core. This will provide for continuity of built form when the adjacent lands are developed in accorda nce with the town centre functions of the locality.
- Incorporating materials, details and finishes in the design of the Cheltenham Service Facility that respond to the heritage conservation area values and landscape elements of the site.
- Providing opportunities within the Cherrybrook Station site for the planting of tree species that will provide a positive landscape contribution commensurate with those species removed from the site.

Response 29

Hornsby Shire Council's comment is noted.

Communication – Consultation

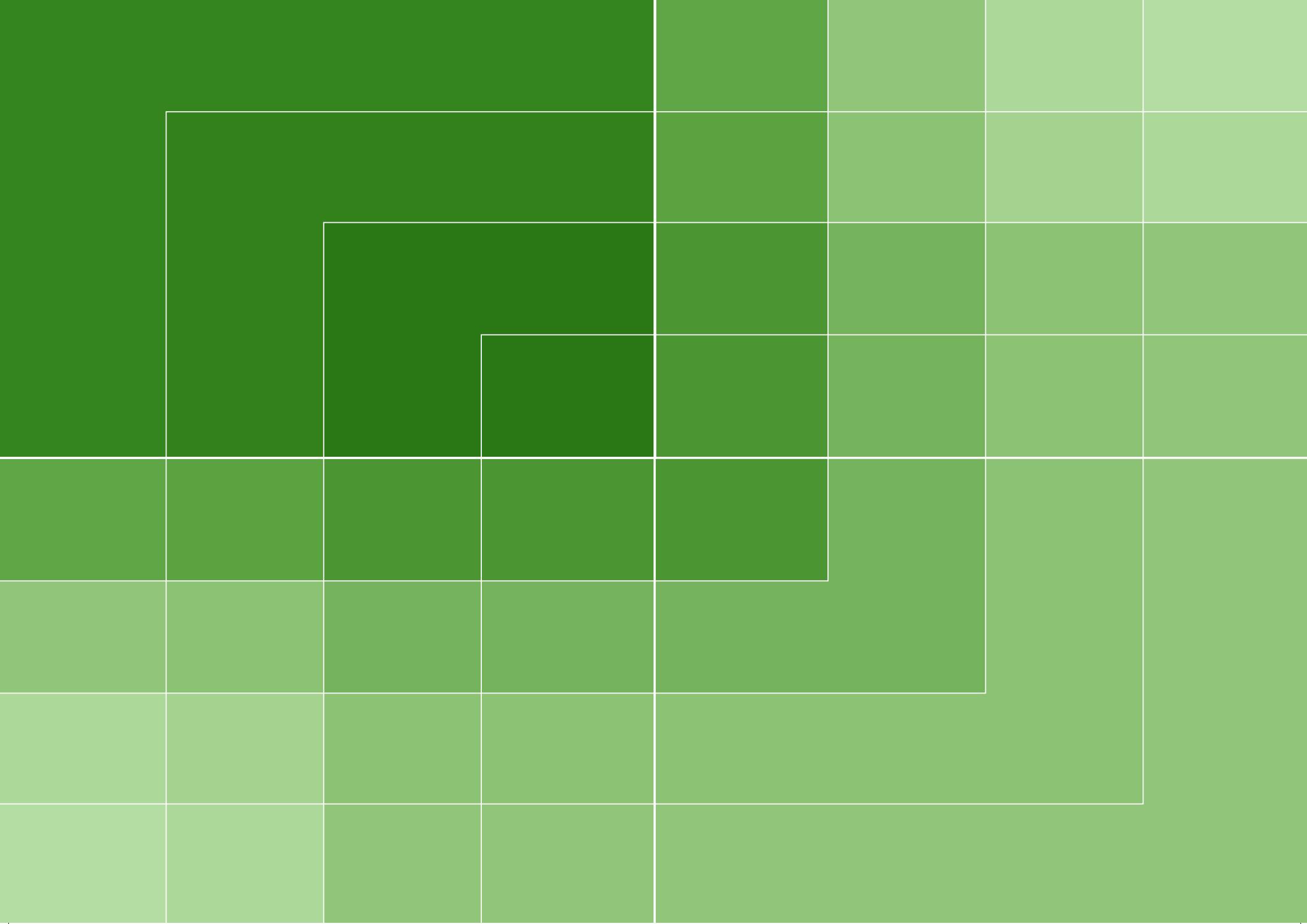
Issue 30

It is recommended Council be consulted in relation to the formation of both the Construction Noise and Vibration Impact Statements and Operational Noise and Vibration Management Plans.

Response 30

Hornsby Shire Council's comment is noted.


6



6 Other Key Stakeholder Submissions

6.1 Business / Commercial Submissions

6.1.1 BP Australia

Construction – Business impacts

Issue 1

A key concern for BP is the direct effects of the proposal on traffic accessibility to its site.

Response 1

Suitable access and egress to and from BP would be maintained throughout construction.

Communication – Consultation

Issue 2

The Concept Plan Approval Condition 3.1(f) required that:

An appropriate and justified level of consultation with relevant stakeholders including a description of how stakeholder input has been considered in decisions on design and / or mitigation.

BP has seen little evidence of this dialogue in the lead-up to the preparation of EIS 2 or even subsequently which is disappointing. BP had one meeting with TfNSW on 8 October 2012 and is due to meet with them again on 6 December. However the meeting on 8 October was more a "meet and greet" to advise of the upcoming EIS 2 release. No new information was forthcoming nor were any responses provided to the previously raised concerns.

Response 2

Two face to face meetings have been undertaken with BP on 8 October 2012 and 6 December 2012. Matters raised by BP during these face to face meetings will continue to be considered during the Bella Vista Station detailed design and construction planning stage. In addition, an information session designed for businesses, residents and stakeholders in the Bella Vista and Norwest areas was conducted as part of the public exhibition of EIS 2.

The level of consultation undertaken by TfNSW is considered appropriate.

Issue 3

While it was helpful to meet some TfNSW professionals at the Norwest exhibition on 8 November 2012, concerns remain about direct consultation with BP about the project. BP is advised that a masterplan is being prepared for the Bella Vista site, and that this masterplan would include a traffic management plan. BP is acknowledged as a key site in this precinct. However BP's opportunity to input into this masterplan will not occur until after the exhibition period for this SSI application. In regard to our previous submissions on this matter on consultation, the Submissions Report (4-167) indicates that:

"Further consultation will be undertaken as the design proceeds and prior to decisions being finalised. Access concerns will be discussed with BP at this stage."

We note the earlier commitment to undertake consultation with business owners near stations during the design phase (Statement of Commitment No 45). This commitment is important and BP appreciates the commitment from TfNSW to retain the key roundabout during the construction stage of the works. In our view there would be value on both sides for there to be a more sophisticated treatment of the access issues for the BP site in the longer term.

Response 3

One to one consultation has been undertaken with BP as described in the response to issue #2 above. Matters raised in BP's submissions would be considered during the Bella Vista Station detailed design stage.

For the areas shown in EIS 2 as Future Use to be Determined by Master Plan (see Figure 6.23 – Bella Vista Station – Indicative Layout), the type of land use and scale of proposed development does not form part of the NWRL project presented in EIS 2 for which approval is being sought. Further approvals would be required for the future uses proposed on these sites under the relevant local / State planning processes.

Property – Property acquisition

Issue 4

The access way which BP may lose as a result of the project (and is intended for dedicated construction access into the Bella Vista station site) remains under private ownership which is shared by BP as part of common property. There would need to be agreement from BP before this land became available to the project.

Response 4

All property acquisition for the project must be undertaken in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991.*

It is noted that the revised station location and precinct street pattern (documented in Chapter 8 of this report, Preferred Infrastructure Report) provides for improved access arrangements to this site.

Construction – Access

Issue 5

BP notes that the Celebration Drive / Lexington Drive roundabout will remain open during the construction period however, there remains a concern that other matters raised have not been rigorously assessed, and these matters are deferred for consideration to later traffic and other management plans.

Response 5

Specific details of access and egress arrangements at the construction sites would be determined by the construction contractors during the detailed construction planning stage and documented within Construction Traffic Management Plans and / or Traffic Control Plans required by the Construction Environmental Management Framework (Appendix B of EIS 2). BP would be consulted during this period regarding the Bella Vista Station construction site.

It is noted that the revised station location and precinct street pattern (documented in Chapter 8 of this report, Preferred Infrastructure Report) provides for improved access arrangements to this site.

Construction and Operation – Noise and vibration

Issue 6

BP notes that the acoustic assessment in the site vicinity has been redone.

Response 6

BP's comment is noted.

Issue 7

The BP site is adjacent to the tunnelling / excavation works on the southern approach to Bella Vista Station. While the EIS investigates the groundwater considerations relating to the excavation, there is no commentary on ensuring that these earthworks and associated vibration are managed to ensure the integrity of BP buildings and the underground tanking at the site. Appropriate conditions should be imposed. There should be direct liaison with BP specialists regarding tank integrity and its management. There has been no contact with BP specialists to date.

Response 7

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (conditions E26 to E31).

Issue 8

We note the advice that the acoustic investigation relevant to the BP site has been reworked and that a Construction Noise and Vibration Impact Statement (CNVIS) will be undertaken for the Bella Vista site. BP would expect to be advised of the outcome of this work to ensure that there are no serious adverse effects on staff or visitors due to extreme noise events in the tunnelling.

Response 8

Impacts associated with tunnelling works were addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Section 10.11.7 of EIS 2 shows that noise levels for Stage 2 construction would comply with the Noise Management Levels at the nearest residential and commercial receivers at the Bella Vista Station construction site.

Planning – Land use planning

Issue 9

TfNSW has committed to continuing dialogue with BP Australia about detailed site masterplanning, however there has not been an opportunity for BP to be involved in the masterplanning work at this stage. The Concept Plan approval (condition 3.1(f)) required:

An appropriate and justified level of consultation with relevant stakeholders including a description of how stakeholder input has been considered in decisions on design and / or mitigation.

BP is likely to be directly impacted by this project. It is hoped that "the same level of access" can be obtained to the BP site (eg via an access way from the north of the BP site to Lexington Drive north) or that access can be accommodated in future modification applications if necessary. It would be entirely inappropriate if the Department of Planning and Infrastructure's assessment (and Minister's determination) of this proposal was based on traffic management plans prepared sometime in the future that may not provide the same level of access.

The proponent has not yet indicated how it intends to deliver on the undertaking to provide the "same level of access". It is recommended that this occur through the preparation of a Traffic Management Plan for the area in consultation with BP's traffic expert. This would need to occur after the exhibition period has concluded and it seems reasonable that costs to BP be kept low in this matter.

Response 9

For the areas shown in EIS 2 as Future Use to be Determined by Master Plan (see Figure 6.23 – Bella Vista Station – Indicative Layout), the type of land use and scale of proposed development does not form part of the NWRL project presented in EIS 2 for which approval is being sought. Further approvals would be required for the future uses proposed on these sites under the relevant local / State planning processes.

In relation to the construction period, TfNSW have committed to maintaining access to existing properties and buildings (see mitigation measure T5 in Table 9.25 of EIS 2. This is reproduced in Chapter 9 of this report). The specific details of access arrangement would be determined by the construction contractors and documented in Construction Traffic Management Plans and / or Traffic Control Plans required by the Construction Environmental Management Framework (Appendix B of EIS 2).

In relation to operational arrangements, EIS 2 acknowledges that there are potential for impacts to access to BP as a result of the new station precinct. Section 9.5.6 of EIS 2 identifies a number of alternative options to access and egress the BP service station. These would be further developed during the detailed design.

BP would continue to be consulted in relation to temporary construction access arrangements and the permanent operational access arrangements.

Operation – Traffic impacts

Issue 10

The Department seems to be in a difficult position in seeking to make a determination on a matter where traffic impacts are potentially significant but the current position is that either:

a. "Options are still being assessed for traffic management in this area"; or
b. A rigorous assessment is not available.

It would be reasonable for BP Australia to expect that the proponents would have undertaken an assessment of impacts on the BP Bella Vista site as part of this work. It does not seem reasonable for BP to incur significant costs to do a full review of potential impacts of this project. For the time being BP resubmits an earlier expert traffic report which it has undertaken for EIS 1. However it is requesting that an independent assessment be undertaken of traffic effects of the proposal as part of the environmental assessment work.

Response 10

EIS 2 provides a thorough traffic assessment based on the concept design. Further traffic assessment work would be required based on the final detailed design and in response to detailed construction planning.

The issues raised on BP's traffic report which formed part of BP's submission for EIS 1 have been considered as documented in the *Submissions Report Stage 1 – Major Civil Construction Works Incorporating Preferred Infrastructure Report* (TfNSW, July 2012). This was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 11

The technical reports accompanying the EIS do not present a good understanding of the traffic context, nor do they explain how the "same level of access" (Source EIS 1 p13-19) to the BP site when the project is complete will be achieved. Three factors are not well acknowledged in the assessment documents:

1. There is no recognition of the important traffic movement from the east and south-east to the BP Bella Vista site. At present the BP Bella Vista site garners significant trade from the commercial and residential land uses east and south-east. This occurs in particular during the PM peak (and BP notes that refuelling is more common at PM "on the way home" than AM peaks). As presently conceived, the removal of the roundabout at the Celebration Drive / Lexington Drive intersection denies entrance of traffic from the east and south-east via the current extension to Lexington Drive and Homemaker Centre. This traffic movement is ignored in EIS 2 Technical Paper 2-1 (Section 8.5.4) when it considers the impact of the removal of the existing roundabout.
2. There is no evidence of appreciation of the importance of "convenience" as a significant attraction factor for the BP Bella Vista service station site. The directness of the egress movement is as important as that of the ingress movement. A large volume of users enter the site with the intent of

egressing to Old Windsor Road via the convenient and traffic light free movement of the Celebration Drive / Lexington Drive roundabout. The loss of this roundabout completely changes the attractiveness of the site to a large portion of visitors. The suggestion of alternatives at EIS 2 Technical Paper 2-1 (Section 8.5.4) which involve longer routes or movement through a number of traffic signals may be attractive to "destination" traffic, but removes the "convenience" which is essential to the current service station attraction.

3. Suggested "New entry to the McDonald's outlet via Celebration Drive" at Section 8.5.4 needs further explanation. This new entry seems to be indicated in one of the drawings (Figure 39) but not the main EIS documents, or in a document kindly provided to us by email from TfNSW on 27/11/2012. There is a good opportunity for continuing integration of the BP Bella Vista site and McDonald's and this should be encouraged.

Response 11

EIS 2 acknowledges that BP's access arrangements would be affected and provides alternative access and egress options (refer to Section 9.5.6 of EIS 2).

Vehicles egressing to Old Windsor Road could use the proposed Celebration Drive Extension / Brighton Drive roundabout.

It is also noted that the revised station location and precinct street pattern (documented in Chapter 8 of this report, Preferred Infrastructure Report) provides for improved access arrangements to this site.

Opportunity for continuing integration of the BP Bella Vista site and McDonald's would be considered during the detailed design stage.

Issue 12

Submission to the Stage 1 Major Civil Construction Works EIS was attached to the respondent's submission. Concerns raised that issues were not adequately addressed.

Response 12

Matters raised in the submission to Stage 1 Major Civil Construction Works EIS were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Submissions to EIS 1 that were beyond the scope of the Major Civil Construction Works were dealt with in Section 5.7.1 of EIS 2.

6.1.2 McDonald's Pty Ltd

Construction – Business impacts

Issue 1

McDonald's considers that the cumulative impact of construction and station precinct planning will have a potentially significant, adverse, long term commercial impact on the current McDonald's operations.

Response 1

Impacts to businesses including McDonald's have been identified and assessed in Chapter 13 of EIS 2. Specifically Section 13.5.7 provides an assessment of potential impacts around Bella Vista Station. Due to its proximity to the proposed Bella Vista Station entry, it is envisaged that there would be an increased demand for McDonald's products.

Issue 2

McDonald's currently enjoys a high degree of exposure to passing trade with clear sight lines from south bound traffic on Old Windsor Road. It is considered that the scale and built-form alignment of the proposed park and ride facility, together with the proposed pedestrian bridge will significantly diminish views into the store. The proposed pedestrian bridge, which connects to the existing T-Way station opposite appears to present limited

opportunity to allow for design in a manner that mitigates the impact on exposure to the McDonald's store. These factors, together with the convergence of vehicle and pedestrian access into the station precinct in immediate proximity to the existing restaurant will potentially generate confusion and sub-optimal way finding through this area. The commercial consequence of these factors is likely to be a significant diminution in trade.

Response 2

Any change in level of convenience for vehicles would be counterbalanced by the improvement of transportation afforded by the NWRL and the generation of pedestrian and cyclist activity on the Bella Vista Station precinct. EIS 2 envisaged there would be increased demand for McDonald's products due to its proximity to the proposed Bella Vista Station entry.

The revised station location and precinct street pattern (documented in Chapter 8 of this report, Preferred Infrastructure Report) provides for improved access arrangements to this site and reduces the scale of car parking adjacent to the site.

Issue 3

There will be long term adverse commercial impacts as a consequence of the inferior design proposal of the areas adjacent to and in the vicinity of the McDonald's store.

Response 3

As described in Section 6.7.1 of EIS 2 NWRL stations would be designed to create spaces that are cohesive with a welcoming and attractive feel that reinforce existing community areas.

Impacts to businesses including McDonald's have been identified and assessed in Chapter 13 of EIS 2. Specifically Section 13.5.7 provides an assessment of potential impacts around Bella Vista Station. Due to its proximity to the proposed Bella Vista Station entry, it is envisaged that there would be an increased demand for McDonald's products.

The revised station location and precinct street pattern (documented in Chapter 8 of this report, Preferred Infrastructure Report) provides for improved access arrangements to this site and reduces the scale of car parking adjacent to the site.

Design – Station precincts

Issue 4

Whilst the new slip lane entry into the site from Old Windsor Road is acknowledged, this must be balanced against:

- The practical ability for this slip lane to be constructed due to the alignment of the existing T-Way underpass.
- It's effectiveness for McDonald's given that it is also providing primary access to an adjoining 800 car space park-and-ride facility. There is no detailed modelling or analysis within EIS 2 that give McDonald's any comfort that this is practical given the close proximity (circa 30 metres) that separates the entry to park-and-ride and entrance to the reinstated McDonald's car park.
- The circuitous route that trade originating from the residential area to the east must traverse as compared to the existing situation via Brighton Drive / Celebration Drive (Figure 1 and Figure 2 included in submission).

Response 4

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout shows the park-and-ride facility shifted to the north. As such the McDonald's slip lane entry from Old Windsor Road would not be shared with the park-and-ride access road.

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route.

Issue 5

The proposal for Bella Vista Station delivers a sub-optimal and vastly inferior outcome for exiting traffic from that currently enjoyed by McDonald's (shown in Figure 2 included in submission).

Response 5

As described in Section 6.7.1 of EIS 2 NWRL stations would be designed to create spaces that are cohesive with a welcoming and attractive feel that reinforce existing community areas.

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout shows the park-and-ride facility shifted to the north. As such the McDonald's slip lane entry from Old Windsor Road would not be shared with the park-and-ride access road.

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route. Also, the proposed re-alignment of Balmoral Road to provide a direct connection to Miami Street would provide an additional access / egress route to the store (refer to Chapter 2 – Clarifications of this report).

Issue 6

McDonald's restaurants thrive on convenience. This is not dissimilar to any quick-service restaurant whether it be car focussed or pedestrian focussed. In this case however we are dealing with a highly successful car based restaurant that is designed and functions as such. EIS 2 fails to acknowledge this and gives only superficial recognition of its needs by providing a "reinstated car park" that is accessed via a proposed slip lane whose practicality is currently questionable. The proposed design of the "reinstated car park" is unsatisfactory as it has the potential to generate its own impacts from a design perspective as well as commercially.

Response 6

Careful consideration has been given to businesses including McDonald's in Chapter 13 of EIS 2.

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout shows the park-and-ride facility shifted to the north. As such the McDonald's slip lane entry from Old Windsor Road would not be shared with the park-and-ride access road. The amended Bella Vista Station layout also eliminates the direct impact to the McDonald's restaurant car park. The current parking arrangements will remain unaltered.

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route. Also, the proposed re-alignment of Balmoral Road to provide a direct connection to Miami Street would provide an additional access / egress route to the store (refer to Chapter 2 – Clarifications of this report).

Issue 7

The indicative layout plan for the Bella Vista station precinct will result in a lessening in the convenience of service offered from this McDonald's store. This is purely as a result of changes to the surrounding road network that will result in the diversion of a significant quantity of traffic generated by the McDonald's outlet onto the local road network in the first instance. Not only is this of great concern to McDonald's but should be recognised as a significant cumulative local impact arising from the NWRL in this location and one for which McDonald's has no responsibility.

Response 7

Impacts to businesses including McDonald's have been identified and assessed in Chapter 13 of EIS 2. Specifically Section 13.5.7 provides an assessment of potential impacts around Bella Vista Station. Due to its proximity to the proposed Bella Vista Station entry, it is envisaged that there would be an increased demand for McDonald's products.

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout shows the park-and-ride facility shifted to the north. As such the McDonald's slip lane entry from Old Windsor Road would not be shared with the park-and-ride access road.

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route. Also, the proposed re-alignment of Balmoral Road to provide a direct connection to Miami Street would provide an additional access / egress route to the store (refer to Chapter 2 – Clarifications of this report).

Issue 8

McDonald's requests that it be provided with an opportunity to contribute to the detailed station precinct design process. At a minimum McDonald's require:

- Relocation of the "reinstated car park" to a location that addresses McDonald's design principles.
- Provision of a road link that provides direct access from the site onto Celebration Drive.

Response 8

Consultation with business owners including McDonald's would continue during the detailed design stage.

Due to the amended Bella Vista Station layout (refer to Chapter 8 of this report) there would be no requirement to relocate the McDonald's car park.

Design – Alternatives

Issue 9

McDonald's proposes the realignment of the southern component of the park-and-ride facility (shown in Figure 3 included in submission). This enables a relocation of McDonald's car park which is considered to be a critical design consideration for McDonald's.

Response 9

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout shows the park-and-ride facility shifted to the north with the existing McDonald's car park retained in its current location.

Issue 10

In drawings included in the submission (Figure 3 and Figure 4), McDonald's identified two potential alternative egress arrangements from the site so as to potentially provide a more convenient means by which traffic can:

- Re-enter Old Windsor Road.
- Re-enter Celebration Drive to enable residential trade to continue eastwards.

Unfortunately both options highlight significant constraints in achieving a comparable level of service from that currently enjoyed by McDonald's customers. Issues with these arrangements were outlined in the Figure 3 and Figure 4 included in the submission.

Response 10

Section 9.5.6 of EIS 2 describes potential traffic impacts associated with Bella Vista Station.

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report).

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route. Also, the proposed re-alignment of Balmoral Road to provide a direct connection to Miami Street would provide an additional access / egress route to the store (refer to Chapter 2 – Clarifications of this report).

Issue 11

Key McDonald's design principles to note which are critical to effective store operation are:

- Car parking location being in immediate and convenient vicinity to store entry for ease of access and pedestrian mobility / safety.
- Drive-thru location and traffic separated from the car park and peripheral to the site yet in a highly or readily visible location to avoid car park traffic and pedestrian conflict and to facilitate convenience.
- Loading dock at back of house with access via car park area minimised.

The proposed "reinstated car park" depicted on Figure 6.27 compromises each of the key design principles outlined above. In summary, the proposed reinstated car park:

- Positions the majority of car parking on the opposite side of the building, remote from store entry.
- Positions the drive-through central to the site running between the car park and the restaurant.
- Locates car parking in proximity to the loading dock.
- Gives rise to significantly increased opportunity for vehicle and pedestrian conflict within the McDonald's site.

The only way by which these could conceivably be addressed is by demolition of the existing restaurant and the complete re-orientation of the building so that it faces west rather than east. This is an unreasonable impost.

Response 11

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout allows the existing McDonald's car park and drive-through operations to be retained in their current location.

Issue 12

In order to assess the opportunity to improve traffic and pedestrian access and circulation around the site, two alterative scenarios were prepared (shown in Figure 6 and Figure 7 included in submission). In each case the primary driver has been to explore opportunities to:

- Address McDonald's key store design principles so as to overcome the issues identified in Section 2 of the submission. Notably, both options require relocation of the car park from the location as currently proposed in EIS 2.
- Improve immediate access into and out of the McDonald's site in a manner that as closely as possible resembles the existing situation but taking into account access into the Station Precinct and alternative egress constraints.

Whilst both options have, to a degree, demonstrated ability to achieve one or the other of the above, neither totally meets McDonald's design objectives. However and perhaps most tellingly:

- Neither option is capable of achieving the level of convenience currently enjoyed by McDonald's (and the adjoining BP) patrons in re-entering Old Windsor Road in continuing a south bound journey. This is simply because of the removal of the existing Lexington and Celebration Drive intersection round-about and the proposed installation signals. This feature alone not only means a more circuitous and less convenient means of re-entering the arterial road network, it also means that all McDonald's traffic will be diverted onto the local road network in the first instance when this is not currently the case. Similarly neither option can provide for the same level of convenient access to and from the residential area to the east.

- The second option (depicted in Figure 7 included in the submission) is not capable of providing for the same quantum of on-site car parking which is currently 43 spaces as required by the terms of McDonald's development consent.

Response 12

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout allows the existing McDonald's car park to be retained in its current location.

Approach routes to the store would be via Old Windsor Road, Celebration Drive and a currently un-named road ending at the north eastern section of the site.

The Celebration Drive Extension / Brighton Drive roundabout could be used as an egress route. Also, the proposed re-alignment of Balmoral Road to provide a direct connection to Miami Street would provide an additional access / egress route to the store (refer to Chapter 2 – Clarifications of this report).

Construction – Noise

Issue 13

EIS 2 acknowledges the potential for impact during construction phases from noise. The NWRL approach is to defer precise mitigation responses to the implementation stage, via the *"Construction Environmental Management Framework"*. This approach does not address uncertainty for McDonald's now, particularly when at a higher level the proposed station precinct layout delivers a sub-optimal outcome for on-going store operations. McDonald's therefore consider it essential that these impacts be accurately assessed now.

Response 13

Construction noise impacts have been assessed as part of the EIS 2 (refer to Chapter 10). Table 10.32 of EIS 2 presents the predicted noise modeling results at the Bella Vista Station construction site. The results indicate compliance with the Noise Management Levels at the nearest residential and commercial receivers including McDonald's.

Construction – Air quality

Issue 14

EIS 2 acknowledges the potential for impact during construction phases from dust. The NWRL approach is to defer precise mitigation responses to the implementation stage, via the *"Construction Environmental Management Framework"*. This approach does not address uncertainty for McDonald's now, particularly when at a higher level the proposed station precinct layout delivers a sub-optimal outcome for on-going store operations. McDonald's therefore consider it essential that these impacts be accurately assessed now.

Response 14

Construction impacts from dust have been assessed as part of the EIS 2 (refer to Section 19.1). Table 19.4 of EIS 2 lists mitigation measures specific to mitigate dust impacts during construction. These mitigation measures are reproduced in Chapter 9 of this report.

Construction – Traffic and transport

Issue 15

EIS 2 acknowledges the potential for impact during construction phases from construction traffic. The NWRL approach is to defer precise mitigation responses to the implementation stage, via the *"Construction Environmental Management Framework"*. This approach does not address uncertainty for McDonald's now, particularly when at a higher level the proposed station precinct layout delivers a sub-optimal outcome for on-going store operations. McDonald's therefore consider it essential that these impacts be accurately assessed now.

Response 15

Impacts during construction phases from construction traffic have been assessed in EIS 2 (refer to Section 9.6). Mitigation measures relevant to the Bella Vista Station construction site are listed in Table 9.25 of EIS 2. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 16

In the weekday morning and afternoon peak periods there is already queuing and delays at the intersection of Old Windsor Road and Celebration Drive. The proposed station and associated changes in land use will exacerbate this situation and no mitigation measures have been identified in the EIS.

Response 16

Table 9.18 of the EIS 2 shows that the performance of the Old Windsor Road / Celebration Drive intersection would slightly decrease during weekday PM peak hour periods but would be maintained during weekday AM peak hour periods during the construction period.

The slight decrease of the intersection performance during PM peak hour periods would be mitigated by the reduction in traffic generation through the removal of the Totally Home Centre, the routing of some NWRL construction vehicles via Memorial Avenue and the retention of the roundabout at the intersection of Celebration Drive / Lexington Avenue.

Table 9.8 of EIS 2 shows that there would only a slight deterioration at the Old Windsor Road / Celebration Drive intersection during operations.

Communication – Consultation

Issue 17

Detailed mitigation responses to noise, dust and construction traffic need to be developed now, not in the implementation stage, in consultation with affected landowners including McDonald's.

Response 17

Potential impacts relating to noise, dust and construction traffic have been assessed in EIS 2 Chapters 10, 19 and 9 respectively. Section 10.12, 19.2 and 9.7 provide mitigation measures relevant to reduce the impacts of each of these aspects. These mitigation measures are reproduced in Chapter 9 of this report.

Design – Public safety

Issue 18

The EIS indicates that as part of the station construction the existing McDonald's car park would be relocated from the eastern side of the store to the western side of the store. Relocating the car park to the west would result in the drive through separating the car park from the store. This would result in safety concerns as customers would have to cross the drive through to access McDonald's from the car park. This is not an optimal arrangement and could result in safety concerns.

Response 18

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout allows the existing McDonald's car park and drive-through operations to be retained in their current location.

Planning – Landuse planning

Issue 19

McDonald's notes that relocation of the car park to the west would locate it in the existing set back zone from Old Windsor Road. Provision of car parking within this set back zone may not comply with Council planning controls.

Response 19

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout allows the existing McDonald's car park to be retained in its current location.

Construction – Access

Issue 20

The construction of the proposed station would have significant impact on access to McDonald's. The plans show no impact on the ingress from Old Windsor Road. Figure 6.28 in EIS 2 shows indicative vehicle and pedestrian movements. Due to the construction of the station the existing entry / exit to Lexington Drive (via the existing Right Of Way though the Homemaker Centre development) would be closed. Alternative access would be provided to the north. While not shown it is assumed that the existing connection to Celebration Drive (via the adjacent BP service station) would be retained. Thus access to the site from Norwest and access from the site onto Old Windsor Road would be severely restricted. To reach Old Windsor Road vehicles would need to use one of the following routes:

- Exit onto Celebration Drive (left turn) and then turn right onto Lexington Drive and use Norwest Boulevard to access Old Windsor Road.
- Exit onto Celebration Drive (left turn), pass through Lexington Drive and use the roundabout at Brighton Drive to undertake a u-turn and then travel back along Celebration Drive onto Old Windsor Road.
- Travel north from the site, around the station and use either the Celebration Drive extension or Lexington Drive extension (through the bus interchange) to access Celebration Drive and then Old Windsor Road.

Each of these routes is much longer than the existing connection to Lexington Drive via the Right Of Way through the Homemaker Centre. Thus the construction of the station would result in lower level of accessibility to Old Windsor Road and the surrounding area compared to today.

Response 20

The existing access and parking for the McDonald's would be maintained during construction as detailed in Chapter 8 of this report.

Operation – Traffic impacts / volume

Issue 21

The EIS for the proposed station at Bella Vista includes park-and-ride for some 800 cars on the northern and western part of the site, with land on the eastern part of the site subject to a future master plan, and construction of a number of new roads (including the extension of Celebration Drive and Lexington Drive). No assessment of the traffic impact of the new land uses or the changes to the road network is provided in the EIS.

Response 21

The assessment of the traffic impacts for Bella Vista Station is presented in Section 9.5.6 of EIS 2. This assessment covers the proposed 800 car park spaces and the proposed new road extensions. Traffic assessment results indicate that there would be no significant changes to the performance of the main intersections around Bella Vista Station as a result of the operation of the NWRL.

Issue 22

The EIS contains inadequate assessment of the broader traffic impacts of the changes to the road network and impact of proposed new landuses. This is particularly important in circumstances where the existing road network already experiences queuing and delays at certain times. McDonald's is also concerned about the lack of information in EIS 2 about the long term traffic impacts of the proposal and submit that further detailed analysis of these impacts should be prepared by TfNSW.

Response 22

The assessment of the traffic impacts for Bella Vista Station is presented in section 9.5.6 of the EIS 2. This assessment covers the proposed 800 car park spaces and the proposed new road extensions. Traffic assessment results indicate that there would be no significant changes to the performance of the main intersections around Bella Vista Station as a result of the operation of the NWRL.

Planning – Approval process

Issue 23

In McDonald's submission to EIS 1 (construction of the Bella Vista Station and tunnelling works) we raised concern about parking, access and traffic effects on McDonald's. EIS 2 contains a local business impact assessment that addresses potential impacts to McDonald's during construction in a high and simplistic manner without providing any analysis or justification. EIS 2 states that the NWRL Principal Contractor will proactively work with affected stakeholders in order to minimise impacts. It is McDonald's view that EIS 2 has not satisfactorily addressed the matters raised in our submission to EIS 1.

Response 23

The purpose of EIS 2 was to assess the potential impacts associated with Stage 2 stations, rail infrastructure and systems construction as well as operation of the rail line.

Matters raised in the submission to Stage 1 Major Civil Construction Works EIS were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Submissions to EIS 1 that were beyond the scope of the Major Civil Construction Works were dealt with in Section 5.7.1 of EIS 2.

Property – Property acquisition

Issue 24

The adverse impacts which will arise directly as a consequence of the construction of the NWRL will need to be taken into account by TfNSW in the assessment of compensation it will be required to pay to McDonald's for the acquisition of its land.

Response 24

The layout of the Bella Vista Station precinct had been amended since exhibition of EIS 2 (refer to the Preferred Infrastructure Report in Chapter 8 of this report). The updated layout allows the existing McDonald's car park to be retained in its current location.

All property acquisition for the project must be undertaken in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991.*

6.1.3 Budokan Judo Club

Construction – Access

Issue 1

Groups operating from Castle Hill Showground are concerned the construction of the proposed station will impact the access to the Showground. Confirmation is sought that a safe access will be provided to the Showground during the construction phase.

Response 1

A number of mitigation measures have been developed in relation to access during construction (see mitigation measures T4, T5 and T12 in Table 9.25 of EIS 2). In addition, mitigation measure T26 in Table 9.25 of EIS 2 has been specifically developed for Showground Station and states that, alternative access to the Showground would be developed and detailed in a Construction Traffic Management Plan. These are reproduced in Chapter 9 of this report.

Construction – Traffic and transport

Issue 2

Groups operating from Castle Hill Showground are concerned construction of the proposed station will impact the internal roads in the Showground. Calls for construction traffic to be limited to the construction zone only.

Response 2

Construction traffic movements within the construction site layout will be restricted to designated haul roads. Access and internal haul road arrangements at the Showground Station construction site are presented in Figure 7.2 of EIS 2. Construction traffic access and egress to and from the site will be from Showground Road and a new intersection from Carrington Road.

Construction – Sites / compounds

Issue 3

Groups operating from Castle Hill Showground are concerned the construction of the proposed station will impact the Showground. Reassurance is sought that construction personnel parking would be contained within the construction zone.

Response 3

Construction worker parking would be provided within the construction site as shown on Figure 7.2 of EIS 2. Prior to construction site establishment, Construction Traffic Management and Control Plans will be prepared in consultation with RMS. Construction site parking considerations would form a component of these plans.

Construction – Public safety

Issue 4

Groups operating from Castle Hill Showground are concerned the increase to traffic within the internal Showground roads will increase the risk to children who may need to negotiate a congested parking situation to access for example the amenities block. Business seeks confirmation that parking required for construction will be accommodated within the construction zone.

Response 4

The safety of pedestrians is paramount at every construction site. All construction sites would be secured by fencing or hoarding designed to prevent any trespass into construction zones.

As part of the ongoing work with RMS and local councils, traffic management plans, including schemes to manage pedestrian safety, are being discussed. This includes any necessary adjustments to the locations of access and egress points to and from the construction site as well as parking areas. Parking for the construction workers at the Showground Station construction site would be provided within the site.

Operation – Public Safety

Issue 5

Groups operating from Castle Hill Showground seek confirmation that a Showground User Amenity Risk Management Plan will be developed in conjunction with the Castle Hill and Hills District Agricultural Society Inc to address physical security, required infrastructure upgrades, lighting, footpaths etc. within the Showground precinct and that where upgraded infrastructure is required by such plan, such upgrades are included in the construction plan for Showground Station.

Response 5

The Showground Station Modification Report presented revised mitigation measures relating to amenity and infrastructure associated with the proposed modification to the approved Showground Station. The EIS and Submissions Report for Stage 1 Major Civil Construction Works provided mitigation measures in relation to amenity considerations (including noise, air quality, and visual) to be addressed prior to and during construction. These mitigation measures and management procedures have been endorsed by TfNSW and are reflected in the Construction Environmental Management Framework (Appendix B of EIS 2). The Construction Environmental Management Framework is a NWRL project wide framework which sets out the environmental, stakeholder and community management requirements for the construction of the project. It describes the management process which would be implemented by the NWRL Principal Construction Contractors and includes a communication and consultation strategy, which will form the basis of a Stakeholder and Community Involvement Plan to be developed by the NWRL Contractors.

Construction – Noise and vibration

Issue 6

Groups operating from Castle Hill Showground are unclear what measures will be put in place to ensure acceptable levels of noise from general construction and construction traffic within the construction zone and that any risk to Showground users is mitigated.

Response 6

An assessment of potential noise impacts on sensitive receivers during Stage 2 construction works is presented in Section 10.11.7 of EIS 2. The findings of the construction noise impact assessment at Showground Station were that predicted noise levels associated with construction of the station platform supporting structure, station building and car park as well as for the installation of rail systems indicated compliance with Noise Management Levels in the active recreation area of the Castle Hill Showground.

Construction noise mitigation measures are detailed in Table 10.48 of EIS 2. These are reproduced in Chapter 9 of this report.

Noise issues raised by the submissions received for EIS 1 have been considered by TfNSW as documented in the Submissions Report Stage 1 - Major Civil Construction Works Incorporating Preferred Infrastructure Report (TfNSW, July 2012), which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Construction – Air quality

Issue 7

Groups operating from Castle Hill Showground are unclear what measures will be put in place to ensure acceptable levels of dust pollution from general construction and construction traffic within the construction zone and that any risk to Showground users is mitigated.

Response 7

The majority of dust generating activities would occur during the major civil construction activities and were addressed in EIS 1. To a lesser extent a number of activities associated with the construction works for Stage 2 have the potential to generate dust, including minor earthworks and minor spoil storage and transport. The potential impacts of dust resulting from Stage 2 construction works were presented in Section 19.1.7 of EIS 2. Impacts would be temporary and are expected to be minor with the implementation of mitigation measures as outlined in Section 19.1.8 of EIS 2.

Dust issues raised by the submissions received for EIS 1 have been considered by TfNSW as documented in the Submissions Report Stage 1 - Major Civil Construction Works Incorporating Preferred Infrastructure Report (TfNSW, July 2012), which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Operation – Traffic impacts / volumes

Issue 8

Concerns regarding increased traffic flow through the internal roads of the Showground. Current conditions / facilities are not designed for increased traffic flow and overflow parking would increase risk to Showground users.

Calls for a traffic management plan to be developed for internal roads within the Showground that takes into account increased traffic flow in the Doran Drive / station precinct. Where necessary upgrade of roads will be required to cater for such anticipated traffic flows.

Response 8

Doran Drive would be upgraded to accommodate station traffic and will provide traffic access to the Showground area. Increased traffic on the internal Showground roads is not expected as a result of the new station, as station approach and departure routes for buses and cars would be via Doran Drive and the new road linking Doran Drive and Showground Road.

Showground Station would provide commuter parking for 600 cars and demand for this parking would be greatest on weekdays. These parking facilities would be available for use by those accessing the Showground facilities on weekends when commuter demands would be significantly lower.

Construction Traffic Management Plans and Traffic Control Plans will be prepared in consultation with RMS and other relevant stakeholders. Construction site parking considerations would form a component of these plans.

Planning – Approval process

Issue 9

Given the recent changes to the Showground station location, the EIS 2 document may not reflect all the necessary detail in terms of construction zone configuration or site and community access to provide a full evaluation.

Response 9

The EIS 2 assessment at Showground Station has been undertaken for the modified station site.

The Showground Station Modification Report presented revised mitigation measures relating to amenity and infrastructure associated with the proposed modification to the approved Showground Station. The EIS and Submissions Report for Stage 1 Major Civil Construction Works provided mitigation measures in relation to amenity considerations (including noise, air quality, and visual) to be addressed prior to and during construction. These mitigation measures and management procedures have been endorsed by TfNSW and are reflected in the Construction Environmental Management Framework (Appendix B of EIS 2). The Construction Environmental Management Framework is a NWRL project wide framework which sets out the environmental, stakeholder and community management requirements for the construction of the project. It describes the management process which would be implemented by the NWRL Principal Construction Contractors and includes a communication and consultation strategy, which will form the basis of a Stakeholder and Community Involvement Plan to be developed by the NWRL Contractors.

Communication – Consultation

Issue 10

Given the recent changes to the Showground station location, EIS 2 document may not reflect all the necessary detail in terms of construction zone configuration or site and community access to provide a full evaluation. Therefore as any new details come to light, stakeholders will need to be notified and invited to comment.

Response 10

The EIS 2 assessment at Showground Station has been undertaken for the modified station site.

The Showground Station Modification Report presented revised mitigation measures relating to amenity and infrastructure associated with the proposed modification to the approved Showground Station. The EIS and Submissions Report for Stage 1 Major Civil Construction Works provided mitigation measures in relation to amenity considerations (including noise, air quality, and visual) to be addressed prior to and during construction. These mitigation measures and management procedures have been endorsed by TfNSW and are reflected in the Construction Environmental Management Framework (Appendix B of EIS 2). The Construction Environmental

Management Framework is a NWRL project wide framework which sets out the environmental, stakeholder and community management requirements for the construction of the project. It describes the management process which would be implemented by the NWRL Principal Construction Contractors and includes a communication and consultation strategy, which will form the basis of a Stakeholder and Community Involvement Plan to be developed by the NWRL Contractors.

6.1.4 QIC Property Group

Project – Need

Issue 1

Acknowledgement of the importance of the NWRL project and the benefits it will bring the residents of North Western Sydney, particularly to the Castle Hill Town Centre.

Response 1

QIC Property Group's comment is noted.

Operation – Noise and vibration

Issue 2

Castle Towers operates 16 cinemas which are directly above the proposed rail lines. It is noted that while there is a higher level of attenuation to the rail line to the east as it approaches Castle Hill Station, there is only standard attenuation west of the station where the rail line passes under the Centre. Request for assurance that the level of attenuation proposed under Castle Towers Shopping Centre is sufficient to mitigate any effects on the operations of the cinemas or on any other operations of the Centre.

Response 2

The track form attenuation detailed in EIS 2 results in compliance with the relevant criteria at all receivers. The criteria for cinemas is 35 dBA.

Construction – Traffic and transport

Issue 3

Concerns that traffic changes along Old Castle Hill Road to enable construction will create significant pressure at the intersection of Old Castle Hill Road and McMullen Avenue, to the extent that it will be under stress and has the potential to create flow on traffic constraints in other areas of the precinct. Request for more detailed information on traffic mitigation strategies as the EIS only specifies relying on a combination of traffic signal programming and the NWRL Principal Contractor to implement a traffic management strategy as part of the Construction Environmental Management Framework. Current traffic around the Castle Hill Town Centre is near capacity and a combination of increased traffic from construction activity for NWRL, the expansion of the Castle Towers Shopping Centre and the upgrade of Showground Road, will require significant planning to minimise impacts.

Response 3

The construction traffic assessment for Castle Hill Station construction site for stage 2 works is presented in Table 9.15 of EIS 2. This shows there would be a slight deterioration in the level of service at the Old Castle Hill Road / McMullen Avenue intersection during the AM peak, however the intersection operation would still be within acceptable limits.

Table 9.25 of EIS 2 identifies mitigation measures to manage construction traffic related impacts. These are reproduced in Chapter 9 of this report. Additionally, the Construction Environmental Management Framework (Appendix B of EIS 2) requires construction contractors to develop and implement Construction Traffic Management Plans and Traffic Control Plans to detail specific mitigation measures in response to detailed construction planning.

Construction – Cumulative impacts

Issue 4

Traffic surrounding the Castle Hill Town Centre is currently near capacity and a combination of increased construction traffic from NWRL, the expansion of Castle Towers Shopping Centre and the upgrade of Showground Road will require significant planning to minimise impacts. Request for assurance from TfNSW that QIC as the owners of Castle Towers Shopping Centre are properly consulted during the development of any traffic management strategies.

Response 4

The construction traffic assessment for Castle Hill Station construction site for stage 2 works is presented in Table 9.15 of EIS 2.

Table 9.25 of EIS 2 identifies mitigation measures in order to manage construction traffic related impacts. These are reproduced in Chapter 9 of this report.

The Construction Environmental Management Framework (Appendix B of EIS 2) requires construction contractors to develop and implement Construction Traffic Management Plans and Traffic Control Plans to detail specific mitigation measures in response to detailed construction planning. QIC will be informed of any traffic management strategies as they relate to the operation of Castle Towers.

Transport – Pedestrian and bicycle access

Issue 5

Request for QIC to work together with NWRL to establish opportunities for integrating a pedestrian connection between the proposed Castle Hill Station and the Castle Towers Shopping Centre. Given the anticipated increase in traffic around the proposed station and the bus interchange, particularly along Old Castle Hill Road, suggestion to explore opportunities for a safe, undercover access between Castle Hill Station and Castle Towers.

Response 5

The EIS safeguards for a potential subterranean pedestrian link underneath Old Castle Hill Road to connect into Castle Towers. At opening, the NWRL would provide pedestrian crossings across Old Castle Hill Road to facilitate connection of the Station to Castle Towers.

Property – Geotechnical investigations

Issue 6

Concern that as part of NWRL EIS 2, geotechnical investigations have been limited only to desktop studies. No site specific geotechnical investigations have been undertaken for analysis to confirm that there will be no impacts on the support for the surface including existing and proposed underground building foundations.

Response 6

Section 8.3.1 of EIS 2 details the additional geotechnical studies and investigations which have been undertaken. Significant geotechnical investigations have been undertaken to inform the design of the project. Further geotechnical investigations will continue. NWRL will work with QIC in relation to further investigations which may be within Castle Towers Shopping Centre.

The potential impacts associated with construction of the rail tunnels were assessed in EIS 1, including any settlement impacts above the tunnel. Conditions of Approval C17 through C20 establish settlement criteria. Conditions of Approval E25 through E31 establish a robust construction management framework.

Property – Property damage

Issue 7

Concerns regarding acquisition of sub-surface stratum under the existing Castle Towers Shopping Centre and under the proposed expansion of the shopping centre on property owned by QIC along Showground Road, Castle

Hill (DA consent no: 297/2008/HB, 8 February 2011). The design for the proposed development was informed by the Foundation Exclusion Zone for the Sydney Metro (the then responsible authority for NWRL), confirming the proposed expansion could proceed without impacts to the foundations and basement footprint. Following the receipt of an Acquisition notice (A2042947-404) from the Department of Transport, QIC is concerned that the area of resumption and use of sub-stratum as part of the current NWRL proposal has a considerably greater level of impacts than previously indicated beyond the Foundation Exclusion Zone.

Response 7

The footprint of the existing development consent for expansion of the Castle Towers Shopping Centre would not be affected by construction or operation of the NWRL. The conditions of consent for expansion of the Castle Towers Shopping Centre remain valid.

Issue 8

The revised depth of any revised Foundation Exclusion Zone has not been indicated within NWRL EIS 2 and the extent to which foundations of buildings will or may be affected is unclear.

Concern that as the proposed design and construction methodologies for the underground rail facilities have yet to be determined and therefore are not taken into account with NWRL EIS 2, likely impacts have not been adequately assessed.

QIC has requested that conditions of approval for EIS 2:

- Require TfNSW to mitigate and compensate for any damage to foundations and underground structures as a result of NWRL.
- Require TfNSW to avoid conflicts with previously approved underground structures that complied with the previously stated Foundation Exclusion Zone and that there will be no additional cost implications to the subject property owners / developers.

Response 8

The footprint of the existing development consent for expansion of the Castle Towers Shopping Centre would not be affected by construction or operation of the NWRL. The conditions of consent for expansion of the Castle Towers Shopping Centre remain valid.

Planning – Approval process

Issue 9

Concern that the current proposal in NWRL EIS 2 is not in compliance with:

- Condition 2.2 and Statement of Commitment 10 of the Stage I Approval dated May 2008 to undertake further investigations with respect to the planned expansion of the Castle Hill Shopping Centre and integration of the project with the Castle Hill Draft Master Plan.
- Condition 3.2 of the Stage 1 Approval dated May 2008 to confirm the footprint of the project and describe the land use impacts on existing and future use associated with any additional land take.

Response 9

Compliance with conditions is detailed in EIS 1 and EIS 2. Specifically compliance with the conditions raised are detailed in the following sections:

- Condition 2.2 of the Staged Infrastructure Approval is detailed in Chapter 5 (Table 5.3) of EIS 1.
- Statement of Commitment 10 of the Staged Infrastructure Approval is detailed in Chapter 5 (Table 5.3) and Chapter 20 of EIS 1, as well as Chapters 5 and 20 of EIS 2.
- Condition 3.2 of the Staged Infrastructure Approval is detailed in Chapters 7 and 14 of EIS 1, as well as Chapters 6, 7 and 14 of EIS 2.

6.1.5 The GPT Group (owners and managers of Rouse Hill Town Centre)

Issue 1 (GPT reference 1 and appendix 2)

GPT has a number of concerns regarding the likely impacts of the NWRL project on the on-going success of RHTC and its future development. GPT requests that the Minister adopt GPT's proposed solutions, outlined in its submission. The following issues relevant to the Construction Environmental Management Framework (CEMF) are raised by Renzo Tonin & Associates on behalf of GPT.

Issue 1a) Construction – Noise and vibration

EIS 2 does not fully assess the construction noise and vibration impacts of NWRL on the RHTC, and in particular does not take into account the existence of residential premises in its noise assessment. Table 12.43 of EIS 2, Technical Paper 3 reports exceedance of the 70 dB(A) NML for the skytrain construction works between Rouse Hill Station and Cudgegong Road. The passive recreation noise level criteria of 60 dB(A) would therefore be exceeded by more than 10 dB(A), contradicting the submissions report. Construction of the skytrain and station in the evening period is therefore not justified by the EIS.

Response 1 a)

The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts and car park construction. Compliance is predicted for these activities at commercial Rouse Hill Town Centre (RHTC) receivers described in EIS 2. In response to this submission, residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime NMLs is predicted for residential receivers in the RHTC. These Stage 2 works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the NMLs for passive recreation areas by up to 4 dB during the daytime.

Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these Stage 2 works would be restricted to the daytime period and are anticipated to occur for a relatively short period of time (of the order of 2 to 4 weeks adjacent to RHTC).

Issue 1 b) Construction – Noise and vibration

Background noise monitoring and criteria has not been presented for RHTC residential receptors. It is therefore unclear how the assessment of residential premises in RHTC has been carried out. Further detail regarding background noise monitoring at RHTC residential premises is requested to be provided for both EIS 1 and EIS 2 works.

Response 1 b)

The NMLs for residential receivers in the RHTC have been based on the background noise measurements at location BG20 (shown on Figure 10.1 of EIS 2. This location is a similar distance from Old Windsor Road as the RHTC residential receivers, but is otherwise a quiet residential area. It is considered that this represents a conservative approach as other activities in the RHTC are likely to contribute to higher background noise levels than those observed at BG20.

Issue 1 c) Construction – Noise and vibration

As a noise barrier to be constructed around the perimeters of the construction sites has been included in the calculations then works need to be scheduled such that it can be installed as a priority (refer paragraph 12.4.1 of EIS 2 Technical Paper 3). The assessment otherwise needs to be carried out on the basis it is not installed. The reports contradict one another in regard to the noise mitigation that is to be provided, and that which has been included in the assessment. It appears that the assessment may misrepresent the likely impacts as a result of the feasibility of including the nominated mitigation measures.

Response 1 c)

A three metre high noise barrier is proposed to be constructed around the perimeter of the Rouse Hill Station Construction Site. This has been included in the assessment and will provide a benefit for receivers at ground level, when works are taking place at ground level. Due to the elevated nature of the proposed Rouse Hill Station, some construction works will take place above the noise barrier and in this situation the barrier will not provide a benefit. Some receivers are also elevated, and will not receive a benefit. The effects of both elevated works and elevated receivers have been included in the assessment.

Issue 1 d) Construction – Noise and vibration

Giving further consideration to the sensitivity of the cinema use, GPT requests that the evening residential criteria of 40 dB(A) be adopted for the Reading Cinema. EIS 2 identified that ground borne noise from the use of vibratory rollers may be audible in the Reading Cinema, however no noise levels are provided to indicate the extent of potential impact. A ground borne noise criteria, reflective of the sensitivity of the cinema usage and function, needs to be set.

Response 1 d)

While cinemas are considered sensitive receivers, we note that during film screenings ambient noise levels in cinemas are relatively high and can include noise from films in adjacent cinemas. The proposed ground borne construction noise criterion of 60 dBA is therefore considered reasonable, considering the temporary nature of construction works. During operations, a more stringent noise criterion of 35 dBA has been adopted.

EIS 2 recommends that measurements also be conducted to assist in evaluating and managing impacts in conjunction with the cinemas when the works commence. During construction, in the event that cinema identifies that ground-borne noise is affecting cinema patrons during film screenings (at any noise level), the cinema will be able to contact the construction contractor to request additional monitoring. In the event that vibration intensive works are required and lower impact equipment cannot be substituted, all efforts would be made to rescheduled work at less sensitive times.

Issue 1 e) Operation – Noise and vibration

The operational rail noise assessment includes only airborne noise from the operation of trains on the rail line. Noise from the stations, car parks and traffic are assessed separately against the relevant noise policy.

Residential apartments within RHTC have not been identified in the assessment. The predicted noise level contours however indicate that compliance is expected to be achieved at the nearest residential apartments. Estimates however have been made as the noise contours are presented at 4.5 metres above the ground rather than at the elevated residential locations. Confirmation in the EIS is therefore required.

Mixed use development, which may include residential, in the approved Rouse Hill Northern Precinct Concept Plan has not been considered.

Response 1 e)

Compliance with the operational noise goals is expected to be achieved at the existing residential apartments in the RHTC. The proposed Rouse Hill Northern Precinct has been considered and buildings have been included in the operational noise prediction model as shown in the EIS 2 noise contours. At the time of the EIS 2 assessment, residential areas in this development were expected to be set back from the rail corridor behind commercial buildings and hence rail noise impacts on residential areas were expected to be low.

The Northern Precinct Plan for Rouse Hill Regional Centre available on The Hills Shire Council website (Application HB-354/2013) submitted on 24 September 2013 indicates the potential for mixed use including residential in buildings fronting Orchard Road. No detail is available at this stage on which levels or which of these buildings may be residential. The attached supplementary information is therefore provided to GPT for information purposes to assist in the design of this development to meet the internal noise levels required by the *State Environmental Planning Policy (Infrastructure) 2007.*

In the event that residential apartments are proposed on the Orchard Road frontage of the development, the maximum predicted rail noise levels at the façade of the upper levels of multi-storey buildings in the future scenario are up to 70 dBA $L_{Aeq(15hour)}$ (daytime) 65 dBA $L_{Aeq(9hour)}$ (night time)and 88 dBA L_{Amax} (maximum) at a distance of approximately 30 metres from the near track. These levels include a 3 dB curve noise correction and a 2.5 dB facade correction.

Further information is provided in Appendix A.

Issue 1 f) Construction – Noise and vibration

Airborne operational noise to outdoor areas of the RHTC should be assessed against the "passive recreation" criteria.

Response 1 f)

Due to the proximity to the station and hence low train speeds, operational rail noise impacts to existing outdoor areas of the RHTC are expected to be low. Compliance with the passive recreation criteria at these areas (the same as the residential criteria) would be expected as can be seen from the EIS 2 noise contours.

Issue 1 g) Operation – Noise and vibration

As the noise modelling demonstrates compliance with the relevant noise policy, GPT consider that further discussion or detail regarding noise mitigation is not warranted.

Response 1 g)

GPT's comment is noted.

Issue 1 h) Operation – Noise and vibration

The assessment does not cover the surface and viaduct section of track. While ground borne noise impact is usually isolated to tunnel operations where there is no airborne noise component to mask the ground borne noise, ground borne noise can impact other locations where airborne noise is well isolated, such as the Reading Cinema. While this has not been directly addressed, based on the data presented in Figure 7.1, ground borne noise from the rail line is not expected to impact the cinema due to the slow operating speed of trains at the Station and the distance from the track.

Confirmation that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the Reading Cinema should be provided.

Response 1 h)

The RHTC planning consent granted by the Hills Shire Council requires GPT to provide adequate noise and vibration protection in consultation with Government agencies. TfNSW would welcome understanding how GPT has complied with these conditions. GPT would need to seek its own advice in relation to its compliance with the provisions of existing consents.

Issue 1 i) Operation – Noise and vibration

In-principle assessment is presented for mechanical services equipment only. No public car park is included at Rouse Hill Station.

Noise from the Station PA system is likely to be the most sensitive issue for noise emission from the station. Due to the high peak train movements of 20 per hour proposed for the NWRL, announcements are expected to be frequent. Also, as the ambient noise level is expected to be high as a result of traffic along Windsor Road, the noise level of the PA is expected to be reasonably high.

No assessment of PA noise has been included in EIS 2. The report therefore is unable to provide an indication as to whether noise from the PA system is capable of complying with the relevant criteria. Given the open platform design, there are limited opportunities to mitigation airborne noise from the PA. The conditions of approval or contract requirements should not prohibit or discourage the modification of the platform design to effectively mitigate airborne noise.

Response 1 i)

As stated in EIS 2, mitigation of noise from PA systems at stations will be required to achieve the INP noise criteria. It is anticipated that these criteria can be achieved with appropriate design such as loudspeaker selection and placement and installation of ambient noise sensing microphones and automatic volume control systems. It is anticipated that both the Conditions of Approval and the contract specifications will require the design of PA systems to meet the INP noise criteria.

Issue 1 j) Operation – Noise and vibration

The Operational Traffic Report (EIS 2 Technical Paper 2) does not appear to present any traffic figures for Main Street of RHTC. Therefore it is unclear as to how an assessment of traffic noise onto residential receivers within the RHTC has been carried out. Assessment of traffic noise onto RHTC residential receivers should be provided.

Response 1 j)

As stated in EIS 2, due to the existing bus interchange and the close proximity of the proposed Rouse Hill Station to Windsor Road, traffic noise levels are not predicted to increase by 2 dB or more at any receivers near the station proper.

We note that the RHTC includes residential apartments along Main Street that are set well back from Windsor Road. No road traffic noise assessment has been undertaken for these receivers as no traffic numbers are available at this stage. Not all the identified kiss-and-ride traffic identified in EIS 2 would access the station via Main Street.

Main Street would be considered a local road as it currently operates and the criteria in the Road Noise Policy would apply, ie $L_{Aeq(1hour)}$ 55 dBA during the daytime and $L_{Aeq(1hour)}$ 50 dBA during the night-time.

Issue 1 k) Operation – Noise and vibration

Retail premises within Rouse Hill Town Centre operate into the evening period and therefore should be considered for any proposed evening work.

Response 1 k)

The Stage 2 construction works described in EIS 2 are expected to occur during standard construction hours, ie during the daytime. In the event that evening works are required, impacts on commercial premises would be considered. The commercial NML is the same during the daytime and evening.

Issue 1 l) Construction – Noise and vibration

Residential premises within the RHTC have not been considered in the assessment. Assessment of construction noise to residential apartments within the Rouse Hill Town Centre is required as they are located closer than other identified residential receivers.

Assessment to the approved Level 2 Development Application of RHTC, to be situated between Tempus Street and the existing RHTC, has not been considered in the assessment.

Assessment to closer residential and commercial premises may impact upon the reasonableness of potential evening construction works.

Response 1 l)

The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts and car park construction. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. In response to this submission residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime NMLs is predicted for residential receivers in the RHTC. These Stage 2 works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the NMLs for passive recreation areas by up to 4 dB during the daytime.

Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these Stage 2 works would be restricted to the daytime period and are anticipated to occur for a relatively short period of time (of the order of 2 to 4 weeks adjacent to RHTC).

Construction impacts on the proposed Level 2 DA of RHTC, to be situated between Tempus Street and the existing RHTC have not been considered at this stage in the assessment. This development would be considered during preparation of the more detailed site-specific Construction Noise and Vibration Impact Statements during the detailed design stage.

Issue 1 m) Construction – Noise and vibration

Noise level data of typical road construction equipment are not included within the report and therefore assessment of temporary relocation and reinstatement of the Bus T-Way has not been carried out. This deficiency could alter the duration and proximity of works to the RHTC as well as cumulative impacts. The submissions report stated that construction phases would not overlap. Assurance that the Station construction will not occur at the same time as skytrain construction should be provided.

Response 1 m)

The scenario assessed for the Stage 2 works is reinstatement of the T-Way interchange. The impacts of the initial relocation of these facilities were covered in the assessment of the Stage 1 works in EIS 1. The Stage 2 works will occur after completion of the Stage 1 Major Civil Construction Works.

Issue 1 n) Construction – Noise and vibration

Only brief outline of equipment and activities associated with each construction phase are described in Sections 12.4.1 (pp.144-145), Technical Paper 3.

The number of each plant item to be expected at each site during each phase of works, or that assumed in the noise assessment, needs to be provided to ensure an appropriate noise assessment has been carried out.

Response 1 n)

The assessment is based on a realistic worst case construction scenario. Consistent with other NWRL construction sites, detailed information relating to the precise equipment to be used on this site is not known and is subject to future contracts. Further detail would become available in the detailed design phase.

Issue 1 o) Construction – Noise and vibration

'Passive recreation' criterion has not been used for the assessment of outdoor areas of RHTC as stated in the submissions report. Noise predictions for Station Construction and viaduct construction between Kellyville Station and Rouse Hill Station indicate compliance with the relevant criteria. Predicted noise levels however are not presented.

Response 1 o)

The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts and car park construction. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. Residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime NMLs is predicted for residential receivers in the RHTC. These works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the NMLs for passive recreation areas by up to 4 dB during the daytime.

Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these works would be restricted to the daytime period and are anticipated to occur for a relatively short period of time (of the order of 2 to 4 weeks adjacent to RHTC).

Issue 1 p) Construction – Noise and vibration

A 3 metre high hoarding is to be provided for Rouse Hill in Table 12.46 [p.189]. It is unclear whether this mitigation has been included for station works.

No specific noise and vibration mitigation measures are stated for Rouse Hill Station to Cudgegong Station where exceedance of the Noise Management Levels (NMLs) is predicted.

The EIS should clarify whether the specific 3 metre hoardings are to be provided around Rouse Hill Station. It is noted that 10 dB(A) exceedances were predicted in EIS 1.

Response 1 p)

A 3 metre noise barrier is proposed to be constructed around the perimeter of the Rouse Hill Station Construction Site for Stage 1 works and would be retained for Stage 2 works. This has been included in the assessment and will provide a benefit for receivers at ground level, when works are taking place at ground level. Due to the elevated nature of the proposed Rouse Hill Station, some construction works will take place above the noise barrier and in this situation the barrier will not provide a benefit. Some receivers are also elevated, and will not receive a benefit. The effects of both elevated works and elevated receivers have been included in the assessment.

Issue 1 q) Construction – Noise and vibration

The Construction Noise and Vibration Strategy (CNVS) identifies a mechanism to determine when and what additional mitigation measures should be applied, beyond the Standard Measures. This approach, the Additional Mitigation Measures Matrix (AMMM), is generally well considered and provides some certainty about when mitigation options should be offered to affected receivers. However it is not clear whether the AMMM will be used to assess commercial receivers such as the RHTC. The AMMM refers only to the level at which construction noise exceeds the background noise level (Appendix J), CNVS, Tables 5.2 to 5.4, p.19) which ultimately excludes commercial receivers.

The AMMM should ensure a mechanism for assessment of commercial premises. Reference to background noise levels may be appropriate, in particular for external areas of restaurants and cafes where an external amenity is expected.

Response 1 q)

The mitigation measures described in the AMMM are intended to be applied to residential receivers. However, the standard mitigation measures and monitoring requirements described in the CNVS are applicable to commercial premises.

Reference to background noise levels for receivers other than residential receivers is not required by the Interim Construction Noise Guideline. NMLs for other receiver types (including commercial premises and passive recreation areas) are defined independent of the background levels.

Issue 1 r) Construction – Noise and vibration

Unlike EIS 1 internal NMLs for commercial premises is not provided, nor is it set in the CNVS. The internal ground borne noise NML of 1-Aeq(15minute) 60dB(A), set within the EIS 1, is considered too high, being only 10 dB(A) below the external NML.

Response 1 r)

The Stage 2 construction works described in EIS 2 are generally not expected to result in ground borne noise impacts. For this reason only external NMLs are stated in EIS 2. The exception is the identified potential for noise from vibratory rollers to be audible in the Reading Cinema during Stage 2 construction work. See response to issue 1 d) for further information.

The construction NMLs identified in EIS 1 will remain applicable to the Stage 2 works, even if not explicitly stated.

Issue 1 s) Construction – Noise and vibration

Section 12.13.4 (p.174) of Technical Paper No.3 indicates that ground borne noise from the operation of vibratory rollers may be audible within the Reading Cinema. The report does not indicate the likely levels of noise within the cinema. A criteria needs to be set for the assessment of the Reading Cinema, which would ultimately need to be incorporated into the CNVS.

Response 1 s)

While cinemas are considered sensitive receivers, we note that during film screenings ambient noise levels in cinemas are relatively high and can include noise from films in adjacent cinemas. The proposed ground borne construction noise criterion of 60 dBA is therefore considered reasonable, considering the temporary nature of construction works. During operations, a more stringent noise criterion of 35 dBA has been adopted.

Section 7.11.4 of EIS 1 Technical Paper 2 identified that the Stage 1 works are not anticipated to result in audible ground-borne noise in the cinemas. The potential for noise from vibratory rollers to be audible in the Reading Cinema during Stage 2 construction work has been identified in EIS 2. At this stage, no information is available on the size of equipment proposed to be used or the detailed schedule of works. The impacts will be revisited during the preparation of the more detailed site-specific Construction Noise and Vibration Impact Statement for this location during the detailed design stage.

EIS 2 recommends that measurements also be conducted to assist in evaluating and managing impacts in conjunction with the cinemas when the works commence. During construction, in the event that cinema identifies that ground-borne noise is affecting cinema patrons during film screenings (at any noise level), the cinema will be able to contact the construction contractor to request additional monitoring. In the event that vibration intensive works are required and lower impact equipment cannot be substituted, all efforts would be made to reschedule work at less sensitive times

Planning – Approval process

Issue 2 (GPT reference 2)

GPT requests that the Minister imposes a condition of approval requiring TfNSW to continually consult with GPT on the CEMF to agree detailed design elements and to agree specific strategies to mitigate and ameliorate the impact during construction and operation of the NWRL on the operation and future development of RHTC.

Response 2

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. EIS 2 includes a number of mitigation measures which have been developed for addressing potential impacts of the project. A set of mitigation measures, including revised mitigation measures, can be found in Chapter 9 of this report. Relevant mitigation measures have been developed for: Local Business Impacts (in particular, LB1, LB2, LB3 and LB4) and Land Use and Community Facilities (in particular, mitigation measures LC2, LC12, LC14 and LC15). In addition, Chapter 4 - Stakeholder and Community Involvement initiatives presented in the Construction Environmental Management Framework (Appendix B of EIS 2) contains a number of relevant management initiatives including a Communication and Consultation Strategy, complaints handling, urban design of temporary works and the requirement for a Business Management Plan.

Issue 3 (GPT reference 3)

The level of design development contained in EIS 2 does not allow for an adequate assessment to determine impacts on the operation of RHTC, despite the fact that EIS 2 essentially represents a 'development application' stage assessment. GPT is concerned that important design details have been excluded from the SSI application and are deferred to third party contractors and their sub-contractors under multi-tiered design and construct tender arrangements.

In EIS 1 and the subsequent related documents, TfNSW repeatedly undertook to provide detailed designs of the station precinct in EIS 2. This has not occurred.

GPT requests that the Minister requires TfNSW to prepare and lodge a separate application (eg a Development Application) for the design and construction of the Rouse Hill Station precinct. Prepared in consultation with GPT, this application should provide a detailed and holistic assessment covering design, construction and impact mitigation, and be assessed through a transparent application process.

Response 3

The project is subject to an environmental assessment and approval process under the *Environmental Planning and Assessment Act 1979* (EP&A Act) and is classified as Critical State Significant Infrastructure. With recent amendments to the EP&A Act, the Concept Plan Approval for the project granted by the Minister for Planning on 6 May 2008, is taken to be a Staged Infrastructure Approval under Part 5.1 of the EP&A Act. Before works can commence on the project, a detailed environmental assessment must be undertaken and approved by the Minister for Planning and Infrastructure for each stage or component of the project. Development Applications relate to Part 4 of the EP&A Act and are not relevant to the EP&A Act planning provisions which are applicable to the NWRL.

In EIS 2, Section 6.5 provides details regarding the design of the NWRL. This section states that the EIS is based on a concept design for the NWRL which has been developed to provide the level of detail necessary to allow:

- Identification of property acquisition necessary to enable the project to be implemented.
- An understanding of the nature and extent of likely impacts and impact mitigation measures.
- A level of flexibility to enable detailed design development while having regard to reasonable and feasible mitigation measures to minimise impact on the receiving environment.

Feedback from the community and key stakeholders including councils and industry has influenced the design process.

Section 6.5 also addresses design aspects of the NWRL including principles and standards used throughout the design process and discusses:

- The detailed design phase.
- Design principles for stations and service facilities.
- Public art.
- Design Review Panel.
- Delivery of a high quality design.

It is noted that the design review panel engaged for the duration of the project has been tasked with ensuring the detailed design developed by TfNSW and its construction contractors and operators delivers a high quality product.

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. Details presented in EIS 2 include a number of mitigation measures which have been developed. As a result of the submissions received during the public exhibition of EIS 2 some of these mitigation measures have been revised. A set of mitigation measures, including revised mitigation measures, can be found in Chapter 9 of this report. Relevant mitigation measures have been developed for: Local Business Impacts (in particular, LB1, LB2, LB3 and LB4) and Land Use and Community Facilities (in particular, mitigation measures LC2, LC12, LC14 and LC15). In addition, Chapter 4 - Stakeholder and Community Involvement initiatives presented in the Construction Environmental Management Framework (Appendix B of EIS 2) contains a number of relevant management initiatives.

Issue 4 (GPT reference 7)

GPT welcomes past assurances by TfNSW that an Interface Agreement will be executed between GPT and TfNSW to ensure that customer experiences and expectations of the precinct are not only met but aim to be exceeded. The Interface Agreement will establish further collaboration between GPT, TfNSW and TfNSW's contractors on key interface issues. A draft agreement, tentatively entitled the "Rouse Hill Town Centre NWRL Umbrella Agreement", has previously been tabled with TfNSW through the Project Working Group for further resolution and finalisation at the appropriate time.

GPT requests that the conditions of approval require that an Interface Agreement between GPT and TfNSW, binding the principal contractors, be entered into prior to commencement of any works adjacent to Rouse Hill Town Centre.

Response 4

TfNSW would enter into Interface Agreements between numerous stakeholders for the NWRL and the details of each Interface Agreement would be negotiated between TfNSW and the relevant stakeholder. Each Interface Agreement would be fair and reasonable to both TfNSW and the relevant stakeholder and would be a formally executed common law agreement. TfNSW does not agree that any Interface Agreement should form a condition of approval under the *Environmental Planning and Assessment Act 1979*.

Issue 5 (GPT reference 9)

GPT requests that the Minister recognises that modifications to the consents and applications for RHTC Town Centre may be required solely as a result of the change from an underground station to an above ground viaduct and station and that an appropriate condition be imposed on the approval for SSI 2 to address this.

Response 5

Development of the NWRL project has had a long and diverse history since 1998. Since Concept Plan Approval was granted for the project in 2008 further strategic planning and project development has occurred. Details of the NWRL development history can be found in Section 1.3 of EIS 2. TfNSW does not agree that a condition be imposed to respond to designs developed by other parties who have relied upon earlier NWRL designs.

Issue 6 (GPT reference 13)

GPT requests that the Minister requires that TfNSW and its contractors, in consultation with GPT, develop a site-specific CEMP for the RHTC as an area of particular significance. The CEMP for RHTC should seek to maintain a high standard of amenity for occupants of and visitors to the town centre, including during extended work hours and peak trading periods.

Response 6

Section 4.5 of the Construction Environmental Management Framework (Appendix B of EIS 2) states that:

- The NWRL Principal Contractors will proactively work with potentially affected stakeholders to identify the likely impacts and put in place measures to minimise impacts.
- Construction works will be undertaken to meet the following objectives:
  - Minimise the potential impact of the project to the operation of businesses affected by NWRL works.
  - Ensure businesses are kept informed of the project and consulted in advance of major works or factors that are likely to have a direct impact.
  - Consult with all business directly affected by changes to access arrangements regarding specific requirements at least two weeks prior to those changes coming into effect.
  - Ensure that business stakeholder enquiries and complaints regarding the project are managed and resolved effectively.
- NWRL Principal Contractors will develop and implement a Business Management Plan. The Business Management Plan will document key issues by locality with a particular focus on proactive consultation with affected businesses. The Business Management Plan will include:
  - Identification of specific businesses which are sensitive to construction activity disturbances.
  - Summary of the commercial character of the locality, its general trading profile (daily and annually) and information gained from the business profiling such as:
  - Operating hours.
  - Main delivery times.
  - Reliance on foot traffic.
  - Any signage or advertising that may be impacted.
  - Customer origin.
  - Other information specific to the business that will need to be considered in construction planning.

- Definition of the roles and responsibilities in relation to the control and monitoring of business disturbances.
- Identification of locality specific standard business mitigation measures which would be implemented.
- Maps and diagrams to illustrate the information for easy identification of measures which would be implemented.
- Description of the monitoring, auditing and reporting procedures.
- Procedure for reviewing performance and implementing corrective actions.
- Description of the complaints handling process.
- Procedures for community consultation and liaison.

The strategy for the development and management of CEMPs for the NWRL would be determined by TfNSW.

Issue 7 (GPT reference 22)

The amended Construction Environmental Management Framework does not adequately address the requirements of the EIS 1 approval or the detailed mitigation measures provided in Table 13.7 of EIS 2. For example, while it appears to give all responsibility for business impact management and monitoring to the principal contractor, it does not appear to cater for:

- ❖ The role, reporting responsibility, and timing of the appointment of Place Managers.
- ❖ The establishment of a business impact risk register.

GPT requests that the Minister requires TfNSW to expand the CEMF to adequately address the requirements of the EIS 1 approval and the detailed mitigation measures provided in Table 13.7 of EIS 2.

Response 7

The Construction Environmental Management Framework (CEMF) presented in Appendix B of EIS 2 was not intended to address the requirements of the EIS 1 or address the mitigation measures provided in Table 13.7 of EIS 2. As outlined in Section 7.13 of EIS 2, the CEMF provides a linking document between the planning approval documentation and the CEMP to be developed by the construction contractors. The CEMF details the environmental, stakeholder and community management systems and processes for the construction of the NWRL. Specifically, it details the requirements in relation to the CEMP, sub-plans and other supporting documentation for each specific environmental aspect. The mitigation measures relevant to each environmental issue are identified within the relevant sections of EIS 2.

Communication – Consultation

Issue 8 (GPT reference 4)

Should the Minister not require a separate application (eg a Development Application) to be lodged, GPT requests clarification from TfNSW as to the mechanism that will be used to ensure key affected stakeholders are adequately consulted on the detailed design of the stations and station precincts, and what recourse is available should the principal contractors not meet pre-agreed principles and outcomes.

Response 8

A separate application for the NWRL is not required.

Issue 9 (GPT reference 5)

GPT is concerned that the principal contractors may not be obliged to demonstrate the same level of commitment to working with RHTC as that which has been demonstrated by TfNSW. In particular, GPT is concerned about working through the complex issues of interface issues, station precinct design and post-completion precinct management with a contracted third party.

GPT requests that a condition of approval be imposed on SSI 2 requiring the Rouse Hill Station Precinct Project Working Group meetings to continue for the duration of the project, with meetings to be held at regular frequency depending on the stage and intensity of work in progress.

Response 9

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. Details presented in EIS 2 include a number of mitigation measures which have been developed. As a result of the submissions received during the public exhibition of EIS 2 some of these mitigation measures have been revised. A set of mitigation measures, including revised mitigation measures, can be found in Chapter 9 of this report. Relevant mitigation measures have been developed for: Local Business Impacts (in particular, LB1, LB2, LB3 and LB4) and Land Use and Community Facilities (in particular, mitigation measures LC2, LC12, LC14 and LC15). In addition, Chapter 4 - Stakeholder and Community Involvement initiatives presented in the Construction Environmental Management Framework (Appendix B of EIS 2) contains a number of relevant management initiatives.

Issue 10 (GPT reference 6)

It is noted that the approach to consultation during the construction phase is a generic methodology comprising letterbox drops and the like. It is submitted that in the case of RHTC and its multiple stakeholder groups, a more intensive approach may be required, with details to be agreed with the Project Working Group.

GPT requests that the terms of reference for the Project Working Group should be reviewed to ensure that it covers all disciplines and issues for the precinct including but not limited to:

a. Construction programming and scheduling.
b. Design development.
c. Traffic & transport.
d. Business impact and management.
e. Site-specific consultation needs.
f. The CEMP.

Response 10

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. Details presented in EIS 2 include a number of mitigation measures which have been developed. As a result of the submissions received during the public exhibition of EIS 2 some of these mitigation measures have been revised. A set of mitigation measures, including revised mitigation measures, can be found in Chapter 9 of this report. Relevant mitigation measures have been developed for: Local Business Impacts (in particular, LB1, LB2, LB3 and LB4) and Land Use and Community Facilities (in particular, mitigation measures LC2, LC12, LC14 and LC15). In addition, Chapter 4 - Stakeholder and Community Involvement initiatives presented in the Construction Environmental Management Framework (Appendix B of EIS 2) contains a number of relevant management initiatives.

Issue 11 (GPT reference 12)

GPT requests that TfNSW continues to consult with GPT to address the specific concerns raised with the CEMF. Further, GPT continue to be consulted throughout the conversion of the CEMF into a site specific CEMP for Rouse Hill, including the establishment of hold points prior to implementation.

Response 11

TfNSW would continue to consult with GPT. As outlined in Section 7.13 of EIS 2, the CEMF provides a linking document between the planning approval documentation and the CEMP to be developed by the construction contractors.

The strategy for the development and management of CEMPs for the NWRL would be determined by TfNSW.

Planning – Land use planning

Issue 12 (GPT reference 10)

GPT requests that there is recognition of the proposed mixed use development (including residential accommodation) in the vicinity of the rail viaduct, that these uses be incorporated into the impact assessment and that appropriate measures be established to mitigate and ameliorate the impacts.

Response 12

Chapter 14 – Land Use and Community Facilities of EIS 2 acknowledges the mixed use development within RHTC. This is acknowledged in Section 14.4.10 which considers RHTC's existing character, land use and zoning and Section 14.5.7 which acknowledges RHTC's potential future development, and potential future development proposed by private stakeholders. These factors have been considered in the environmental assessment process presented in EIS 2.

Issue 13 (GPT reference 11 c)

GPT submits that clarity around construction is critical due to the interface between the RHTC and NWRL. Given the strategic importance of the RHTC, a specific assessment in relation to the impacts on RHTC is warranted.

GPT requests that the Minister requires TfNSW to develop a site specific detailed construction program for RHTC, in consultation with GPT, that clearly identifies staging implications that accommodates the operational needs of RHTC and future development of the Northern Precinct and Sleeve Buildings.

Response 13

TfNSW agrees that clarity around construction is critical. An assessment of the impacts around RHTC has been undertaken based upon the indicative construction methodology and programming which has been developed to inform EIS 2.

In EIS 2, Table 7.8 – Rouse Hill Station indicative program and Table 20.2 – Indicative construction timeframe for Stage 1 and Stage 2 of the NWRL provide the indicative construction programs for activities around RHTC. Further detail regarding construction programming at RHTC is not able to be provided until the construction contractor/s have completed construction programming.

Issue 14 (GPT reference 44)

GPT understands that the relationship between the NWRL and land uses is primarily being addressed through a parallel precinct planning and land use integration process centred around each station location. EIS 2 notes that this process is being led by the Department of Planning and Infrastructure in consultation with Local Councils and TfNSW.

Based on earlier Rouse Hill Station Precinct Project Working Group discussions, GPT understood that this work would happen contemporaneously with EIS 2, and hence a better level of resolution was anticipated at this stage. Planning for the future use of land is considered to be an integral part of station precinct planning. For example, the land under the viaduct adjacent to the Rouse Hill Station precinct appears to be redundant and risks being de-activated. Alternate uses could be considered as part of detailed planning.

As a major stakeholder, it is important that GPT is involved in the land use planning process, due to the close interface with the RHTC, including the planned Northern Precinct. Land use planning also has implications for GPT's TCCPP Consent, which allows for future development of 'Sleeve Buildings' and the 'Market Square' Building.

GPT requests that the Minister requires the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly with and through regular meetings of the Project Working Group.

Response 14

The Department of Planning and Infrastructure and TfNSW have jointly established a Precinct Planning Working Group with Blacktown City, The Hills and Hornsby Shire Councils. The primary objective of the working group is for State and Local government to work collaboratively to develop and implement station precinct planning frameworks to maximise the land use opportunities associated with the NWRL. The outcomes of the precinct planning working group will be used to facilitate community and stakeholder discussion about the desired future character of station precincts. This will ultimately inform future planning controls and infrastructure requirements to support growth scenarios along the NWRL corridor. Ongoing consultations are occurring with the Department of Planning and Infrastructure (Strategies and Land Release and Plan Making and Urban Renewal) as part of the detailed station planning. This work is considered essential to ensure that detailed access, land use integration and coordination issues are resolved.

Project – Project timing

Issue 15 (GPT reference 11 a, b and d)

GPT is concerned about the lack of clarity around the proposed construction timeframes. Contractors engaged by TfNSW should be required to reduce the time each construction site is in use, by reducing the size of the compound as works are completed, or by releasing the site as soon as possible.

GPT seeks to ensure that best practice programming is undertaken and that the key drivers, apart from overall time, cost and quality, also include the minimisation of time that work is undertaken at RHTC. In addition, the safety and convenience (and most importantly the perception of safety and convenience) of customers and commuters at RHTC needs to be paramount.

GPT requests that the Minister requires TfNSW to develop a site specific detailed construction program for RHTC, in consultation with GPT, that clearly identifies a total optimum construction timeframe for all works including strategies for reducing the total construction timeframes at each site, the various construction activities and their proposed timeframes and strategies for reducing total construction timeframes on each site.

Response 15

TfNSW agrees that clarity around construction is critical. An assessment of the impacts around RHTC has been undertaken based upon the indicative construction methodology and programming which has been developed to inform EIS 2.

In EIS 2, Table 7.8 – Rouse Hill Station indicative program and Table 20.2 – Indicative construction timeframe for Stage 1 and Stage 2 of the NWRL provide the indicative construction programs for activities around RHTC. Further detail regarding construction programming at RHTC is not able to be provided until the construction contractor/s have completed construction programming.

Construction – Sites / compounds

Issue 16 (GPT reference 11 e)

GPT requests that the Minister requires TfNSW to develop a site specific detailed construction program for RHTC, in consultation with GPT, that clearly identifies opportunities to reduce the size of construction zones as works are partially completed.

Response 16

TfNSW agrees that clarity around construction is critical. An assessment of the impacts around RHTC has been undertaken based upon the indicative construction methodology and programming which has been developed to inform EIS 2.

In EIS 2, Table 7.8 – Rouse Hill Station indicative program and Table 20.2 – Indicative construction timeframe for Stage 1 and Stage 2 of the NWRL provide the indicative construction programs for activities around RHTC. Further detail regarding construction programming at RHTC is not able to be provided until the construction contractor/s have completed construction programming.

Construction – Access

Issue 17 (GPT reference 11 f)

GPT requests that the Minister requires TfNSW to develop a site specific detailed construction program for RHTC, in consultation with GPT, that clearly specifies that no construction work that alters or interferes with access and egress arrangements will be undertaken at RHTC at Easter (1 week either side of the designated public holiday dates) and Christmas / year end (between 1 December and 31 January each year).

Response 17

TfNSW agrees that clarity around construction is critical and Table 7.8 – Rouse Hill Station indicative program and Table 20.2 – Indicative construction timeframe for Stage 1 and Stage 2 of the NWRL in EIS2 provide the indicative construction programs for activities around RHTC. Further detail regarding construction programming at RHTC is not able to be provided until the construction contractor/s have completed construction programming.

Operation – Noise and vibration

• Issue 18 (GPT reference 14 and Appendix 2)

GPT requests that the Minister requires TfNSW to complete its noise impact assessment in accordance with the recommendations in Renzo Tonin's report as follows:

1. Noise impact at upper levels (ie not acoustically shielded by the viaduct barriers), not 4.5 metres above ground, needs to be provided to allow assessment of high rise commercial and residential buildings. At source treatment such as rail dampers, can reduce impacts to upper level receivers.
2. Background noise monitoring at residential premises within RHTC is required for the assessment of station noise emission.
3. Confirmation that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the Reading Cinema should be provided.
4. Noise from the Station must consider all receivers including approved but undeveloped commercial sites between Tempus Street and the existing RHTC (Level 2 DA).
5. An assessment of PA noise emission must be included in the EIS to ensure that the design is capable of complying with the noise criteria. The conditions of approval or contract requirements should not prohibit or discourage the modification of the platform design to effectively mitigate airborne noise.
6. Existing and future operational traffic predictions for Main Street are required, and following, an assessment of noise impact on residential premises in RHTC must be included in EIS 2.

Response 18

1. Compliance with the operational noise goals is expected to be achieved at the existing residential apartments in the RHTC. The proposed Rouse Hill Northern Precinct has been considered and buildings have been included in the operational noise prediction model as shown in the EIS 2 noise contours. At the time of the EIS 2 assessment, residential areas in this development were expected to be set back from the rail corridor behind commercial buildings and hence rail noise impacts on residential areas were expected to be low.

   The Northern Precinct Plan for Rouse Hill Regional Centre available on The Hills Shire Council website (Application HB-354/2013) submitted on 24/9/2013 indicates the potential for mixed use including residential in buildings fronting Orchard Road. No detail is available at this stage on which levels or which of these buildings may be residential. The attached supplementary information is therefore provided for the information of GPT to assist in the design of this development to meet the internal noise levels required by the State Environmental Planning Policy (Infrastructure) 2007.

In the event that residential apartments are proposed on the Orchard Road frontage of the development, the maximum predicted rail noise levels at the façade of the upper levels of multi-storey buildings in the future scenario are up to 70 dBA $L_{Aeq(15hour)}$ (daytime) 65 dBA $L_{Aeq(9hour)}$ (night time) and 88 dBA L_{Amax} (maximum) at a distance of approximately 30 metres from the near track. These levels include a 3 dB curve noise correction and a 2.5 dB facade correction.

Further information is provided in Appendix A. It is noted that rail dampers can reduce impacts on upper level receivers and that rail dampers are proposed in this area.

2. The NMLs for residential receivers in the RHTC have been based on the background noise measurements at location BG20 shown on Figure 10.1 of EIS 2. This location is a similar distance from Old Windsor Road as the RHTC residential receivers, but is otherwise a quiet residential area. It is considered that this represents a conservative approach as other activities in the RHTC are likely to contribute to higher background noise levels than those observed at BG20.

   Noise issues related to the Major Civil Construction Works presented in EIS 1 were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works and were independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on 25 September 2012. The Conditions of Approval include the need to identify areas sensitive to construction vibration and construction ground borne noise, including residential premises and incorporate the results into the Construction Noise and Vibration Management Plan (examples include: Conditions E.11 and E. 46(b)).

   For EIS 2 – Stations, Rail Infrastructure and Systems a similar approach as described above for EIS 1 would be expected, that is, that the noise impacts will be assessed in more detail in the Construction Noise and Vibration Management Plan.

3. An operational ground-borne noise criterion of 35 dBA has been identified for the Reading Cinema. Ground borne noise from the operation of the surface and viaduct section of the rail line will not affect nearby receivers including the Cinema.

4. The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. In response to this submission residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime Noise Management Levels is predicted for residential receivers in the RHTC. These Stage 2 works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the Noise Management Levels for passive recreation areas by up to 4 dB during the daytime.

   Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the Noise Management Levels are predicted at nearby sensitive receivers during track construction, these works would be restricted to the daytime period and are anticipated to occur for a relatively short period of time (in the order of 2 to 4 weeks adjacent to RHTC).

   Construction impacts on the proposed Level 2 DA of RHTC, to be situated between Tempus Street and the existing RHTC have not been considered at this stage in the assessment. This development would be considered during preparation of the more detailed site-specific

Construction Noise and Vibration Impact Statements during the detailed design stage.

5. As stated in EIS 2, mitigation of noise from PA systems at surface stations will be required to achieve the INP noise criteria. It is anticipated that these criteria can be achieved with appropriate design such as loudspeaker selection and placement and installation of ambient noise sensing microphones and automatic volume control systems. It is anticipated that both the Conditions of Approval and the contract specifications will require the design of PA systems to meet the INP noise criteria.
6. A detailed assessment of noise impacts on RHTC residential receivers has not been undertaken. As stated in EIS 2, due to the existing bus interchange and the close proximity of the proposed Rouse Hill Station to Windsor Road, traffic noise levels are not predicted to increase by 2 dB or more at any receivers near the station proper.

   TfNSW notes that the RHTC includes residential apartments along Main Street that are set well back from Windsor Road. No road traffic noise assessment has been undertaken for these receivers as no traffic numbers are available at this stage. Not all the identified kiss-and-ride traffic identified in EIS 2 would access the station via Main Street.

   Main Street would be considered a local road, as it currently operates, and the criteria in the *Road Noise Policy* would apply, ie $L_{Aeq(1hour)}$ 55 dBA during the daytime and $L_{Aeq(1hour)}$ 50 dBA during the night-time.

Construction – Noise and vibration

Issue 19 (GPT reference 14 and Appendix 2)

GPT requests that the Minister requires TfNSW to complete its noise impact assessment in accordance with the recommendations in Renzo Tonin's report as follows:

1. The construction noise and vibration assessment needs to include residential premises within RHTC along with assessment to the passive recreation criteria for outdoor areas of RHTC.
2. Appropriate background noise monitoring at residential premises within RHTC are required for this assessment.
3. The construction noise and vibration assessment must include the relocation and reinstatement of the Bus T-Way, including any cumulative impacts.
4. Clarification regarding the implementation of 3 metre noise walls around the RHTC Station site is required. Consideration of noise barriers around the RHTC construction site should be given for Bus T-Way works, particularly if impacts are to be comparable with the major civil works.
5. The 'Additional Mitigation Measures Matrix' (AMMM) included in the Construction Noise and Vibration Strategy (CNVS) should include a mechanism for the assessment of commercial premises and passive recreational spaces.
6. The CNVS should include a criterion for ground borne noise intrusion into sensitive spaces such as the RHTC Reading Cinema. It is recommended that the evening criteria for residential premises of 40 dB(A) be set.

Response 19

1. The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators, stairs and lifts and car park construction. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. In response to this submission residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime Noise Management Levels is predicted for residential receivers in the RHTC. These Stage 2 works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the Noise Management Levels for passive recreation areas by up to 4 dB during the daytime.

Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these Stage 2 works would be restricted to the daytime period and are anticipated to occur for a relatively short period of time (of the order of 2 to 4 weeks adjacent to RHTC).

2. The NMLs for residential receivers in the RHTC have been based on the background noise measurements at location BG20 shown on Figure 10.1 in EIS 2. This location is a similar distance from Old Windsor Road as the RHTC residential receivers, but is otherwise a quiet residential area. It is considered that this represents a conservative approach as other activities in the RHTC are likely to contribute to higher background noise levels than those observed at BG20.

3. The scenario assessed for the Stage 2 works is reinstatement of the T-Way interchange. The impacts of the initial relocation of these facilities were covered within the assessment of the Stage 1 works in EIS 1. The Stage 2 works will occur after completion of the Stage 1 Major Civil Construction Works.

4. A 3 metre noise barrier is proposed to be constructed around the perimeter of the Rouse Hill Station construction site for Stage 1 works and would be retained for Stage 2 works. This has been included in the assessment and will provide a benefit for receivers at ground level, when works are taking place at ground level. Due to the elevated nature of the proposed Rouse Hill Station, some construction works will take place above the noise barrier and in this situation the barrier will not provide a benefit. Some receivers are also elevated, and will not receive a benefit. The effects of both elevated works and elevated receivers have been included in the assessment.

5. The mitigation measures described in the AMMM are intended to be applied to residential receivers. However, the standard mitigation measures and monitoring requirements described in the Construction Noise and Vibration Strategy are applicable to commercial premises.

   Reference to background noise levels for receivers other than residential receivers is not required by the Interim Construction Noise Guideline. NMLs for other receiver types (including commercial premises and passive recreation areas) are defined independent of the background levels.

6. While cinemas are considered sensitive receivers, we note that during film screenings ambient noise levels in cinemas are relatively high and can include noise from films in adjacent cinemas. The proposed ground borne construction noise criterion of 60 dBA is therefore considered reasonable, considering the temporary nature of construction works. During operations, a more stringent noise criterion of 35 dBA has been adopted.

   Section 7.11.4 of EIS 1 Technical Paper 2 identified that the Stage 1 works are not anticipated to result in audible ground-borne noise in the cinemas. The potential for noise from vibratory rollers to be audible in the Reading Cinema during Stage 2 construction work has been identified in EIS2. At this stage, no information is available on the size of equipment proposed to be used or the detailed schedule of works. The impacts will be revisited during the preparation of the more detailed site-specific Construction Noise and Vibration Impact Statement for this location during the detailed design stage.

   EIS 2 recommends that measurements also be conducted to assist in evaluating and managing impacts in conjunction with the cinemas when the works commence. During construction, in the event that cinema identifies that ground-borne noise is affecting cinema patrons during film screenings (at any noise level), the cinema will be able to contact the construction contractor to request additional monitoring. In the event that vibration intensive works are required and lower impact equipment cannot

be substituted, all efforts would be made to reschedule work at less sensitive times.

Construction – Traffic and transport

Issue 20 (GPT reference 15)

More detail is required regarding any temporary or permanent road diversions or amendments that would impact the operation of the RHTC, as well as measures to mitigate the impacts on the operation of the RHTC. This detailed information required relates to matters such as:

a. The proposed changes to Tempus Street (GPT has a registered interest in the land that contains Tempus Street) and its likely impacts to the operation of RHTC.
b. The management of access to Construction Site 14 from White Hart Drive as there is potential for queuing impacts on to White Hart Drive which is one of the main accesses to RHTC car parks and loading docks. The potential knock-on impacts of queuing from the construction site access requires design review and management to minimise impacts to the operation of one of the main access routes to the RHTC.
c. The management of access to Construction Site 15 from Commercial Road, Rouse Hill Drive and Windsor Road as there is potential for queuing impacts. The potential knock-on impacts of queuing from the construction site access requires design review and management to minimise impacts to the operation of the main access routes to the RHTC.
d. The likely impacts of construction vehicles on Caddies Boulevard and its key intersections surrounding RHTC as shown in EIS 2, Figure 9.18.

GPT requests that the Minister requires TfNSW to complete, prior to any works commencing at RHTC in consultation with GPT, a site specific Traffic Management Plan that details any temporary or permanent road diversions or amendments to key access routes to the RHTC including:

a. Proposed changes to Tempus Street and its likely impacts to the operation of RHTC.
b. The required management of access to Construction Site 14 from White Hart Drive to mitigate and ameliorate the potential for queuing impacts on to White Hart Drive, the RHTC car parks and loading docks.
c. The required management of access to Construction Site 15 from Commercial Road, Rouse Hill Drive and Windsor Road to mitigate and ameliorate the potential for queuing impacts and to mitigate and ameliorate impacts to the operation of the main access routes to the RHTC.
d. The required management of the impacts of construction vehicles on Caddies Boulevard and its key intersections surrounding RHTC as shown in EIS 2, Figure 9.18.

Response 20

Condition E46 of the NWRL EIS 1 approval requires preparation of a Construction Traffic Management Plan (CTMP) to manage construction traffic and transport impacts of the NWRL project. It is anticipated that a similar condition will be imposed on any EIS 2 approval. The CTMP is to include consideration of traffic routes and haulage management, parking management, site traffic and access, incident responses and other relevant matters in greater detail than that communicated via the EIS 2 documentation. The additional detail requested by GPT will be provided through these CTMPs and will address those Rouse Hill specific issues listed above.

Operation – Traffic impacts / Transport – Kiss-and-ride

Issue 21 (GPT reference 36 and partial 37)

EIS 2 does not advise of the amount of additional traffic on Tempus Street and Main Street, generated by kiss-and-ride traffic to Rouse Hill Station. Therefore, the impacts of kiss-and-ride traffic on these privately owned low traffic town centre roads and its flow-on impacts to the surrounding key access routes to the RHTC car parks and loading docks cannot be understood. Greater analysis, understanding and consideration of these potential impacts is necessary to ensure that the existing safe, efficient access to and operation of RHTC can be maintained and enhanced.

EIS 2 has shown the existing Town Centre Main Street, as a private road within the RHTC, and one of the key in-bound routes for kiss-and-ride. Given the pedestrian-oriented nature of Main Street, GPT would like to work with the NWRL team to understand the magnitude of the likely increase in traffic volumes on Main Street throughout the day and how the pedestrian friendly environment of Main Street can be maintained whilst providing good accessibility to the Station. GPT would also like to continue to work with the NWRL to understand the likely impacts of the kiss-and-ride activities along Tempus Street and to its surrounding intersections and key access routes into the RHTC car parks and loading docks.

GPT requests that the Minister requires TfNSW to consult with GPT to ensure that any adverse impacts of the additional traffic generated by the kiss-and-ride activities can be mitigated and ameliorated along Tempus Street, Main Street, key access routes to the RHTC car parks and loading docks and to the operations and future development of the RHTC.

GPT also welcomes further discussions to confirm the location and land requirements for the kiss-and-ride zone proposed on the eastern side of Tempus Street (on that land that GPT holds a registered interest in) and requests that the Minister requires TfNSW to continue consultation with GPT to confirm the final location of kiss-and-ride zones and taxi rank.

Response 21

The kiss-and-ride and other multi-modal estimates referred to in EIS 2 are based on demand forecasts generated by the Bureau of Transport Statistics that are subject to change due to a range of factors including changes to future land use, population and employment assumptions. Moderate to high peak period volumes of kiss-and-ride activity are forecast for Main Street and Tempus Street in 2021. Main Street will, by necessity, be required to take increased traffic as Rouse Hill Drive will no longer be used as a through traffic route in the future and changes will occur at the intersection of Tempus Street and Rouse Hill Drive as a result of GPT's Northern Frame development. This, in turn, means that traffic exiting Tempus Street at the northern end will be forced to turn left to go south on Old Windsor Road.

The traffic movement restrictions required at either end of Tempus Street (triggered at the northern end by the need to accommodate the proposed GPT Northern Frame car park ramps) and the GPT initiated change to the function of Rouse Hill Drive, means that Main Street and Civic Way will need to accommodate higher traffic volumes post introduction of NWRL than would otherwise have been the case.

Pedestrian access between the station and the RHTC would be provided by way of a pedestrian crossing across Tempus Street at Market Square. Zebra

crossings would also be provided to the north and south of Rouse Hill Drive in the vicinity of Main Street. NWRL will continue to work with GPT to maintain a pedestrian friendly environment and to better define the routes and likely increases in traffic within these town centre streets and the preferred multi-modal kerbside allocations adjacent to the RHTC.

Transport – Parking availability

Issue 22 (GPT reference 16)

EIS 2 advises that parking areas between Windsor Road and Tempus Street and north of Rouse Hill Drive would be displaced during the construction period. EIS 2 suggests that GPT is able to replace the staff parking area between Windsor Road and RHTC and the Northern Precinct with parking in other parts of the RHTC. However, the majority of the parking at the area north of Rouse Hill Drive is commuter-related. The current suggestion in EIS 2 is to potentially relocate these parking spaces to other vacant parts of the RHTC or other locations in the vicinity of the RHTC. There have been no detailed arrangements put in place with GPT in this regard. The loss of this parking is contrary to the Level 3 Consents for RHTC and is likely to have impacts on the commercial operation of the RHTC, if not properly addressed.

GPT requests that the Minister requires TfNSW to continue to work in consultation with GPT to determine suitable alternative car parking arrangements to provide for displaced parking, including the entering of commercial agreements, where required.

Response 22

The parking spaces in the rail corridor are identified as "temporary" in the Rouse Hill Town Centre planning consent given by The Hills Shire Council. The consent also requires GPT to remove the temporary parking spaces. GPT would need to seek its own advice in relation to its compliance with the provision of parking spaces under existing consents.

In this regard mitigation measure T32 in Section 9.7.2 of EIS 2 is not relevant and has been deleted. This clarification is reflected in Chapter 9 of this report.

Transport – Bus integration

Issue 23 (GPT reference 17)

GPT requests that the Minister requires TfNSW to continue the effective consultation with GPT for the purposes of confirming the bus interchange relocation, detailed operation of the relocated bus interchange and bus layover, pedestrian access arrangements between the relocated bus interchange and RHTC, as well as the impacts of bus re-rerouting and the relocation of the bus layover area on the operation of the RHTC during construction.

Response 23

NWRL welcomes the opportunity to continue the collaborative discussions with GPT in relation to bus access and kerbside management in both the NWRL construction and operational phases. These discussions will be supplemented by the Construction Traffic Management Plan and the Traffic and Transport Liaison Group processes. NWRL will require GPT to be equally forthcoming with information about its planned Northern Frame re-development.

NWRL will work with GPT in respect of GPT's obligation to remove the bus interchange under the planning consent given by the Hills Shire Council for the Transit Interchange.

Issue 24 (GPT reference 37)

EIS 2 has provided an indication of changes to the bus interchange and taxi rank at Rouse Hill Station. Further operational details of changes to bus routes and bus interchange layout are required to confirm the public transport amenity that current exists at RHTC is maintained and improved.

EIS 2 advises that a new T-Way interchange will be created on the western side of the station for northbound and southbound bus access. The interchange will connect to the existing T-Way at the intersection with White Hart Drive and continues north through the intersection of Rouse Hill Drive towards Commercial Road to facilitate bus services to the north and the extension of Rouse Hill Town Centre. This is confirmed by the diagram shown on page 48 of the EIS 2 Summary Report. However, Figure 9.7 of the EIS 2 document has shown that bus routes may continue to use Windsor Road when travelling to the north of Rouse Hill Station.

GPT welcomes the proposal as this will increase public transport accessibility to a future area of retail and employment. Further clarity is sought in relation to final bus interchange / layover arrangements as well as bus route / frequency details at Rouse Hill Station to ensure public transport accessibility is maintained and maximised to Rouse Hill Station and the Town Centre.

Further discussions would also be appreciated to confirm the location and land requirements for the kiss-and-ride zone proposed on the eastern side of Tempus Drive (on that land that GPT holds a registered interest in).

GPT requests that the Minister requires TfNSW to continue consultation with GPT to confirm:

a. Final bus interchange / layover arrangements at Rouse Hill Station, which will maximise accessibility with the station entrance and the Rouse Hill Town Centre.
b. Final bus routing accessing Rouse Hill Station Interchange, in particular bus routes travelling between RHTC and suburbs / areas to the north.

c. Bus frequency and other operation details at Rouse Hill Station to ensure the current accessibility to the RHTC by public transport is maintained or improved.
d. Detailed design of bus layovers to the north and south of Rouse Hill Station.

The location and configuration of these installations should not have an adverse impact on the operation and future development of RHTC.

Response 24

The lines indicating bus routing in the Figure on page 48 of the A3 Overview provide an indication of bus routing across Rouse Hill Drive and via the proposed northern bus layover facility. GPT's acceptance in principle of the proposal to accommodate T-Way access from the north is acknowledged and further consultation with GPT and others will be required to determine how best to link the T-Way carriageway with Commercial Road. Figure 9.7 in EIS 2 reaffirms that, irrespective of this linkage, there still remains scope to allow for northbound bus access from the interchange onto Windsor Road via the Rouse Hill Drive / Windsor Road intersection subject to closer examination of geometric and phasing feasibility.

Indicative future bus routes and frequencies post-NWRL opening are given in Figure 52, p 140 of EIS 2 Technical Paper 2. Further development of the future bus network, routes and frequencies to be operated post-NWRL opening will continue.

NWRL will continue to work with GPT regarding the likely increases in traffic within RHTC streets and the preferred multi-modal kerbside allocations adjacent to the RHTC.

Transport – Pedestrian and bicycle access

Issue 25 (GPT reference 18)

EIS 2 suggests that the impact of the construction activity on key pedestrian and bicycle routes would be relatively minor. However, GPT would appreciate appropriate mitigation measures in a management plan to be developed such that any impacts can be managed to minimise impacts to the customers of the RHTC during all stages of construction. Further details are also required to identify appropriate relocation of bicycle racks and lockers within the existing interchange area, such that similar facilities are still available for cyclists.

GPT requests that the Minister requires TfNSW to continue to consult with GPT to develop a Pedestrian and Cyclist Management Plan that shows how pedestrian movements and pedestrian safety for RHTC customers is to be managed, to ensure safe movements to and from the RHTC and its bus stops. The management plan once developed shall consider the relocation of bicycle racks and lockers displaced as a result of the construction works.

Response 25

Condition E35 of the NWRL EIS 1 approval requires that the Construction Traffic Management Plan address the pedestrian and cyclist safety aspects of the NWRL proposals. It is anticipated that a similar condition will be imposed on any EIS 2 approval.

Construction – Spoil and waste management

Issue 26 (GPT reference 19)

GPT's concern is that neither EIS 2, nor the draft CEMF,indicate that testing would be done on soil or materials other than that which is intended to be disposed off-site. Accordingly, soil or materials that are retained on-site and turn out to be contaminated are at risk of contaminating adjoining lands, such as RHTC.

GPT requests that the Minister requires TfNSW to recognise that not all Areas of Environmental Concern have been targeted, and that the CEMF

should specify that the Soil and Water Management Plan contain a transparent process for testing of soils and materials to target all Areas of Environmental Concern, whether or not the soil or materials are bound for offsite disposal.

Response 26

A summary description of findings to date in regard to soil and groundwater contamination conditions at each of the major construction sites is provided in Table 8.3 of EIS 2. Additional contamination studies and detailed investigations are likely to be required in a number of locations along the alignment, including in the vicinity of Rouse Hill as described in Section 8.4.9.

Issue 27 (GPT reference 20)

GPT requests that the Minister requires TfNSW to prepare a Soil and Water Management Plan to ensure that the construction activities will not introduce a migration pathway for contaminants onto other land, including the RHTC, either by mobilisation of contaminants through the soil or geology profile, tracking along existing or new utilities, or by wind-blown dust.

Response 27

NWRL Principal Construction Contractors will develop and implement a Soil and Water Management Plan for their scope of works as required by Section 15.2 of the Construction Environmental Management Framework (Appendix B of EIS 2).

Construction – Surface water and flooding

Issue 28 (GPT reference 21)

The disturbance and exposure of soils at designated construction sites has the potential to result in increased erosion and sediment transport with potential impacts on the receiving environment, particularly around and downstream of Tributary 3 (adjacent to RHTC). If RHTC is undertaking construction concurrently, there is a risk that the source of any downstream adverse water quality impacts could be uncertain. Water quality mitigation and management is proposed to adhere to the relevant Guidelines, and if properly implemented, the proposed mitigation measures are expected to provide a suitable level of risk mitigation. The two key risk elements identifiable for RHTC are the placement of as yet undefined construction sites for laydown / construction support and the ability to clearly define between downstream impacts on water quality if any adverse impact occurs.

The CEMF identifies generic considerations for preparation of CEMPs and soil erosion control plans (SECP) or soil and water management plans but does not identify specific controls to be implemented and affected for site specific conditions at the construction areas most likely to affect RHTC.

The precise location of sediment basins has not been defined. The location will have implications for access needs for construction and maintenance (to retain functionality and capacity) as well as for potential off-site discharge via an assumed spillway into a natural drainage line. The location may also influence the availability of land for RHTC activities and implications for current RHTC land use and access.

EIS 1 noted the potential for significant rainfall events to result in sedimentation basins filling to capacity and overflowing, with higher quantities of sediment being discharged downstream. Although EIS 1 indicated that an appropriate level of dilution is likely given the large volume of runoff associated with such events, there remains potential for downstream impacts and for these impacts to be attributed to RHTC work sites.

GPT requests that the Minister requires TfNSW to prepare, in consultation with GPT, a site specific Surface Water and Hydrology Management Plan that addresses all relevant matters including:

- Separation of water treatment trains for the NWRL construction phase and the RHTC construction and operation stages.
- The clear delineation of boundaries, controls and responsibilities at an early stage to be able to determine independent liability for minor or serious pollution events.
- The precise location and operation.

Response 28

NWRL Principal Construction Contractors will develop and implement a Soil and Water Management Plan for their scope of works as required by Section 15.2 of the Construction Environmental Management Framework (Appendix B of EIS 2). In addition, NWRL Principal Construction Contractors will develop and implement progressive Erosion and Sediment Control Plans for all active worksites in accordance with *Managing Urban Stormwater: Soils & Construction Volume 1* (Landcom, 2004) (known as the "Blue Book"). The process of Soil and Water management as defined in the CEMF is considered appropriate for all work sites.

If RHTC is undertaking construction concurrently, it is expected that those works would be managed in accordance with legislative requirements.

Operation – Noise and vibration

Issue 29 (GPT reference 40)

EIS 2 omits assessment to residential premises located within the RHTC and also future residential uses within mixed use buildings shown in the Northern Precinct DA. These future mixed-use buildings are located along the proposed Orchard Road within the Northern Precinct *[as per the DA drawing currently in the submission under assessment by The Hills Shire Council]*.

Renzo Tonin has identified the following issues with the noise and vibration assessment in EIS 2:

- Operational rail noise upon outdoor seating areas of RHTC has not been assessed against the passive recreation classification, as considered for construction noise impacts.
- Whilst the *Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP) neglects commercial premises, design criteria based on the predicted noise levels need to be provided so that GPT can appropriately design buildings for future rail noise impact. Assessment should consider approved but undeveloped commercial sites between Tempus Street and the existing RHTC (Level 2 DA).
- The assessment of ground borne noise does not address receivers in proximity to the surface and viaduct sections of track. Potential impact from ground borne noise is not isolated to rail tunnels.
- Noise from the Public Address (PA) system has not been assessed and therefore it cannot be established whether noise will impact nearby receptors. PA noise is not readily controllable, particularly on open platforms as a certain level of audibility is required for commuters, if not addressed at the station design stage.
- Relevant data and assessment of operational road traffic noise impact on the Main Street residential premises within RHTC is not provided. Being identified as a route for kiss-and-ride vehicular traffic, the traffic report does not provide existing and future traffic predictions for Main Street to allow assessment of these impacts.

GPT requests that the Minister requires TfNSW to comply with the recommendations in Renzo Tonin's report regarding operational noise, as follows:

1. Noise impact at upper levels, not just 4.5 metres above ground, (ie not acoustically shielded by the viaduct), need to be provided to allow assessment of high rise commercial and residential buildings. At source treatment such as rail dampers, can reduce impacts to upper level receivers.
2. Background noise monitoring at residential premises within RHTC is required for the assessment of station noise emission.
3. Confirmation should be provided that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the RHTC Reading Cinema.
4. Noise from the Rouse Hill Station must consider all receivers including approved but undeveloped commercial sites between Tempus Street and the existing RHTC (Level 2 Consent). This includes Transit / Market Square.
5. An assessment of PA noise emission must be included in the EIS to ensure that the design is capable of complying with the noise criteria. The conditions of approval or contract requirements should not prohibit or

discourage the modification of the platform design to effectively mitigate airborne PA noise.

6. Existing and future operational traffic predictions for Main Street are required, and following an assessment of noise impact onto residential premises in RHTC, must be included in EIS 2.
7. A schedule of periodic noise monitoring of the operation of the rail line (at least every two years) is required to be formalised through consent conditions, as noise attenuation methods will largely be reliant upon noise dampeners and noise absorption materials which can perish and wear over time resulting in gradual increases in noise levels.

Response 29

1. Compliance with the operational noise goals is expected to be achieved at the existing residential apartments in the RHTC. The proposed Rouse Hill Northern Precinct has been considered and buildings have been included in the operational noise prediction model as shown in the EIS 2 noise contours. At the time of the EIS 2 assessment, residential areas in this development were expected to be set back from the rail corridor behind commercial buildings and hence rail noise impacts on residential areas were expected to be low.

   The Northern Precinct Plan for Rouse Hill Regional Centre available on The Hills Shire Council website (Application HB-354/2013) submitted on 24 September 2013 indicates the potential for mixed use including residential in buildings fronting Orchard Road. No detail is available at this stage on which levels or which of these buildings may be residential. The attached supplementary information is therefore provided for the information of GPT to assist in the design of this development to meet the internal noise levels required by the State Environmental Planning Policy (Infrastructure) 2007.

   In the event that residential apartments are proposed on the Orchard Road frontage of the development, the maximum predicted rail noise levels at the façade of the upper levels of multi-storey buildings in the future scenario are up to 70 dBA $L_{Aeq(15hour)}$ (daytime), 65 dBA $L_{Aeq(9hour)}$ (night time) and 88 dBA L_{Amax} (maximum) at a distance of approximately 30 metres from the near track.
   These levels include a 3 dB curve noise correction and a 2.5 dB facade correction.

   Further detail is provided in Appendix A.

2. The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts and car park construction. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. Residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime Noise Management Levels is predicted for residential receivers in the RHTC. These works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the Noise Management Levels for passive recreation areas by up to 4 dB during the daytime.

   Table 12.43 of EIS2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these works would be restricted to the daytime period and are anticipated to occur for a relatively short period time (of the order of 2 to 4 weeks adjacent to RHTC).

3. An operational ground-borne noise criterion of 35 dBA has been identified for the Reading Cinema. Ground borne noise from the operation of the surface and viaduct section of the rail line will not affect nearby receivers including the Cinema.

4. The Stage 2 works assessed in EIS 2 at Rouse Hill Station are the construction of station platform supporting structures, station buildings, escalators stairs and lifts and car park construction. Compliance is predicted for these activities at commercial RHTC receivers described in EIS 2. Residential premises and outdoor eating areas in the RHTC have now also been assessed. Compliance with the daytime NMLs is predicted for residential receivers in the RHTC. These works are expected to occur in standard construction hours. Noise levels at outdoor eating areas are expected to exceed the NMLs for passive recreation areas by up to 4 dB during the daytime.

   Table 12.43 of EIS 2 Technical Paper 3 describes the noise impacts of track construction as the works move along the length of the viaduct. This is a different scenario to the Stage 1 construction works assessed in EIS 1 and referred to in the EIS 1 Submissions Report. While exceedances of the NMLs are predicted at nearby sensitive receivers during track construction, these works would be restricted to the daytime period and are anticipated to occur for a relatively short period time (of the order of 2 to 4 weeks adjacent to RHTC).

   Construction impacts on the proposed Level 2 DA of RHTC, to be situated between Tempus Street and the existing RHTC have not been considered at this stage in the assessment. This development would be considered during preparation of the more detailed site-specific Construction Noise and Vibration Impact Statements during the detailed design stage.

5. As stated in EIS 2, mitigation of noise from PA systems at surface stations will be required to achieve the INP noise criteria. It is anticipated that these criteria can be achieved with appropriate design such as loudspeaker selection and placement and installation of ambient noise sensing microphones and automatic volume control systems. It is anticipated that both the Conditions of Approval and the contract specifications will require the design of PA systems to meet the INP noise criteria.

6. A detailed assessment of noise impacts on RHTC residential receivers has not been undertaken. As stated in EIS 2, due to the existing bus interchange and the close proximity of the proposed Rouse Hill Station to Windsor Road, traffic noise levels are not predicted to increase by 2 dB or more at any receivers near the station proper.

   TfNSW notes that the RHTC includes residential apartments along Main Street that are set well back from Windsor Road. No road traffic noise assessment has been undertaken for these receivers as no traffic numbers are available at this stage. Not all the identified kiss-and-ride traffic identified in EIS 2 would access the station via Main Street.

7. Main Street would be considered a local road as it currently operates and the criteria in the Road Noise Policy would apply, ie $L_{Aeq(1hour)}$ 55 dBA during the daytime and $L_{Aeq(1hour)}$ 50 dBA during the night-time. EIS 2 identifies the requirement for noise monitoring to be undertaken after opening to assess compliance. Longer term compliance monitoring would be conducted if required by the Conditions of Approval. This is a matter for consideration by the Department of Planning and Infrastructure.

Operation – Business impacts

Issue 29 (GPT reference 23)

GPT also seeks to ensure that the impact assessment caters for the numerous potential business costs which have not been identified in detail in EIS 2, including:

- Additional costs associated with increased cleaning, security, car park operation, resourcing, maintenance to roads, maintenance to landscaping, maintenance to air conditioning equipment, increased insurances, and increased resourcing to manage stakeholder engagement and complaints.
- Reduced visitation leading to tenant claims for rent abatements / rent reductions due to visual amenity impacts, lack of passing trade, traffic redirection, and problems accessing the centre.

- Increased vehicular traffic through the centre (ie along Main Street) as a consequence of changes to the existing traffic patterns to the detriment of the open spaces and ambience of the centre.
- Diminished car park capacity resulting in reduced visitation.
- Noise and dust, reducing restaurant's ability to trade in their outdoor licensed areas.
- General construction traffic intimidating customers.

Finally, GPT is concerned that EIS 2 does not contain an assessment of the construction phase impacts on businesses in the yet-to-be developed Sleeve Buildings and Northern Precinct of the RHTC. GPT seeks to ensure that future businesses will be protected by all of the proposed mitigation measures that apply to the existing businesses.

GPT requests that the Minister requires TfNSW to expand the business impact assessment to cater for the numerous potential business costs which have not been identified in detail in EIS 2, and to cater for new developments which may occur during the life of the NWRL project.

Response 29

The Construction Environmental Management Framework (Appendix B of EIS 2) indicates that the NWRL Principal Construction Contractor/s would develop and implement a Business Management Plan, which would document key issues by locality with a particular focus on proactive consultation with affected businesses.

In addition, it should be noted that the construction of NWRL is expected to benefit food and retail outlets as a result of demand from construction workers. In the longer term, NWRL would significantly add to the visibility and patronage of Rouse Hill Town Centre to the benefit of businesses and property owners.

Issue 30 (GPT reference 24)

The amended CEMF appears to give all responsibility for business impact management and monitoring to the principal contractor, it does not appear to cater for the requirement for Business Consultation Group/s, their terms of reference and management framework.

GPT requests that the Minister requires TfNSW to establish Business Consultation Groups and complete Business Management Plans, in consultation with GPT, prior to the commencement of any works associated with the NWRL project that are adjacent to RHTC.

Response 30

Section 4.5 of the Construction Environmental Management Framework (See Appendix B contained in Volume 1b of EIS 2) states that:

- The NWRL Principal Contractors will proactively work with potentially affected stakeholders to identify the likely impacts and put in place measures to minimise impacts.
- Construction works will be undertaken to meet the following objectives:
  - Minimise the potential impact of the project to the operation of businesses affected by NWRL works.
  - Ensure businesses are kept informed of the project and consulted in advance of major works or factors that are likely to have a direct impact.
  - Consult with all business directly affected by changes to access arrangements regarding specific requirements at least two weeks prior to those changes coming into effect.
  - Ensure that business stakeholder enquiries and complaints regarding the project are managed and resolved effectively.
- NWRL Principal Contractors will develop and implement a Business Management Plan. The Business Management Plan will document key issues by locality with a particular focus on proactive consultation with affected businesses. The Business Management Plan will include:
  - Identification of specific businesses which are sensitive to construction activity disturbances.

- Summary of the commercial character of the locality, its general trading profile (daily and annually) and information gained from the business profiling such as:
  - Operating hours.
  - Main delivery times.
  - Reliance on foot traffic.
  - Any signage or advertising that may be impacted.
  - Customer origin.
  - Other information specific to the business that will need to be considered in construction planning.
- Definition of the roles and responsibilities in relation to the control and monitoring of business disturbances.
- Identification of locality specific standard business mitigation measures which would be implemented.
- Maps and diagrams to illustrate the information for easy identification of measures which would be implemented.
- Description of the monitoring, auditing and reporting procedures.
- Procedures for reviewing performance and implementing corrective actions.
- Description of the complaints handling process.
- Procedures for community consultation and liaison.

The strategy for the development and management of CEMPs for the NWRL would be determined by TfNSW.

Issue 31 (GPT reference 29-30)

GPT believe EIS 1 contained insufficient consideration of the capability or capacity of existing services or mitigation strategies to ensure services for the operation and future development of RHTC are not disrupted. This is not resolved in EIS 2.

The services identified within EIS 1 as being required for construction include power, water, sewer and communications. It was also identified that intermittent disruption to services could be expected during construction which could have significant impacts to the operation of RHTC and its retailers.

EIS 2 is silent on the potential impact of the power supply requirement on neighbouring users.

NWRL construction works at the RHTC will require water for dust suppression and site amenity buildings. While recycled water would be maximised for dust suppression, the likely volume and proposed sources have not been identified. Similarly, the sewer provisions for site amenities have not been identified (eg use of portaloos in comparison to connection to the existing sewerage system).

In summary, there is no site specific assessment that provides quantification around the forecast requirements, loads or demands on existing utilities or that provides an assessment of the implications of loads, demands or disruptions to these services (intentional or unintentional) to surrounding land users. There is no assessment of the capability or capacity of existing utilities to support the additional needs of the NWRL development.

GPT requests that the Minister imposes similar conditions on Stage 2 works regarding the adequacy of utility service to those imposed on the approval to the Stage 1 works, with the objective of ensuring that services to RHTC (current and future) will not be compromised or disrupted.

GPT requests that the Minister requires TfNSW, as part of the site specific and detailed CEMP, to prepare a site specific assessment of the capability or capacity of existing utilities to support the additional needs of the NWRL development.

Response 31

Services issues related to the Major Civil Construction Works presented in EIS 1 were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works and were independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's

Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012. Conditions of Approval related to utilities and services which are of particular relevance include Conditions C.23 and C.24.

The issue of power supply was identified in EIS 1 (Section 7.10.7).

TfNSW expects that for EIS 2 – Stations, Rail Infrastructure and Systems - similar conditions related to utilities and services would be imposed to those which formed part of the Conditions of Approval for Major Civil Construction Works.

Submissions to EIS 1 that were beyond the scope of the Major Civil Construction Works were dealt with in Section 5.7.1 of EIS 2.

Issue 32 (GPT reference 38, 39, 41 and 42)

There is a risk that the viaduct and station building will make RHTC virtually invisible from Windsor Road. GPT submits that this could have significant commercial ramifications and mitigating measures are required.

EIS 2 states that the viaduct will "partially screen views to the Town Centre" and identifies a "minor adverse impact on views from Windsor Road due to a noticeable reduction in the visual amenity from a location of local visual sensitivity". GPT contends that this is a significant understatement and no mitigating measures have been proposed *[refer to submission artist impressions to indicate scale of impact].*

GPT requests that the Minister requires the detailed design of the station precinct to have regard to the need to retain visibility of the RHTC from Windsor Road, including but not limited to entry points, landmark buildings, and sight lines to major tenant signage. The following specific design elements require careful thought and planning in consultation with GPT and other RHTC stakeholders:

a. Viaduct design.
b. Station building design.
c. Need for and placement of ancillary buildings housing services and 'precinct activation'.
d. Landscaping.
e. Signage.

Additionally, GPT requests that the Minister requires a Signage Strategy to be agreed between TfNSW, RMS and GPT to ensure that appropriate Site / Business Identification Signage, and directional and wayfinding signage is able to be erected on land within the rail corridor and/or road reserve.

Response 32

EIS 2 presents design principles for stations (see section 6.5.3) and design principles for the skytrain (see section 6.20) and further detailed design of these elements would be based upon these principles.

The visual assessment of Rouse Hill Station was presented in section 16.6.4 of EIS 2. The assessment found: views from public open space and viewpoints to be a minor adverse visual impact during operation and Stage 2 construction; views from residential areas to be a negligible visual impact during operation and Stage 2 construction; views from RHTC to result in a minor beneficial impact during operation and Stage 2 construction; and views at night to be a negligible visual impact.

Environment – Visual amenity

Issue 33 (GPT reference 25)

GPT requests that the Minister requires TfNSW to undertake a site specific assessment of the visual impacts of Construction Sites 13, 14 and 15 on the RHTC, Sleeve Buildings and Northern Precinct.

Response 33

A visual assessment during operation and Stage 2 construction of the NWRL was undertaken and presented in Chapter 16 of EIS2. The methodology, presented in section 16.2, is based on the identification of the level of visual modification created by the NWRL and the sensitivity of the viewer. Combined, these characteristics of the view are then considered to assign a

level of likely visual impact. This methodology has been applied to all services facilities, stations and the stabling yard.

The visual assessment of Rouse Hill Station was presented in section 16.6.4 of EIS 2. The assessment found: views from public open space and viewpoints to be a minor adverse visual impact during operation and Stage 2 construction; views from residential areas to be a negligible visual impact during operation and Stage 2 construction; views from RHTC to result in a minor beneficial impact during operation and Stage 2 construction; and views at night to be a negligible visual impact.

The mitigation measures presented in section 16.8 to avoid, reduce and manage identified potential operational and construction impacts are considered appropriate. Furthermore, section 12 – Visual Amenity of the Construction Environmental Management Framework (Appendix B of EIS 2) provides additional management measures related to visual amenity. No further assessment of visual impacts is considered necessary.

Issue 34 (GPT reference 26)

GPT requests that the Minister requires TfNSW to develop a Visual Impact Management Plan, in consultation with GPT, that addresses the following construction related matters:

a. Appropriate replacement signs to be erected by the Proponent, in consultation with GPT.
b. Additional directional and wayfinding signage around RHTC and on construction hoarding to ensure that the reduced visibility and accessibility is addressed.
c. Sight lines to major tenant signage will not be impeded.
d. GPT's artwork, messaging and branding will be included on hoardings and signage.
e. A rigorous hoarding maintenance scheme will be implemented to ensure the presentation quality of RHTC is preserved.

Response 34

A visual assessment during operation and Stage 2 construction of the NWRL was undertaken and presented in Chapter 16 of EIS2. The methodology, presented in section 16.2, is based on the identification of the level of visual modification created by the NWRL and the sensitivity of the viewer. Combined, these characteristics of the view are then considered to assign a level of likely visual impact. This methodology has been applied to all services facilities, stations and the stabling yard.

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The mitigation measures presented in section 16.8 to avoid, reduce and manage identified potential operational and construction impacts are considered appropriate. Furthermore, section 12 – Visual Amenity of the Construction Environmental Management Framework (Appendix B of EIS 2) provides additional management measures related to visual amenity. No further assessment of visual impacts is considered necessary.

Issue 35 (GPT reference 27)

GPT requests that the Minister requires TfNSW to consult with GPT regarding visual impact on the Sleeve Buildings and the Northern Precinct in future assessments and management frameworks. Feature hoarding and appropriate signage needs to be planned to coincide with the development of the Sleeve Buildings and the Northern Precinct.

Response 35

A visual assessment during operation and Stage 2 construction of the NWRL was undertaken and presented in Chapter 16 of EIS 2. The methodology, presented in Section 16.2, is based on the identification of the level of visual modification created by the NWRL and the sensitivity of the viewer. Combined, these characteristics of the view are then considered to assign a level of likely visual impact. This methodology has been applied to all services facilities, stations and the stabling yard.

The visual assessment of Rouse Hill Station was presented in Section 16.6.4 of EIS 2. The assessment found: views from public open space and viewpoints to be a minor adverse visual impact during operation and Stage 2 construction; views from residential areas to be a negligible visual impact during operation and Stage 2 construction; views from RHTC to result in a minor beneficial impact during operation and Stage 2 construction; and views at night to be a negligible visual impact.

The mitigation measures presented in Section 16.8 to avoid, reduce and manage identified potential operational and construction impacts are considered appropriate. Furthermore, Section 12 – Visual Amenity of the Construction Environmental Management Framework (Appendix B of EIS 2) provides additional management measures related to visual amenity. No further assessment of visual impacts is considered necessary.

Construction – Air quality

Issue 36 (GPT reference 28)

GPT believe EIS 1 relegated air quality as a non-core issue. GPT's submission for EIS 1 reiterated that, given the unique open air trading environment and the immediate proximity of a transport interchange, outdoor dining and public squares in the RHTC, reduced air quality will have a significant impact on the operations of RHTC and the businesses within. This concern remains for EIS 2, which reports that the NWRL principal contractors will develop and implement an Air Quality Management Plan.

Given the unique trading environment of RHTC (the open air retail and dining areas and the residential component), it is considered a highly sensitive receptor and the impact on air quality is a key issue, rather than non-core, that must be adequately assessed and managed.

It appears that all critical issues are addressed by suggesting that there will be a plan in place to deal with it, however the scope needs to be clearly defined.

GPT requests that the Minister requires TfNSW to develop a site specific Air Quality Management Plan in consultation with GPT that addresses the following:

a. Recognising air quality as a key issue at RHTC.
b. Location of spoil stockpiles on the construction sites to ensure stockpiles are located away from the boundary with the shopping centre.
c. Stockpile management procedures, including management of any contaminated spoil for prevention of release of dust.
d. Agreement on the method by which the air quality baseline will be set and the appropriate exposure thresholds that will be used for assessing the impact to air quality at RHTC.
e. Any assessment of air quality impacts should include consideration of property damage i.e. dust deposition on land, vegetation, buildings or vehicles, as well as human health impacts.
f. Confirmation of the extent and frequency of monitoring of weather conditions and air quality. Air quality monitoring should be conducted at the boundary with RHTC to ensure that dust or gaseous emissions potentially affecting the site are quantified. Weather conditions should be continuously assessed and measures put in place to restrict certain construction activities during high winds or when the prevailing wind direction is toward sensitive receptors.
g. Details on how air quality impacts to pedestrians accessing RHTC will be assessed and managed.
h. Management of demolition activities to prevent the release of hazardous materials (eg asbestos).

i. Procedures for consultation and communication with RHTC Management and residents during construction specifically with reference to dust release events, receipt and investigation of complaints and information on construction schedules and activities.

Response 37

Air quality issues related to the Major Civil Construction Works presented in EIS 1 were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works and were independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012. Conditions of Approval relating to air quality of particular relevance include Conditions E.1 and E.46(g).

For EIS 2 an assessment of air quality was undertaken and presented in section 19.1. The assessment resulted in the development of a number of mitigation measures for operational air quality and construction air quality. Furthermore, Section 16 – Air Quality of the Construction Environmental Management Framework (Appendix B of EIS 2), provides additional air quality management measures.

Design – Station precinct / skytrain

Issue 38 (GPT reference 8)

GPT requests that the Minister imposes a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the viaduct, station building and station precinct to ensure the objectives of the Level 1 Masterplan Consent, the Level 2 TCCPP Consent and the Northern Precinct Plan DA are met and the operations and future development of RHTC are not impacted.

Response 38

The objectives of the Level 1 Masterplan Consent, the Level 2 TCCPP Consent and the Northern Precinct Plan DA would be considered during detailed design of the station precinct.

Issue 39 (GPT reference 31)

GPT seeks to collaborate with TfNSW to efficiently and seamlessly deliver, operate and manage the public realm linking Rouse Hill station to the wider community at RHTC.

GPT shares TfNSW's aspirations for the North West Rail Link stations to integrate with and strengthen the character of the local area. Today's customer-centric RHTC caters to the complex requirements of a broad cross section of society, whilst at the same time effectively integrating the needs of a car-based community with enhanced provision for pedestrians and bicycle traffic. GPT is committed to maintaining and enhancing this functionality and connectivity.

A clear governance structure, such as possible inclusion of the station precinct in the existing Rouse Hill Town Centre Publicly Accessible Areas Management Plan (PAAMP) and the Town Centre and Community Management Schemes, would enable effective and successful ongoing management that will ensure customer's experience and their expectations of the precinct are not only met but aspire to be exceeded .

GPT's strong view is that its participation in the planning and design process will deliver a seamless, high quality environment at Rouse Hill rail station and put the customers' needs at the centre of this important transport interchange. It will also continue to build upon GPT's long track record of delivering excellence in design at Rouse Hill Town Centre.

GPT request that the Minister requires TfNSW to enable GPT to:

a. Have input into the design of the station precinct, station box and skytrain structures to ensure design compatibility between the existing design principles of RHTC and the key elements of the station precinct.

b. Develop a clear and integrated design, operational and governance structure.
c. Include the station precinct and associated public realm into the existing Publicly Accessible Areas Management Plan (PAAMP) and Town Centre and Community Management Scheme.

Response 39

The existing design principles of RHTC, the existing Publicly Accessible Areas Management Plan and Town Centre and Community Management Scheme would be considered during the detailed design of the station precinct.

Issue 40 (GPT reference 32, 33, 34 and 35)

GPT is seeking an architecturally distinct design, influenced by local surroundings and context, incorporating RHTC design standards and principles as articulated in the RHRC Masterplan and Town Centre Core Precinct Plan. Given the paucity of design detail at EIS 2 stage, GPT seeks to ensure that the appropriate design principles and details are incorporated into the design evolution of the future station precinct.

As outlined previously, EIS 2 is based on a 'concept design', and detailed design will continue 'during the planning approval process'. The lack of detail at EIS 2 stage is of concern, and GPT has requested in this submission that a separate approval be obtained for the design and construction of the station precinct.

The concept design cannot be relied upon by stakeholders as it 'may be refined by TfNSW and its construction contractor and operator within the limits of any conditions imposed by the planning approval and the design constraints, principles and standards used throughout the design development process'.

The issue of design excellence is of utmost importance to GPT and, given its Major Centre role, a unique design outcome for Rouse Hill Station is sought. Design Guidelines for the RHTC, and particularly the transport buildings and associated public realm, have been approved by The Hills Shire Council, extracts of which are included at Appendix 3.

EIS 2 proposes a Design Review Panel and engagement of world class and / or award winning architects, engineers, urban designers, and landscape architects. The importance of an appropriate budget to achieve world class and potentially award winning outcomes however is not addressed. Furthermore, any consideration of 'value for money' in station precinct design and construction should be scoped to meet this word-class ambition and also be based on 'whole of life' criteria.

In relation to the proposed Design Review Panel, GPT notes that a Design Review Panel has been in place for the RHRC for around 8 years and is currently operational. A co-ordination of the terms of reference and operation of the panels at Rouse Hill is desirable to avoid conflicting design and to maximise collaboration.

GPT generally supports the Design Principles presented in EIS 2, but requests that certain additional matters be added.

GPT requests that the Minister impose a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the skytrain, station building and station precinct to ensure that the ambitions for design for both the NWRL and RHTC are able to be met.

GPT requests that the Minister impose a condition on the approval for SSI 2 that states that Rouse Hill Station should be architecturally distinct, and that its design should be informed by existing approved documents (Town Centre Core Precinct Plans and Design Guidelines) and the currently operating Rouse Hill Regional Centre Design Review Panel.

GPT requests that the Minister requires TfNSW to add Design Principles as follows:

a. The consideration of 'value for money' should recognise world's best practice and be assessed based on 'whole of life' criteria.

b. The vision for stations should seek for each station to be a "place of social wellbeing".
c. Station planning should allow for future growth and phased development in areas of high development potential, such as Rouse Hill Town Centre.

The station design process should closely involve key stakeholders in interface areas.

GPT also requests that the Minister impose a condition that requires the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly and through the regular meetings of the Project Working Group.

Response 40

Section 6.5.3 of EIS 2 provides design principles for stations and service facilities and Section 6.20 of EIS 2 provides design principles for the skytrain.

Design – Viaduct

Issue 41 (GPT reference 43)

GPT is interested in the activation strategy proposed for the station precinct. Currently there is only a small standalone retail building in the station precinct and little further detail about the environment under the viaduct. Given the immediate proximity of the town centre buildings, both existing and planned (the latter comprising the Level 2 DA-approved building on Market Square, on the eastern side of Tempus Street), GPT is concerned about the size, design, configuration, envisaged uses, and management of this area throughout the 24 hours of a day. Unless this area is properly planned and managed, it will result in the creation of an anti-social environment which will be a blight on the front door of RHTC.

GPT requests that the Minister requires TfNSW to prepare an Activation Strategy, in consultation with GPT, for the non-station area under the viaduct.

Response 41

Section 6.7.1 of the EIS describes station design, including measures and objectives for ensuring a safe environment for rail users, staff and the general public. The stations would be designed in accordance with Crime Prevention Through Environmental Design (CPTED) principles. In particular, access and safety for customers getting off or joining trains and using car parks and interchanges at night has been carefully considered during the design process. Emergency help points would also be provided within the station. A safe environment would be encouraged through the following elements which have been incorporated into the design:

- Well-designed and efficiently controlled lighting systems.
- Visible CCTV surveillance.
- Appropriate staffing during operational hours.
- Clear visibility lines and use of natural light.

A key land use integration element of the project design includes optimisation of the station precincts and car park layouts to provide opportunities for active uses near stations, which helps to improve precinct safety and surveillance.

Construction – Cumulative impact

Issue 42 (GPT reference 45)

In the submission to EIS 1, GPT raised concerns that the Cumulative Impact Assessment was extremely brief, and failed to address the compounding impacts of the NWRL during construction and whilst in operation.

EIS 2 contains an assessment that identifies a broad range of potential sources and types of cumulative impacts. However, the proposed method of addressing the cumulative impacts is somewhat simplistic: that is, prepare a CEMP. EIS 2 states as follows:

As part of the CEMP, TfNSW would identify all other significant developments occurring in the vicinity of the construction sites and identify environmental impacts to be monitored during construction which have the potential for cumulative effects to

occur. TfNSW would review environmental impacts every six months during the construction phase. Any new impacts identified during construction would be addressed appropriately to reduce the cumulative impacts and reported. [sic].

Subject to the preparation and implementation of the CEMP, EIS 2 proposes that no additional mitigation measures would be required and does not account for future, currently unidentified, development that will arise during the construction phase.

GPT requests that the Minister requires TfNSW to undertake a more frequent review of environmental impacts to ensure that cumulative impacts are monitored and responded to in a timely fashion. Such impacts should be reported through the Monthly Project Working Group meetings and be supplemented with a quarterly Key Stakeholder Review chaired by the NWRL Project Director.

Response 42

TfNSW considers that the existing requirement contained in Section 20.5 of EIS 2 is appropriate for the management of cumulative impacts. Relevant mitigation measures have been reproduced in Chapter 9 of this report.

6.1.6 Busways Group Pty Ltd

Transport – Bus integration

Issue 1

Castle Hill Interchange

The co-location of the bus layover and arrival / departure ranks facilitates efficient bus operations. However, the bus layover is for periods of *"15 minutes up to an hour"* (EIS 2 – Operation Traffic and Transport Management Plan p 75). This is partially inaccurate and therefore erroneously used to support the provision of a remote layover location post construction. Short term layover is considered to be anything above five minutes in duration (and is often simply a slightly extended break between two trips). It allows the bus driver the opportunity to access toilets in between trips, especially during longer sections of the allocated driving shift. While the accompanying assertion that *"…these breaks are best taken away from any passenger pick up/set down areas…"* is correct, it is not feasible to access a remote layover for most toilet-break opportunities.

During construction the proposal to continue to utilise Old Castle Hill Road for both short and long term layover is acceptable, and the current long-standing local practices can continue.

Post construction however, it would be preferable to return to an earlier proposal to retain some bus ranks in Old Castle Hill Road. This was the subject of former studies on a proposed bus interchange in Castle Hill. This proposal allows for the separation of bus services operated by Busways, which, while providing some local feeder services to the community, are for the most part, *cross-regional* in nature. It also allows for a small amount of short term layover within both Old Northern Road and Old Castle Hill Road.

Given the intention to provide a **long term** bus layover facility *"…remotely away from the bus interchange"* (EIS 2 - Traffic and Transport Management p 69), it is critical that adequate space for *appropriately located* **short term** layover is planned for now, and that this does not hinder the operation of this busy interchange.

Further, it is equally imperative that a dedicated toilet is provided for bus drivers somewhere in this immediate vicinity. (It is noteworthy that a facility of this type located in Arthur Whitling Park serves this purpose for buses on short term layover in both Old Castle Hill Road *and* Old Northern Road).

The ranking arrangement proposed by Busways (provision of 3 bus spaces on the south-eastern side of Old Castle Hill Road) also allows Busways bus services, owing to their origin / destination, a short, predictable and efficient route from and to Showground Road (via Pennant Street, Old Castle Hill Road, bus rank, Castle Street, and Pennant Street). The report (EIS 2 – Construction Traffic Management p 39) also noted that the performance of the signalised intersection at Old Castle Hill Road / Pennant Street / McMullen Avenue is expected to deteriorate and bottom out at LoS F. Given the huge number of buses exiting Old Castle Hill Road via this intersection, consideration must be

given to diverting construction traffic away during the morning and afternoon peaks. In the worst case scenario, queuing from this intersection could extend back along Old Castle Hill Road beyond Eric Felton Street, and hence impact on the bus interchange. Given that large numbers of school students are moved in and out of Old Castle Hill Road by bus, unacceptable delays could well impact on the timeliness of school student transport.

Response 1

It is not currently proposed to provide bus layover on Old Castle Hill Road, with bus operations to be consolidated in the proposed interchange on Old Northern Road, and taxi, kiss-and-ride and shopping centre traffic on Old Castle Hill Road. However, depending on the final location of a permanent bus layover facility, it may be necessary to review the requirement for some limited short term bus layover spaces in close proximity to the interchange, potentially located in Old Castle Hill Road replacing some of the proposed kiss-and-ride spaces. Any such review of bus layover requirements would be undertaken in consultation with TfNSW and stakeholders including affected bus operators.

It is acknowledged that the public toilet currently located in Arthur Whitling Park would be removed. New facilities would be provided in the rail station, which would be accessible by bus drivers. Alternative facilities would also continue to be available within Castle Towers shopping centre.

The existing and predicted levels of service during construction at the Old Castle Hill Road / Pennant Street / McMullen Avenue signalised intersection during the PM peak hour period are acknowledged by TfNSW. Options to alleviate this predicted congestion would be investigated during the detailed construction panning stage. This may include restriction in heavy vehicle movements through this intersection during the PM peak period.

Issue 2

Rouse Hill Town Centre Interchange (RHTC)

In view of the concentration of bus services at RHTC, and the intention to provide bus layover remote from the operational bus ranks, as at Castle Hill, (EIS 2 - Traffic and Transport p 9-37), an identical set of circumstances relating to short term layover also exists at this location. Hence, all of the comments relating to the proximity of short term layover parking to the operational bus ranks (and the provision of bus driver's toilet facilities) at Castle Hill are also valid in this instance.

What *is* different at RHTC, is that this problem exists in both the temporary arrangements (during construction), *and* the permanent arrangements (post construction). It is imperative in circumstances where long term / meal break layover space is remote from the operational bus ranks that separate short term layover parking and dedicated toilet facilities are provided in the immediate vicinity of the operational bus ranks. Should the northern layover area be the site of the *only* toilet facilities provided, then the circuitous route to and from this site will guarantee the late running of buses where bus drivers require access to toilets during most short term layovers.

The provision of a bus driver's meal facility is not mentioned in the section relating to layover during construction (EIS 2 – Construction Traffic Management p 72). This, too, is imperative and must be included in the scope of works – particularly as the bus drivers currently enjoy such a facility at Rouse Hill Town Centre Interchange.

Response 2

During operations, there is considered to be adequate capacity within the proposed interchange for short term bus layover with drivers able to use the toilet facilities located within the station. For all meal breaks or longer layover (including where the driver's next service was departing back in the direction from which the terminating service had approached), the driver would be expected to proceed to either the northern or southern layover as appropriate and make use of the drivers' meal room and toilet facilities which would be

provided at both locations. During construction, adequate temporary toilet facilities and driver meal facilities would be identified as part of the Construction Traffic Management Plan(s).

Issue 3

The delivery of the NWRL will signal the end of many of the M2 city express bus services (EIS 2 – Operation Traffic and Transport Management Plan p 35). It is further mentioned that "These buses would then be used more efficiently to provide enhanced feeder services into NWRL stations…". While it is anticipated that some of these 'feeder services' would also continue to a major hub such as Castle Hill or Rouse Hill, it is also envisaged that many services would simply operate a shuttle service to and from adjacent residential areas to the nearest NWRL station. Given that this style of operation would most likely occur for extended periods during morning and afternoon peak times, consideration should be given to providing a dedicated bus driver toilet room at each NWRL station. The provision of such facilities would ensure the easy maximisation of bus-scheduling potential and the delivery of an agreeable working environment for current and future bus drivers.

Response 3

The operation of the bus network is a matter for TfNSW, although it is anticipated that, apart from Castle Hill and Rouse Hill, bus services will not terminate at stations, but rather be through routes which will pass by en route to other destinations. Notwithstanding, a dedicated bus driver toilet is not considered warranted, as each NWRL station would be provided with public toilet facilities also available for drivers' use.

Issue 4

It is noted that the design for the Cudgegong Road Interchange sees buses allocated rank space on both sides of the northern spine road (EIS 2 - Operation Traffic and Transport Management Plan p 149). The utilisation of the northern spine road introduces inefficiency into bus operations in this precinct. This is owing to the fact that this road does not connect full-length between Cudgegong Road and Tallawong Road. Rather, two additional turning movements are required to complete this leg of the bus route servicing this station. Therefore, given that the station has direct pedestrian access to both the northern and southern spine roads, consideration should be given to providing bus ranks on both sides of the southern spine road in the vicinity of the station access point. Since the southern spine road is planned to directly connect Cudgegong Road and Tallawong Road, it would be odd to ignore it as the logical choice for bus routes through the station precinct, which could then operate in a simplified and hence more efficient manner.

Response 4

The Southern Spine Road traffic would be dominated by vehicular movements from and to the proposed three car park areas.

Northern Spine Road is not constrained by traffic volumes associated with the Cudgegong Road Station car parks and is better placed for passengers pick up and drop off from buses and kiss-and-ride vehicles. The Northern Spine Road also provides a more direct access for passengers to the Cudgegong Road Station entry, supporting the station access hierarchy, and to the proposed town centre.

Construction – Heavy vehicles

Issue 5

It is noted in Section 4.10.3 Heavy Vehicle Routes (EIS 2 – Construction Traffic Management p 69) that entry into Rouse Hill Town Centre Interchange from the north is proposed to be via a left turn into White Hart Drive from Windsor Road, followed immediately by another left turn into the construction access road. Given the opposing movement of buses on the construction access road at that location, consideration should be given to modifying the kerb-returns of the inner radius of the turn to safely accommodate the turning paths of heavy vehicles.

Response 5

The need for modifying the kerb-returns of the inner radius of the turn would be considered as part of the Construction Traffic Management Plan for Rouse Hill in consultation with TfNSW and the relevant bus operators.

Construction – Traffic and transport

Issue 6

The EIS documentation indicates temporary bus routes during the construction phase of the station at Rouse Hill Town Centre Interchange – (EIS 2 Construction Traffic Management p 71ff). These have been thoroughly investigated and are considered to be inappropriate and inefficient. This determination was reached by a joint working group whose members comprised representatives of TfNSW, NWRL, Busways and Hillsbus. This process entailed not only determining recommended temporary bus routes, but also the bus ranking arrangements in Tempus Street and the construction area access road. Universal agreement was reached by all members of the working group that their proposal would satisfy the needs of all interested organisations. A detailed plan depicting the results of the agreement on temporary bus routes and ranks was appended to the submission. (NB. This plan shows only Busways bus routes, but also accounts for the routes operated by Hillsbus – as per the agreement of the working group). A critical component of this, and hence worthy of independent mention, is that a right hand turn for buses from the T-Way (northbound) to White Hart Drive (eastbound) will be required. As such, this must be modelled and incorporated into the enabling works for the construction at Rouse Hill Town Centre.

Response 6

The bus arrangements proposed during construction in the vicinity of Rouse Hill were considered extensively in consultation with TfNSW officers, and bus operator representatives throughout 2012. The required bus re-routing, although in some cases resulting in less efficient bus operations, was considered to be acceptable having regard to the constraints within which the construction activities are being planned. One constraint influencing the need for route diversions around the back of the town centre is the absence of a right turn from the southern end of Tempus Street into White Hart Drive. The ability for northbound buses in the T-way to turn right into White Hart Drive will be considered as part of the construction traffic management process.

Communication – Consultation

Issue 7

It is noted that Busways Group appreciates the opportunity to comment on this second EIS relating to the NWRL, and also the invitation to participate in the Traffic and Transport Liaison Group.

Response 7

Busways' comment is noted.

6.1.7 LMN Fuels Pty Ltd (7-Eleven Service Station, Pennant Hills Road)

Property – Damage

Issue 1

As a large section of this property is located in the NWRL's underground corridor, concern exists regarding damage to underground fuel tanks and pipelines leading to leakage and environmental and other EPA issues.

Response 1

The 7-Eleven Service Station in question is located beneath the alignment between the proposed Cheltenham Services Facility and the Cherrybrook Station in the vicinity of Church Street, West Pennant Hills. Church Street is shown as a marker point on the Geological Long Section (Appendix C of EIS 2). Significant geotechnical investigations have been undertaken to inform the design of the project and further geotechnical investigations will continue.

The potential for impacts for the service station as a result of tunnel construction are considered to be minor, due to the depth of tunnelling at this location, approximately 60 metres below the ground surface through sandstone.

The potential impacts associated with construction of the rail tunnels were assessed in EIS 1, including any settlement impacts above the tunnel. Conditions of Approval C17 through C20 establish settlement criteria for the project. Conditions of Approval E25 through E31 establish a robust construction management framework.

Issue 2

Questions relating to the time frame for which NWRL would accept liability for any structural damage, including ground contamination and clean-up resulting from damage to underground fuel tanks or pipelines.

Response 2

The potential for structural damage to the service station, its underground fuel tanks and its pipelines as a result of tunnel construction are considered to be minor, due to the depth of tunnelling at this location approximately 60 metres below the ground surface.

Nonetheless, the Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (refer to conditions E26 to E31).

Property – Value

Issue 3

Questions regarding the time frame for NWRL to accept liability for any structural damage including ground contamination.

Response 3

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (refer conditions E26 to E31).

6.1.8 Norwest Business Park Mulpha FKP Pty Ltd (owner of Norwest Business Park)

Construction – Traffic and transport

Issue 1

Impacts on existing road network during construction

The existing network needs to be maintained as much as possible during construction to avoid disruption to the existing businesses, particularly during AM and PM peak periods. It is recognised that the Norwest Station has been moved to avoid the closure of the traffic lanes on Norwest Boulevard but while this is recognised as a significant improvement, the same concerns apply in respect to the potential closure of Brookhollow Avenue.

EIS 2 depicts that the intersection of Norwest Boulevard and Brookhollow Avenue will be closed during the life of the construction, between 12 to 15 months. The closure of Brookhollow Avenuenue for this extended period will adversely impact the existing businesses in the area. Brookhollow Avenue also provides access to Norwest Post Office and mail distribution centre which is a major public facility serving the Business Park and the surrounding area.

While the eastern end of Brookhollow Avenue is accessible, this intersection is commonly congested during AM and PM peak periods and it is considered an unacceptable impact to direct all the Brookhollow Avenue traffic via the eastern end for such a long period.

The EIS should consider alternate measures to reduce the closure of the western end of Brookhollow Avenue such as:

- Left in / left out arrangements at the intersection.
- Alternate temporary arrangements to provide access to Brookhollow Avenue.
- Construct the southern end of the station box first, with road access reinstated as early as possible to provide full access to Brookhollow Avenue.

Response 1

A range of options were considered for the management of traffic and access at Norwest during construction.

- The option of retaining left in and left out access at the western intersection of Brookhollow Avenue / Norwest Boulevard was considered. This arrangement may be possible under a cut and cover construction methodology with a staged approach. However, even under a staged approach, it is likely that periods of full closure associated with the introduction of temporary supporting structures and the like would be required.
- An alternative access arrangement may involve the provision of a single lane access road linking Brookhollow Avenue and Norwest Boulevard and providing left out egress onto Norwest Boulevard. This is currently being examined.
- Alternatively, there may be scope for the construction contractor to either a) excavate the southern end of the station box first and then reinstate traffic access at the western Brookhollow Avenue intersection or b) leave the excavation of the southern end of the box until last such that traffic access is retained for as long as possible.

These and other options will continue to be assessed to determine how best to retain traffic access along Brookhollow Avenue with minimal adverse impacts.

Design – Accessibility

Issue 2

Norwest Station is located in proximity to Norwest Shopping Centre and is ideally placed to serve the surrounding commercial area. The main area of concern is the provision of pedestrian access to the station entry.

EIS 2 refers to the replacement of the Norwest Boulevard and Brookhollow Avenue roundabout with a traffic signalised intersection to improve pedestrian safety. This is recognised as an improvement for pedestrian access, together with the bus zones to be provided on each side of Norwest Boulevard. The provision for an underground connection to the station should be allowed in any redevelopment plans on either side of Norwest Boulevard.

Response 2

The design of the station does not preclude the provision of a pedestrian link running beneath Norwest Boulevard. The project would construct a proportion of a future safeguarded pedestrian link so as to reduce the extent of works required if and when a decision is made to complete such a link beneath Norwest Boulevard in the future, potentially in association with future development on the western side of Norwest Boulevard. The merits of a signalised intersection in terms of pedestrian accessibility and safety have been addressed in EIS 2. In the short term absence of the underground link, the traffic signals will facilitate improved access on all four legs of the intersection, especially across the busy Norwest Boulevard.

Planning – Land use planning

Issue 3

The proposed Bella Vista Station is located at the western end of Norwest Business Park, at the end of Lexington Drive. The proposed park-and-ride facilities would change the planning envisaged for this part of the Business Park, as the area is zoned under The Hills Council Local Environmental Plan 2012 as B5 Business Development, including large format bulky goods establishments.

The focus for this station precinct is around an extended Lexington Drive with identified sites for future development as part of the master planning. The Bella Vista Station plans show a new road parallel to Old Windsor Road that provides access to the station plaza entry. This new road is shown as connecting to Balmoral Road and would act as a major collector road to access the station entrance. The status of this new road being an extension of Lexington Drive is seen as questionable given that this road is not identified in either the Norwest or Balmoral Road Development Control Plans.

This new link road from Balmoral Road would attract a significant volume of traffic and is in a different location to the collector road that was shown in the existing DCPs for the subdivision pattern. The existing collector road runs parallel to Elizabeth Macarthur Creek with a connection to Celebration Drive and Balmoral Road.

The proposed road as an extension of Lexington Drive would provide undesirable depth for blocks to be redeveloped, as either commercial or residential development in the future.

The extension of Lexington Drive to connect to Balmoral Road is not seen as the best location for the collector road. The preferred location is for the planned collector road to connect from Balmoral Road via Celebration Drive to Lexington Drive, instead of an extension of Lexington Drive.

Response 3

The proposed station access road or Lexington Drive extension is not intended to replace the collector road shown in Council's Development Control Plan (DCP) documents. The station access road will be designed as a lower order road in the overall network hierarchy, although it is acknowledged that it is likely to accommodate higher traffic volumes at NWRL opening and in advance of the completion of other roads in the Balmoral Road release area. It should be noted that the Norwest and Balmoral Road DCPs both pre-date the proposal for Bella Vista Station in this location. The proposed extension of Lexington Drive will help to create a clear and legible street network that supports future urban development opportunities.

Relocation of the Lexington Drive extension such that it links from Balmoral Road to the Celebration Drive extension in place of an extension which directly passes the proposed station, is not supported, as such an alignment would be remote from the station and require the provision of another road to accommodate multi modal access to / from the station entries. This would also have an adverse impact upon bus access and circulation.

The depth of blocks in the area between the Celebration Drive and Lexington Drive extensions will ultimately be determined as a result of future master planning of the area, which may include the provision of additional local streets within development areas. This approach will provide flexibility in layout and orientation of future development.

For the areas shown in EIS 2 as Future Use to be Determined by Master Plan (see Figure 6.27 – Bella Vista Station – Indicative Layout) the type of land use and scale of proposed developed does not form part of the NWRL project presented in EIS 2 for which approval is being sought. Further approvals would be required for the future uses proposed on these sites, under relevant local / State planning processes.

Issue 4

Norwest Station and Bella Vista Station will have the potential to change the land uses in the Business Park with opportunities for high rise office and residential development in the future. The opportunity to increase the planning controls for building heights and floor space ratios for new developments is encouraged, provided the existing developments within the Business Park are not precluded from the same opportunity for redevelopment.

The Bella Vista Station located at the western end of the Business Park at the end of Lexington Drive has the potential to change the focus of the land uses within the Business Park. The current planning caters for a local neighbourhood centre at what is known as Circa development in the Norbrik end of the Business Park. Should the Bella Vista Station precinct lead to significant retail development, this may take the focus away from the existing burgeoning commercial centre known as the Circa development. Concern is expressed that the master plans around the station precincts may have planning implications for the existing commercial centres within the Business Park.

Response 4

Potential future land use changes around Norwest Station and Bella Vista Station, including the role of existing and future centres, would be considered as part of future strategic planning processes carried out by local councils and the Department of Planning and Infrastructure.

6.1.9 Lend Lease GPT (Rouse Hill) Pty Ltd

Design – Station precincts

Issue 1

Regarding the bus layover facility design and location south of Rouse Hill Station, this design creates an edge almost on the corridor boundary adjacent to Rouse Hill Regional Centre, land planned for residential or mixed use development. This outcome has two negative implications that could be addressed by moving the layover to the west:

- The ability to create through access in the corridor for pedestrians and bike riders is greatly limited by this approach and inconsistent with DGRs 40 and 41. Earlier comments by TfNSW (commenting on the precinct design for development immediately to the east known as the Central Precinct) requested that strong pedestrian and bike links be established through this area to reinforce sustainable transport outcomes connecting to the future Rouse Hill Station. Furthermore, by locking out pedestrian and bike riding activity, there is a likelihood that a dead activity zone is created in this area inconsistent with crime prevention through design standards (CPTED has been included as an impact mitigation technique in Table 16.7 of the EIS).
- Location of the layover this close to the corridor boundary limits the ability to place sufficient trees as part of the wider landscape strategy put forward in the EIS to help mitigate visual impacts of the viaduct. Further, the visual impact of the layover facility itself will be a negative outcome for residents adjacent to the facility.

Lend Lease GPT recommends that, as the bus movements into the layover facility at Rouse Hill station are only from the north, the entry road angle to the layover can be relaxed allowing the main body of the layover to shift west. This design adjustment would allow for sufficient pedestrian and bike thoroughfare together with improved landscape outcomes. (See alternative design and previous Transport for NSW letter requesting improved pedestrian and bike connection outcomes attached to submission).

Response 1

Bus layover facilities at this location are essential for the effective operation of the bus network and the T-Way, and have been appropriately designed at a concept level to ensure adequate property is available for the facility.

Sufficient space remains to create pedestrian and cycle access within the corridor alongside the bus layover. Direct access to the new rail station, the T-Way and Rouse Hill Town Centre would directly benefit the "Central Precinct".

Appropriate landscaping would be developed during detailed design taking into account Crime Prevention Through Environmental Design (CPTED) principles and responding to the adjacent (existing and proposed) residential land uses as well as considering Mungerie House, which is in close proximity.

Operation – Noise

Issue 2

We note in Technical Paper 3, Noise and Vibration, that average night time noise levels in some areas will exceed the current average. The noise contours indicate that some homes in Hedge Street, Bellcast Road and future planned homes in Picket PIace will all have noise levels greater than the current 48 dB(A) level (BG20 in Table 4.2 of Technical Paper 3).

Lend Lease GPT recommends that for night time operation consideration should be given to running the train at slower speeds in the vicinity of Sanctuary Drive to reduce noise to current ambient levels in the areas referred to above. Increased height physical noise barriers attached to the viaduct in this area may also play a role in reducing this noise impact.

Response 2

Section 10.6.4 provides an assessment of operational air-borne noise impacts, including identification of receivers where noise trigger levels are exceeded. The noise contour maps in Appendix E of Technical Paper 3 indicate that the noise levels at the existing and future properties in Hedge Street, Bellcast Raod and Picket Place would comply with the trigger levels in the *Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects* (DECC, 2007) of $L_{Aeq(15\ hour)}$ 60 dBA and $L_{Aeq\ (9\ hour)}$ 55 dBA for the daytime and night-time periods respectively.

Table 10.47 of EIS 2 presents a number of noise and vibration operational mitigation measures in order to reduce potential impacts. These mitigation measures would be given further consideration during the detailed design development phase of the NWRL.

Environment – Visual impact

Issue 3

Chapter 16 Visual Amenity, assesses the visual impact of the viaduct structure on Mungerie House as 'high adverse'. The obvious visual impact of the viaduct on future residential or mixed use buildings planned between Mungerie House and Rouse Hill Station (along the corridor) has not been considered and would be at least moderate adverse if not high adverse.

Response 3

A visual assessment during operation and Stage 2 construction of the NWRL was undertaken and presented in Chapter 16 of EIS 2. The methodology, presented in Section 16.2, is based on the identification of the level of visual modification created by the NWRL and the sensitivity of the viewer. Combined, these characteristics of the view are then considered to assign a level of likely visual impact. This methodology has been applied to all services facilities, stations and the stabling yard.

The visual assessment of Samantha Riley Drive to Windsor Road and Old Windsor Road to White Hart Drive was presented in Section 16.6.3 of EIS 2. Views from residential areas were assessed as part of Section 16.6.3 of EIS 2. Residential properties in the vicinity of Sanctuary Drive would experience a range of views to the viaduct. From those areas directly adjacent to the alignment, and looking toward the intersection of Sanctuary Drive and Windsor Road, there would be a considerable visual change as the viaduct crosses the landscaped entry statement, and runs across the view. Further away from the alignment, vegetation and built form would filter and intervene, resulting in no perceived reduction or improvement in visual amenity. As this is an area of local visual sensitivity at the entry, and neighbourhood visual sensitivity to the west, it is considered that there would be moderate adverse impact in the vicinity of the intersection, reducing to negligible visual impact as the distance increases. These impacts would be experienced during both operation and Stage 2 construction.

Furthermore, Section 12 – Visual Amenity of the Construction Environmental Management Framework (Appendix B of EIS 2) provides mitigation measures related to visual amenity. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 4

The visual assessment presented in the EIS (Figure 16.20 and Figure 16.21 shown in the submission) does not correctly represent the impact on Mungerie House as a large number of trees would need to be removed as part of the development. The tree coverage in Figure 16.21 has not been adjusted to allow for this factor indicating a lesser than realistic visual impact.

Response 4

The visual assessment of Samantha Riley Drive to Windsor Road and Old Windsor Road to White Hart Drive was presented in Section 16.6.3 of EIS 2. Mungerie House was assessed in Section 16.6.3 of EIS 2. Mungerie House is a small heritage listed cottage, including a visitor centre, and is set within attractive gardens. Although access to the house is now from the rear, it faces and is traditionally approached from Windsor Road. Some trees would be

removed for construction, however the remaining vegetation would provide filtered views to the viaduct and supporting structures. It is also noted that EIS 1 relating to Stage 1 construction works contains a commitment to maintain a buffer of trees between Mungerie and the rail corridor and to reinstate any trees removed to facilitate construction (mitigation measure EH11 in Table 11.32 of EIS 1). This mitigation measure is reproduced in Chapter 9 of this report.

Intermittent train movements would be noticeable running across the view. The viaduct, although filtered by the intervening trees would be visually prominent. Due to the considerable reduction in visual amenity from a location of regional visual sensitivity, there would be a high adverse visual impact at this location during operation and Stage 2 construction.

Issue 5

Table 16.7 of the EIS sets out limited detail on the landscape design strategy to be utilised anywhere along the viaduct section for visual impact mitigation. OpV7 from Table 16.7 notes "This may include the use of dark colours, landform mounding and buffer planting." This extremely limited level of detail is insufficient to address impacts assessed as moderate adverse to high adverse and as such the EIS is not complete.

Response 5

Section 6.5 of EIS 2 provides details regarding the design of the NWRL. The section describes that the EIS is based on a concept design for the NWRL which has been developed to provide the level of detail necessary to allow:

- Identification of property acquisition necessary to enable the project to be implemented.
- An understanding of the nature and extent of likely impacts and impact mitigation measures.
- A level of flexibility to enable detailed design development while having regard to reasonable and feasible mitigation measures to minimise impact on the receiving environment.
- Feedback from the community and key stakeholders including councils and industry has influenced the design process.

Section 6.5 of EIS 2 also provides the following details regarding the design aspects of the NWRL:

- Detailed design phase.
- Design principles for stations and service facilities.
- Public art.
- Design Review Panel.
- Delivery of a high quality design.

A detailed landscape design strategy, including along the viaduct section of the alignment, would be developed during the detailed design phase of the project.

Issue 6

Lend Lease GPT recommends a more robust landscape design strategy, including sample methods applied to moderate to high impact areas, should be provided demonstrating that sufficient mitigation is possible within the project budget. A correct assessment of residual visual impacts is required, and satisfaction cannot be completed without this occurring.

Response 6

Section 6.5 of EIS 2 provides details regarding the design of the NWRL. The section describes that the EIS is based on a concept design for the NWRL which has been developed to provide the level of detail necessary to allow:

- Identification of property acquisition necessary to enable the project to be implemented.
- An understanding of the nature and extent of likely impacts and impact mitigation measures.
- A level of flexibility to enable detailed design development while having regard to reasonable and feasible mitigation measures to minimise impact on the receiving environment.
- Feedback from the community and key stakeholders including councils and industry has influenced the design process.

Section 6.5 of EIS 2 also provides the following details regarding the design aspects of the NWRL:

- Detailed design phase.
- Design principles for stations and service facilities.
- Public art.
- Design Review Panel.
- Delivery of a high quality design.

A detailed landscape design strategy would be developed during the detailed design phase of the project.

Operation – Business impacts

Issue 7

Chapter 13 of the EIS considers business impacts from the project. We note that no consideration of the land development business operated by Lend Lease GPT (Rouse Hill) Pty Limited was considered as part of the local business survey.

Response 7

Chapter 13 of EIS 2 qualitatively assessed local business impacts during operations and Stage 2 construction. Chapter 14 provides an assessment of land use impacts and opportunities during construction and operation of the NWRL. These two chapter combined provide a thorough assessment of potential impacts, and opportunities, for Lend Lease GPT (Rouse Hill) Pty Limited.

As well as providing a public transport solution for north-west Sydney, the NWRL would also provide a catalyst for future land development opportunities in areas in proximity to the rail stations.

Issue 8

Lend Lease GPT submits that the impact on the land development business operated by Lend Lease GPT (Rouse Hill) Pty Ltd will be to reduce the revenue from land sales adjacent to the corridor by approximately 10%.

Over 120 planned dwellings between Sanctuary Drive and White Hart Drive are directly adjacent to the viaduct structure with a total negative financial impact on the sales prices of these dwellings of more than $3M. This impact is due mainly to the increased negative impacts from a viaduct rail solution compared to cut and cover tunnel solution previously proposed for the North West Rail Link – and that formed the basis for original planning and design of the Rouse Hill Regional Centre.

Response 8

Development of the NWRL project has had a long and diverse history since 1998. Since Concept Plan Approval was granted for the project in 2008 further strategic planning and project development has occurred. Details of the NWRL's development history can be found in Section 1.3 of EIS 2. TfNSW does not accept responsibility for potential losses of revenue arising from designs developed by other parties who have relied upon earlier NWRL designs.

Issue 9

Lend Lease GPT recommends that the negative business impact on Lend Lease GPT (Rouse Hill) Pty Ltd needs to be considered as an environmental impact and fair and reasonable mitigation of this impact considered consistent with DGR 45. Financial compensation should be considered as a mitigation measure in this case.

Response 9

Development of the NWRL project has had a long and diverse history since 1998. Since Concept Plan Approval was granted for the project in 2008 further strategic planning and project development has occurred. Details of the NWRL's development history can be found in Section 1.3 of EIS 2. Compensation is not available to address commercial decisions.

6.1.10 Hawkesbury Harvest

Construction – Access

Issue 1

Concerns regarding business impacts relating to site access for customers.

Response 1

Construction Traffic Management Plans would be developed on consultation with stakeholders and event organisers to manage access and parking arrangements.

Mitigation measures have been developed to manage access during construction (see mitigation measures T4, T5 and T12 in Table 9.25 of EIS 2). In addition, mitigation measure T26 in Table 9.25 of EIS 2 has been specifically developed for Showground Station. The location and form of the access facilities would be defined as part of the Construction Traffic Management Plan for the site. These mitigation measures are reproduced in Chapter 9 of this report.

Communication – Consultation

Issue 2

Request for further consultation relating to access and egress to the Showground.

Response 2

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. Mitigation measures can be found in Chapter 9 of this report. Mitigation measures have been developed for: Local Business Impacts (in particular LB1, LB2, LB3 and LB4) and Land Use and Community Facilities (in particular mitigation measures LC2, LC12, LC14 and LC15). .

Mitigation measures have been developed in relation to access during construction (see mitigation measures T4, T5 and T12 in Table 9.25 of EIS 2). Mitigation measure T26 in Table 9.25 of EIS 2 has been specifically developed for Showground Station and states that alternative access to the Showground would be developed and detailed in a Construction Traffic Management Plan. These mitigation measures are reproduced in Chapter 9 of this report.

6.1.11 O.K. Caravan Park Pty Ltd

Operation – Noise and vibration

Issue 1

What is the predicted dBA level at the property boundary of the O.K. Caravan Park (51 Terry Road, Rouse Hill, Sydney, NSW)?

Response 1

The noise model for the project predicts the following:

- For the construction stage: noise exceedances would occur at the O.K. Caravan Park during earthworks, piling, viaduct section placement, concrete pouring, installation of stanchions, track construction and during overhead wiring installation.
- For the operational stage: noise exceedances would not occur with the provision of noise attenuation barriers (see response 2 below).

Mitigation measures to reduce the impact on noise and vibration during construction and operation are detailed in Tables 10.48 and 10.47 of EIS 2 respectively. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 2

As the proposed NWRL is located so close to the O.K. Caravan Park, what noise reduction attenuation measures will be used adjacent to the boundary? O.K. Caravan Park is concerned by noise and vibration impacts.

Response 2

The current concept design proposes the following operational noise mitigation for the O.K. Caravan Park:

- A 2 metre high noise attenuation barrier above rail level on the O.K. Caravan Park property boundary.
- A 2 metre high noise attenuation barrier along the proposed earthworks embankment on the O.K. Caravan Park side.

These barriers are predicted to keep noise below the relevant operational noise criteria.

Design – Alignment

Issue 3

How many metres is the closest rail line to the property boundary of O.K Caravan Park?

Response 3

Based on the current concept design, the closest rail track would be located approximately 12 metres to the O.K Caravan Park property boundary.

Design – Station location

Issue 4

How many metres is the 2 metre high wall from the property boundary of O.K Caravan Park?

Response 4

The closest noise attenuation barrier is proposed to be located along the O.K. Caravan Park property boundary.

6.1.12 Dexus Funds Management Limited

Construction – Noise and vibration

Issue 1

DEXUS Funds Management Limited (DEXUS) is the responsible entity of the trust in which 3 Brookhollow Avenue, Baulkham Hills (the premises) is held as an asset by Perpetual Trustee Company Ltd as registered proprietor. The premises is within Norwest Business Park and is occupied as a data centre by IBM. Data centres are sensitive to movement and vibration.

The underground corridor for the proposed NWRL will pass beneath the premises. DEXUS is concerned that the construction of the NWRL will have an unreasonable adverse impact on the premises and the operations of the tenant on the premises and that the assessment undertaken for the purposes of the SSI Application is inadequate such that the predicted impacts in the assessment cannot be relied upon.

DEXUS submits that the SSI Application should not be approved unless:

1. Detailed testing and assessment is undertaken in the vicinity of the premises to more accurately predict the geotechnical and vibration impacts of construction of the NWRL on the building and the sensitive operations on the premises.
2. Detailed conditions are imposed on the approval that ensure the predictions of no or negligible impact are met and that any damage caused by the construction of the NWRL are mitigated and rectified.

Response 1

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

Vibration from tunneling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil

Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).
- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

EIS 1 includes specific mitigation (measure SG3 in Table 8.9 of EIS 1) regarding the development of a geotechnical model for the project. This would include full details of structure which may be impacted, conditions surveys and detailed modelling of properties and infrastructure at risk from damage.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP – DECC, 2007. In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Issue 2

The Concept Plan Reports and the EIS contain generic geotechnical information. The EIS is essentially a summary of the geotechnical content of the Concept Plan Reports.

The Technical Papers on vibration impacts do not consider the sensitive use of the premises and adopts generic vibration impact criteria. In addition, the assessment has been prepared on the basis of a number of assumptions which may not be representative of the subject locality or construction methodology, such as geotechnical composition. No specific predictions of impacts on the ground surface as a result of tunnel construction are made in the Concept Plan Reports, they merely list the types of impacts that may occur. Furthermore, there has not been any specific consideration in the EIS of the use of the Premises as a data centre which is particularly sensitive to noise and vibration.

Response 2

Section 8.3.1 of EIS 2 details the additional geotechnical studies and investigations which have been undertaken.

Vibration, soils and groundwater from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).

- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

EIS 1 includes specific mitigation (measure SG3 in Table 8.9 of EIS 1) regarding the development of a geotechnical model for the project. This would include full details of structures which may be impacted, condition surveys and detailed modelling of properties and infrastructure at risk from damage.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Issue 3

DEXUS submits that the Proponent should be required to more rigorously assess the potential construction related ground-borne noise and vibration impacts on the Premises. In this respect, any impact assessment criteria should reflect that the use of the premises is highly sensitive to vibration.

DEXUS requests that the results of any further investigations and assessment be provided to DEXUS or be placed on public exhibition.

Response 3

Vibration from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).
- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

EIS 1 includes specific mitigation (measure SG3 in Table 8.9 of EIS 1) regarding the development of a geotechnical model for the project. This would include full details of structures which may be impacted, condition surveys and detailed modelling of properties and infrastructure at risk from damage.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Operation – Noise and vibration

Issue 4

The underground corridor for the proposed NWRL will pass beneath the premises. DEXUS is concerned that the operation of the NWRL will have an unreasonable adverse impact on the premises and the operations of the tenant on the premises and that the assessment undertaken for the purposes of the SSI Application is inadequate such that the predicted impacts in the assessment cannot be relied upon.

DEXUS submits that the SSI Application should not be approved unless:

1. Detailed testing and assessment is undertaken in the vicinity of the premises to more accurately predict the geotechnical and vibration impacts of operation of the NWRL on the building and the sensitive operations on the Premises.
2. Detailed conditions are imposed on the approval that ensure the predictions of no or negligible impact are met and that any damage caused by the operation of the NWRL are mitigated and rectified.

Response 4

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

The overall modelled vibration level at the premises is 90 dB dBV re 10-9 m/s. This is within the vibration design objective for critical working areas of 100 dBV identified in EIS 2 (examples of critical working areas include hospital operating theatres and precision laboratories).

The maximum 1/3 Octave Band Vibration Level at the premises is 84 dBV re 10-9 m/s, which is 2 dB above the design objective. It is noted that this establishment would already be subject to relatively high levels of ambient vibration due to its location adjacent to major roads.

Issue 5

The Concept Plan Reports and the EIS contain generic geotechnical information. The EIS is essentially a summary of the geotechnical content of the Concept Plan Reports.

The Technical Papers on vibration impacts do not consider the sensitive use of the premises and adopts generic vibration impact criteria. In addition, the assessment has been prepared on the basis of a number of assumptions which may not be representative of the subject locality or operational requirements, such as train speed. No specific predictions of impacts on the ground surface as a result of operation are made in the Concept Plan Reports, they merely list the types of impacts that may occur. Furthermore, there has not been any specific consideration in the EIS of the use of the premises as a data centre which is particularly sensitive to noise and vibration.

Response 5

Section 8.3.1 of EIS 2 details the additional geotechnical studies and investigations which have been undertaken.

Soils and groundwater from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The overall modelled vibration level at the premises is 90 dB dBV re 10-9 m/s. This is within the vibration design objective for critical working areas of 100 dBV identified in EIS 2 (examples of critical working areas include hospital operating theatres and precision laboratories).

The maximum 1/3 Octave Band Vibration Level at the premises is 84 dBV re 10-9 m/s, which is 2 dB above the design objective. It is noted that this establishment would already be subject to relatively high levels of ambient vibration due to its location adjacent to major roads. The operational vibration assessment includes inputs such as the anticipated depth to tunnel and the anticipated train speed.

Issue 6

DEXUS submits that the Proponent should be required to more rigorously assess the potential operational related ground-borne noise and vibration impacts on the Premises. In this respect, any impact assessment criteria should reflect that the use of the premises is highly sensitive to vibration.

DEXUS requests that the results of any further investigations and assessment be provided to DEXUS or be placed on public exhibition.

Response 6

The overall modelled vibration level at the premises is 90 dB dBV re 10-9 m/s. This is within the vibration design objective for critical working areas of 100 dBV identified in EIS 2 (examples of critical working areas include hospital operating theatres and precision laboratories).

The maximum 1/3 Octave Band Vibration Level at the premises is 84 dBV re 10-9 m/s, which is 2 dB above the design objective. It is noted that this establishment would already be subject to relatively high levels of ambient vibration due to its location adjacent to major roads.

Planning – Approval process

Issue 7

Conditions of approval cannot replace proper assessment of impacts.

It appears to be contemplated in the EIS and the Statement of Commitments for the SSI Application that the geotechnical and vibration impacts will be considered in more detail and mitigated by appropriate conditions placed on the proponent of the SSI Application, if approved. However, it is not appropriate and potentially an error of law for the planning authority to not fully assess the impacts of a development and to attempt to defer assessment of those impacts by way of condition of approval. The proponent should be required to assess the impacts of the construction and operation of the NWRL on the Premises as a commercial facility containing highly sensitive equipment.

Response 7

Soils and groundwater from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Soils and groundwater and noise and vibration relating to Stations, Rail Infrastructure and Systems have been addressed in Chapter 8 and Chapter 10 respectively of EIS 2. Each of these chapters identify mitigation measures to manage potential impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Vibration from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).

- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

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The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Issue 8

The geotechnical and vibration assessment is inadequate.

DEXUS submits that there has not been a proper and reasonable assessment in the EIS of the likely geotechnical and vibration impacts from construction and operation of the NWRL as proposed in the SSI Application. The assessment in the Environmental Impact Statement by TfNSW "Stage 2 - Stations, Rail Infrastructure and Systems" for the SSI Application (EIS) is largely a desktop analysis and to a large extent no site specific testing (other than for contaminants) or analysis appears to have been conducted for the purposes of the SSI Application. The EIS relies heavily on work completed for the concept plan application approved on 6 May 2008, namely the:

- Environmental Assessment Report by GHD dated 6 November 2006 (Concept Plan EAR) including various Appendices.
- Preferred Project Report by GHD dated May 2007 (Concept Plan PPR).
- Supplementary Submissions Report by TIDC dated March 2008 (Concept Plan SSR).

(Together referred to as the Concept Plan Reports).

Response 8

Soils and groundwater from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Soils and groundwater and noise and vibration relating to Stations, Rail Infrastructure and Systems have been addressed in Chapter 8 and Chapter 10 respectively of EIS 2. Each of these chapters identify mitigation measures to manage potential impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Vibration from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).
- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

EIS 1 includes specific mitigation (measure SG3 in Table 8.9 of EIS 1) regarding the development of a geotechnical model for the project. This would include full details of structure which may be impacted, conditions surveys and detailed modelling of properties and infrastructure at risk from damage.

The overall modeled vibration level at the premises is 90 dB dBV re 10-9 m/s. This is within the vibration design objective for critical working areas of 100 dBV identified in EIS 2 (examples of critical working areas include hospital operating theatres and precision laboratories).

The maximum 1/3 Octave Band Vibration Level at the premises is 84 dBV re 10-9 m/s, which is 2 dB above the design objective. It is noted that this establishment would already be subject to relatively high levels of ambient vibration due to its location adjacent to major roads.

Issue 9

DEXUS requests that if approval is to be granted to the SSI Application, that conditions be imposed that:

- Restrict construction of the track underneath the premises.
- Require compliance with vibration criteria (during construction and operation) that reflects the sensitive use of the premises and not general structural or amenity vibration criteria. Such criteria should relate to, among other things, ground-borne vibration during construction and operation.
- Requires the proponent to mitigate and compensate for any damage.

Response 9

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

Vibration from tunnelling activities was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).
- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity

of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Issue 10

We have reviewed the conditions of approval for the Concept Plan Approval dated 6 May 2008 (Concept Plan Approval), the State Significant Infrastructure Application for Major Civil Construction Works for the NWRL dated 25 September 2012 (SSI Civil Works Approval) and for the Epping to Chatswood Rail Link dated February 2002 (ECRL Approval). DEXUS submits that if the SSI Application is to be approved that at a minimum the following conditions of approval should be incorporated into any approval to mitigate the potential impacts. *(Please note condition commentary and comments provided are under the authorship of Dexus Funds Management only).*

1. Condition
The Proponent shall design and construct the SSI as far as is feasible and reasonable, in a manner that minimises:

a. impacts to groundwater hydrology including capture, drawdown and quality and
b. vibration impacts to sensitive premises such as data centres.

1. Comment
This condition is similar to condition C12 in the SSI Civil Works Approval.

2. Condition
A geotechnical model of representative geological and groundwater conditions shall be prepared prior to excavation and tunnelling in subject area(s) to identify geological structures and groundwater features. This model shall include details of proposed excavations and tunnels, construction staging, and identify surface and sub-surface structures and infrastructure which may be impacted by the SSI, including the specific attributes of those structures. The Proponent shall use this model to assess the predicted settlement, ground movement, stress redistribution and horizontal strain profiles caused by excavation and tunnelling on adjacent property and infrastructure.

2. Comment
This condition is the same as condition C17 in the SSI Civil Works Approval.

3. Condition
The Proponent shall undertake an assessment of property and infrastructure at risk from damage to determine appropriate settlement and vibration criteria to prevent damage, including without limitation:

❖ 3 Brookhollow Avenue, Baulkham Hills which contains a data centre.

3. Comment
This condition is similar to condition C18 in the SSI Civil Works Approval however we have added vibration and specifically identified that the Premises is at risk because of the sensitive use of the Premises as a data centre.

4. Condition
Should the geotechnical model in condition 2/C17 indicate that exceedances of the criteria established in condition 3/C18, 5/C20 or in Table 1 (which ever is the lower), the Proponent shall identify and implement mitigation measures such as appropriate, support and stabilisation structures in consultation with

the relevant land and/or infrastructure owners prior to the commencement of construction to ensure where possible that underground services, infrastructure and adjacent buildings will not experience settlements exceeding the criteria. [Table 1 has 20 mm settlement criteria for buildings >3 levels].The criteria does not remove any responsibility from the Proponent for the protection of existing structures or for rectifying any damage resulting from the SSI.

4. Comment
This condition is similar to condition C19 in the SSI Civil Works Approval, however the potentially sensitive data centre may have lower tolerable movement than the 20 mm settlement criteria in Table 1, so we have added a reference to the criteria established in 3/C18 as well as 5/C20, because 5/C20 applies only to utility and infrastructure.

5. Condition
Settlement criteria for individual utility structures and infrastructure shall be determined in consultation with the relevant authorities prior to the commencement of construction.

5. Comment
This condition is the same as condition C20 in the SSI Civil Works Approval.

6. Condition
The proponent shall design and construct the SSI with the objective of minimising impacts to, and interference with, third party property and infrastructure, and that such infrastructure and property is protected during construction and operation.

6. Comment
This condition is the same as condition E25 in the SSI Civil Works Approval.

7. Conidition
The proponent shall, prior to the commencement of construction (including demolition and excavation works), or each part of the SSI that may impact on surrounding properties at risk from damage (including those properties identified in condition 3/C18):

a. Where agreed with the property owner, undertake independent inspections of these properties prior to construction in accordance with AS 4349.1 'Inspection of Buildings' (including for commercial buildings). This inspection shall be undertaken by appropriately qualified and experienced geotechnical and construction engineering experts in consultation with the property owner, and report on property features that may be affected by construction including defects that exist and that are of a type that can be affected by ground vibration or movement.
b. Contact the owners of all buildings on which property inspections are to be conducted before the inspection, or as otherwise agreed by the affected property owner, and advise of the scope and methodology for the inspection, and of the process for making a property damage claim.
c. Provide a copy of the property inspection report to the owner of each property inspected prior to construction that could affect the property.
d. Determine an appropriate property vibration criteria and management and protection measures to ensure that property damage (including cosmetic damage) will be avoided. The criteria is to take into account the uses of the property.
e. Maintain a register of all properties inspected by the Proponent, indicating whether the owner accepted or refused the property inspection offer, and provide a copy of the register to the Director General upon request. Reports from the geotechnical engineer advising on the risk of damage to properties shall be made available upon request to the property owner, Director General and the Independent Property Impact Assessment Panel.

7. Comment

This condition is similar to condition E26 in the SSI Civil Works Approval however:

- AS 4349 is for residential buildings and only requires major defects to be observed. The Premises contains a commercial building and is strictly speaking out of the scope of AS4349.1.
- We have clarified that the assessment includes the Premises.
- The geotechnical report should be made available to owners as well as Director General.

8. Condition

For the purpose of condition 7/E26 properties at risk from damage include, but are not necessarily limited to: (a) those properties identified in condition 3/C18; (b) buildings and structures determined following geotechnical and vibration analysis as certified by a qualified geotechnical engineer; and ~~(c) other sensitive structures within 60 metres from the edge of the works unless otherwise determined following geotechnical and vibration analysis as certified by a qualified geotechnical engineer as not likely to be adversely affected properties need surveys.~~ all buildings / structures within a plan distance of 60 metres from the edge of the tunnel where the tunnel is in solid rock / sandstone to a minimum invert depth of 30 metres or a plan distance equal to twice the invert depth from the edge of the tunnel where the invert depth is less than 30 metres.

8. Comment

This condition is similar to condition E27 in the SSI Civil Works Approval however we have adopted stricter wording from the ECRL Approval which was more prescriptive in specifying which properties need surveys. The SSI Civil Works Approval conditions do not automatically include the Premises in the condition surveys. "Not likely" sets a low bar, and there is a real risk that the Premises does not get inspected. This is not appropriate if the SSI Application is to be approved based largely on a desktop assessment of predicted geotechnical impacts.

9. Condition

The proponent shall install appropriate equipment to monitor construction sites and the tunnel route during construction and for a period of not less than six months after settlement has stabilised with particular reference to risk areas identified in the building and infrastructure condition surveys required by condition 7/E26 9 and/or the geotechnical analysis required by condition 2/C17. If monitoring during construction indicates exceedance of the criteria then all work affecting settlement shall cease immediately and not resume until fully rectified or a revised method of work has been established that will ensure protection of affected structures.

9. Comment

This condition is the same as condition E27 in the SSI Civil Works Approval. Please note our earlier submission that the criteria should be set such that it reflects the sensitive use of the Premises.

10. Condition

The proponent shall establish an Independent Property Impact Assessment Panel prior to relevant construction or demolition works commencing. The Panel shall be approved by the Director General and comprise geotechnical and engineering experts independent of the design and construction team, unless otherwise agreed by the Director General. The Panel shall be responsible for independently verifying assessments undertaken under conditions 2/C17 and 7/E26, the resolution of property damage disputes and the establishment of on-going settlement monitoring requirements. Either the affected property owner or the Proponent may refer unresolved disputes arising from potential and/or actual property impacts to the Panel for resolution. All costs incurred in establishing and implementing the Panel shall be borne by the Proponent.

10. Comment

This condition is the same as condition E29 in the SSI Civil Works Approval.

11. Condition
Notwithstanding the requirements of condition 9/E27, the Proponent shall monitor settlement for any period as may be specified through the Independent Property Impact Assessment Panel referred to in condition 8/E26. The results of this monitoring shall be made available to the Director General upon request.

11. Comment
This condition is the same as condition E30 in the SSI Civil Works Approval.

12. Condition
Any damage caused to property, buildings, structures, lawns, sheds, trees, gardens etc as a result of the SSI shall be rectified or the property owner compensated, within a reasonable timeframe, with the costs borne by the Proponent. This condition is not intended to limit any claims that the property owner may have against the Proponent.

12. Comment
This condition is the same as condition E31 in the SSI Civil Works Approval however the additional wording has been derived from the ECRL Approval to make it clear that property includes buildings and other improvements.

13. Condition
The Construction Management Plan for the stage that includes 3 Brookhollow Avenue, Baulkham Hills shall be prepared in consultation with the owner and occupier and take into account the sensitive use of the site as a data centre.

13. Comment
This condition is similar to conditions imposed on the ECRL Approval for sensitive sites.

14. Condition
The design and construction of the tunnel shall avoid 3 Brookhollow Avenue, Baulkham Hills and allow for potential future excavation of basement carparks.

14. Comment
No comment provided.

15. Condition
The Construction Noise and Vibration Management Plan shall take into account sensitive uses of premises such as data centres and set criteria that prevents adverse impacts on the use of those premises for sensitive uses.

15. Comment
DEXUS assumes that the general conditions of approval will require preparation and approval of such a plan as per the ECRL Approval.

16. Condition
Unless otherwise agreed by the Director-General, following consultation with the EPA, construction and operational ground- borne vibration levels shall not exceed criteria agreed with the property owners for sensitive structures including data centres. [The condition should also include a process whereby if certain levels are exceeded appropriate measures are to be taken to mitigate the concerns of the business. If those mitigation measures still cause damage, the Proponent should be required to compensate for any residual impact].

16. Comment
This condition should override similar conditions 66 and 67 imposed in the ECRL Approval and DEXUS submits that at a minimum the blasting, vibration and noise conditions for the ECRL Approval should be imposed on the SSI Application. Any mitigation measures are similar to condition 76 of the ECRL Approval.

Response 10

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

Tunnelling activities were addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

This approval includes the following conditions relating to vibration sensitive businesses:

- E11. Prior to construction, a detailed land use survey to identify potentially critical areas that are sensitive to construction vibration and construction ground-borne noise impacts, shall be undertaken. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan (condition E45 (b)).
- E23. The Proponent shall consult with potentially-affected community, religious, educational institutions and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to ensure that noise generating construction works in the vicinity of the receivers are not timetabled during sensitive periods, unless appropriate other arrangements are made.

Additionally, E26 to E31 detail conditions of approval relating to potential impacts to third party property and structure, including the requirement to rectify or compensate for any damage caused by the NWRL project.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

Soils and groundwater and noise and vibration relating to Stations, Rail Infrastructure and Systems have been addressed in Chapter 8 and Chapter 10 respectively of EIS 2. Each of these chapters identify mitigation measures to manage potential impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Construction – Business impacts

Issue 11

The track should not be located directly underneath the premises and its sensitive use should be recognised in undertaking and setting the impact assessment and approval criteria.

The use of the premises as a data centre makes it particularly sensitive to vibration and noise during construction. The EIS does not consider the foundations of the Premises and the depth to which they penetrate the surface nor does it consider the sensitive use of the Premises as a data centre. Impact assessment criteria, such as vibration criteria, that have been adopted for the EIS do not consider this sensitive use.

Response 11

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

Operation – Business impacts

Issue 12

The use of the premises as a data centre makes it particularly sensitive to vibration and noise during operation of the NWRL. The EIS does not consider the foundations of the premises and the depth to which they penetrate the surface nor does it consider the sensitive use of the premises as a data centre. Impact assessment criteria, such as vibration criteria, that have

been adopted for the EIS do not consider this sensitive use. According to Technical Paper 3 Figure 6.7 attached to the EIS, the predicted operational ground-borne vibration levels on the premises are likely to exceed the BBN-C criterion curve for highly vibration sensitive equipment. This suggests there is a real risk that the operation of the NWRL will have an adverse impact on the data centre operations.

Response 12

The NWRL alignment passes close to, but not directly underneath the property. At this location the depth to the tunnels is anticipated be around 38 metres. This is shown in Figure 6.5E of EIS 2.

The overall modeled vibration level at the premises is 90 dB dBV re 10-9 m/s. This is within the vibration design objective for critical working areas of 100 dBV identified in EIS 2 (examples of critical working areas include hospital operating theatres and precision laboratories).

The maximum 1/3 Octave Band Vibration Level at the premises is 84 dBV re 10-9 m/s, which is 2 dB above the design objective. It is noted that this establishment would already be subject to relatively high levels of ambient vibration due to its location adjacent to major roads.

The concept plan includes the provision of a variety of indicative track forms along the underground section of the NWRL. With the provision of this range of standard, high and very high attenuation track form, the NWRL achieves compliance with the relevant ground-borne noise and vibration objectives in the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP – DECC, 2007). In the Norwest area, standard attenuation track is predicted to comply with the relevant criteria.

6.1.13 Comfort Delgro Cabcharge

Project – Project need

Issue 1

CDC welcomes the NWRL because it will provide a superior mode of service to the public transport travellers in the North West and Hills area. The majority of CDC Region 4 staff reside in the area and they will welcome the provision of such a service. **or Girls**

Response 1

CDC's comment is noted.

Planning – Long-term transport planning

Issue 2

CDC believes it is important to provide an integrated service with bus and rail services as well as those using alternate modes to the rail such as walk, bicycle, taxi, kiss-and-ride and park-and-ride.

Response 2

The NWRL would provide seamless integration between transport modes. This is supported by a number of the design principles contained within Section 6.5.3 of EIS 2.

Transport – Rail integration

Issue 3

CDC supports the hierarchy of services for proximity to the station with walking, cycling, bus, taxi, kiss-and-ride and finally park-and-ride.

Response 3

CDC's support for the station access hierarchy presented in Figure 6.6 of EIS 2 is noted.

Transport – Pedestrian and bicycle access

Issue 4

Bus Zones shown at Kellyville Station are on the T-Way and passengers will have considerable walk through the car park to the station.

Response 4

Figure 6.32 of the EIS 2 shows that the bus zones on the T-Way are in close proximity to Kellyville Station entry. Passengers transferring between bus and rail would do so through a primary and secondary plaza space and not through the park-and-ride area. Notwithstanding this, pedestrian movements through any car park would be designed to ensure safe and accessible movements for pedestrians and car park users.

Issue 5

CDC supports the Transit Mall at Castle Hill. Buses need to be closer to shops at Castle Hill than is provided where the Interchange is located. If QIC (owners of Castle Towers) were to put a car park where the interchange is planned, there would be outrage over their customers having to walk so far to the shop. And yet we make our passengers do it. A suggested solution is to have the buses operate through the Transit Mall to provide easy access for our customers to the shopping centre. By only having the core services operate through the Mall will result in approximately 20 buses in each direction per hour at the present time.

Response 5

Figure 6.16 of EIS 2 shows pedestrian movements between the bus interchange and the Castle Towers Shopping Centre would be through the plaza area with a walking distance of about 50 metres.

The walking distance and friendly pedestrian environment proposed to access Castle Towers Shopping Centre from the bus interchange is considered appropriate.

Operation – Timetables / trip duration

Issue 6

The travel times for the services quoted in EIS 2 are a concern to any parties wanting to sell better public transport. Attachment 1 (attached to the submission) shows the travel time for various origins within the CDC operating area comparing the new rail system with feeder bus network and the existing bus travel times. It is more than just west of Castle Hill that will be in the category of being a bus feed onto the rail. The assumption is that NWRL service running a five minute frequency service. The worst case of comparing rail travel time with the current bus time shows an additional 35 minute travel time from Baulkham Hills to Wynyard via the rail option. This is twice as long as the current time of 35 minutes to Wynyard by bus.

Response 6

Section 9.5.1 of EIS 2 forecasts that, in the absence of the NWRL, there would be a growth of 144% in M2 buses entering the Sydney CBD by 2021. These constraints mean that growth in bus services cannot accommodate the expected growth in public transport demand. Capacity constraints on the road network demonstrate the need for a mass transit system to facilitate continued growth. The NWRL would have a beneficial impact on travel conditions in the north-west and through to the CBD. Forecast travel time savings of around 10 to 30 percent between the north-west and the key employment destinations of Macquarie Park, Chatswood and Sydney CBD are anticipated by 2021. This represents a much improved travel time reliability compared with bus and private car.

This is consistent with the project objective to 'Deliver Stage 3 of Sydney's Rail Future to improve transport network reliability by facilitating a shift from road to rail for trips to and from the north west, to reduce bus / road congestion and improve amenity in Sydney CBD'.

Reducing congestion on inner city roads (through a reduction in buses entering Sydney CBD from the north-west) would result in additional benefits to bus services from other areas to the north.

Issue 7

There is no provision for transfer time for bus to rail at the stations and Metro to heavy rail at Chatswood. Allowing 5 minutes for transferring by a passenger from a bus covering the walking and catching of escalators to the platform and an average waiting time of 2.5 minutes. This is probably understating the time but CDC think to acknowledge transferring rail to rail at Chatswood is providing a more realistic time for customers.

Response 7

All estimates of travel time produced by TfNSW include a reasonable transfer time between transport modes.

Issue 8

Using the current running times of the two Seven Hills depots introduced on 12 November 2012, CDC observed that services are operating close to time. The examination of services operating to the rail does not take into account the travel times improvements after the completion of the M2 road works. The completion of road works will give the M2 services both faster travel times and improved reliability.

Response 8

TfNSW forecasts have taken into account the completion of the current works on the M2 Motorway.

Section 9.5.1 of EIS 2 forecasts that, in the absence of the NWRL, there would be a growth of 144% in M2 buses entering the Sydney CBD by 2021. These constraints mean that growth in bus services cannot accommodate the expected growth in public transport demand. Capacity constraints on the road network demonstrate the need for a mass transit system to facilitate continued growth. The NWRL would have a dramatic impact on travel conditions in the north-west and through to the CBD. Forecast travel time savings of around 10 to 30 percent between the north-west and the key employment destinations of Macquarie Park, Chatswood and Sydney CBD are anticipated by 2021. This represents a much improved travel time reliability compared with bus and private car.

This is consistent with the project objective to 'Deliver Stage 3 of Sydney's Rail Future to improve transport network reliability by facilitating a shift from road to rail for trips to and from the north west, to reduce bus / road congestion and improve amenity in Sydney CBD'.

Reducing congestion on inner city roads (through a reduction in buses entering Sydney CBD from the north-west) would result in additional benefits to bus services from other areas to the north.

Transport – Bus integration

Issue 9

A significant catchment area for NWRL services will come from the western side of Old Windsor Road. Although the area is Region 1, services to the City and Parramatta are provided by Region 4 buses at present. Busways, Transport for NSW and CDC should sit down and examine how the best services for the area should be delivered.

Response 9

TfNSW would determine the appropriate level of public transport services provided to the Sydney North West Region in consultation with key stakeholders including Busways and CDC.

Issue 10

While there has been some work done on bus services to the City after the introduction of the NWRL services, there will need to be decisions made on frequencies to make for provision for layover at Castle Hill and Rouse Hill terminal.

Response 10

CDC's comment is noted.

Issue 11

Terminating bus services at Castle Hill and / or Rouse Hill is where the bus / rail interchanging would take place through the integration of the timetables. This would not be necessary during peak when a train will operate every five minutes

Response 11

CDC's comment is noted.

Issue 12

Stations other than Castle Hill and Rouse Hill stations are touch and go types of facilities where the bus passes through the station and picks up or drops but does not terminate.

Response 12

CDC's comment is noted.

Issue 13

There will be a need to layover and turn around for buses on the south side of the Castle Hill Transit Mall.

Response 13

The need for bus layover and turn around facilities will be examined in consultation with TfNSW and the relevant bus operators.

Transport – Pedestrian and bicycle access

Issue 14

Walking from Norwest Business Park and Bella Vista Stations to buildings such as Woolworths is 1.2 and 1.0 kilometres respectively. This is a 15 minute walk in the open with no awnings. Shelter should be provided to pedestrian routes.

Response 14

CDC's suggestion is noted. However, the provision of shelters outside the immediate station precincts is beyond the scope of the NWRL.

EIS 2 does envisage the use of local bus services from Bella Vista Station and / or Norwest Station to nearby businesses including Woolworths and RESMED / Norbrik.

Issue 15

Walking from Norwest Business Park and Bella Vista Stations to buildings such as Woolworths is 1.2 and 1.0 kilometres respectively and may require the short cutting of pedestrian routes by providing access between buildings similar to what is to happen at Macquarie Park.

Response 15

CDC's suggestion is noted.

EIS 2 does envisage the use of local bus services from Bella Vista Station and / or Norwest Station to nearby businesses including Woolworths and RESMED / Norbrik.

Transport – Kiss-and-ride

Issue 16

There will need to be a separation of buses from the general traffic in the non-centre stations (all stations except Castle Hill or Rouse Hill) where CDC believe the kiss-and-ride interchanging will predominantly take place. Buses could be caught in these interchanges with excessive kiss-and-ride cars.

Response 16

Kiss-and-ride zones would be segregated from bus zones where feasible. The NWRL has taken into consideration the additional traffic generated during peak hour periods and the anticipated demand for each access mode, and has allocated sufficient space for the proposed kiss-and-ride zones.

Operation – Type of trains

Issue 17

The tunnels on the rail line are being built for the Metro type of train but are servicing a Tier 2 market. This defies the philosophy of having the three tiered approach to the development of rail transport - Tier 1 for the inner market such as Chatswood to the City operated as a Metro, Tier 2 for Berowra to the City and Tier 3 for Newcastle to Sydney Terminal. Metro is better

suited to high density residential and employment areas which are not present on the NWRL.

Response 17

The Norwest Business Park employment area has a jobs target of 30,000 by 2036 and some of the station precincts would comprise of high density residential areas in the future. The NWRL would complement the future land uses of the Sydney North West region.

The NWRL is being designed to accommodate single deck, rapid transit trains which would be fully integrated into Sydney's public transport network as part of Sydney's Rail Future. Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods) would be operated with new generation single deck trains, advanced signalling and dedicated track. The NWRL and future Tier 1 Rapid Transit network would be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Issue 18

CDC believes it is quite short sighted in not building the tunnel to fit the double deck trains when it would be only be marginal cost to take the tunnel to the level to be able to fit the standard double deck carriage

Response 18

The NWRL is being designed to accommodate single deck, rapid transit trains which would be fully integrated into Sydney's public transport network as part of Sydney's Rail Future. Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods) would be operated with new generation single deck trains, advanced signalling and dedicated track. The NWRL and future Tier 1 Rapid Transit network would be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Sydney's Rail Future: Modernising Sydney's Trains released in June 2012 is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

6.2 Community Group / Organisation Submissions

6.2.1 Castle Hill Action Group

Transport – Parking availability

Issue 1

Castle Hill Action Group notes that the proposed parking arrangements are inadequate. The 4,000 car parks planned for the project and 600 planned for Showground Station are insufficient as the number estimated to be required is 20,000 (if the NWRL operates only 10 hours a day and transporting up to 1,300 people every 5 minutes, equalling 156,000 commuters). This would leave thousands of cars which would park in local residential streets, creating parking issues for residents.

Response 1

The NWRL project would provide commuter car parking spaces at dedicated park-and-ride facilities at the proposed Cherrybrook, Showground, Bella Vista, Kellyville and Cudgegong Road Stations. The NWRL would reduce the need to use private cars for travel, in particular along congested road routes into North Sydney and the Sydney CBD.

The provision of car parking spaces at each station has been determined based on the anticipated demand and then adjusted for each station based on accessibility and to encourage increased uptake of cycling, walking and use of buses to access the stations.

Operation – Traffic impacts / volume

Issue 2

The increase in commuter vehicles will have negative impacts on already congested roads near the proposed Castle Hill Station, particularly Ashford Avenue, Carrington Road and Middleton Avenue. The proposed additional sets of lights would worsen this situation.

Response 2

The preliminary traffic and intersection modeling undertaken for Showground Station showed that the roundabout intersection at Middleton Avenue / Carrington Road would fail (Level of Service F) and operate over capacity (Degree of Saturation 1.10) with the addition of NWRL traffic. Signalisation of this intersection is likely to be required (subject to RMS approval) to improve the performance of the intersection at peak times.

Operation – Air quality

Issue 3

Castle Hill Action Group acknowledges that pollution is inevitable but not to the extent of exchanging the current lifestyle of residents for a railway. Significant traffic increase is expected, yet not a single parameter or measure is produced to indicate the impact of CO_2 and other potentially carcinogenic fumes. EIS 2 fails to assess these impacts on health, comfort and enjoyment of life that residents of the project area have been accustomed over many years without at least some baseline parameters. If Castle Hill Action Group can't assess the impact, how can an informed judgment about the negative aspects of the project be made, and constructively influence the direction of the project?

Response 3

Section 19.1.6 of EIS provides an assessment of air quality impacts resulting from motor vehicle emissions.

The NWRL would result in changes to motor vehicle use and therefore emissions within proximity to stations. It is expected that there would be redistributed traffic movements surrounding park-and-ride stations, such as Showground Station, associated with passengers accessing the park-and-ride facilities at the station. There is the potential for localised concentrations of vehicle emissions and a resulting negligible decrease in air quality. However this impact is not expected to be noticeable at the human scale and would not result in adverse impacts on human health.

Overall it is expected that the NWRL project will result in beneficial changes in regional transport emissions from changes in motor vehicle use resulting from the availability and access to rail services (referred to as modal shift). Based on modal shift projections related to the operation of the NWRL, long term beneficial air quality impacts will arise through reduced motor vehicle kilometres travelled and an associated reduction in tonnes of particulate matter (PM_{10}) and oxides of nitrogen (NOx).

Tables 19.3 and 19.4 in EIS 2 present mitigation measures that have been developed to avoid, reduce and manage identified potential impacts to air quality during construction and operation, respectively. These are reproduced in Chapter 9 of this report.

Issue 4

Exhaust stacks release significant amounts of concentrated CO_2 and other solid and gas pollutants into the atmosphere. Where are the exhaust stacks going to be placed in relation to Showground Station?

Response 4

Ventilation shafts would be provided within all underground stations to allow for effective natural ventilation and supplementary mechanical ventilation. Air vent shafts would typically be incorporated into the station or precinct

design and there would also be ventilation fans at each station in the tunnel section. These facilities would supply fresh air to stations and tunnels and discharge air from the tunnels and station environment. Section 6.7.1 provides a description of the ventilation system.

Service buildings at Showground Station would be located at both ends of the station box (refer to Figure 6.19 for indicative locations of service buildings). The final locations of ventilation shafts will be determined in consideration of mitigation measure OpA2 in Table 19.3 of EIS 2 which states: *Location and design of air ventilation, car parks and kiss and ride facilities to consider avoidance of air quality impacts on sensitive receivers.*

Emissions from the service facility would not affect local air quality. As described in Section 6.7 of EIS 2:

"A number of service buildings would be required within each station precinct… These facilities would supply fresh air to stations and tunnels and discharge air from the tunnels and station environment. The project would be an electrified passenger only rail line and therefore tunnel emissions would not affect air quality. The ventilation systems would be designed to meet the criteria for normal, congested and emergency operating scenarios. The systems would also provide ventilation in the event of fire to ensure suitable conditions in the tunnel for safe egress of passengers and safe access for the emergency service personnel. In the event of fire, smoke-laden air would be discharged to the atmosphere."

Operation – Public safety

Issue 5

Request for further information addressing safety and security concerns for residents living nearby NWRL during operation. Safety issues could include violence, crime, social misbehaviour, drunkenness, trafficking of narcotics, prostitution, break-ins and burglaries, property damage, hooliganism and other incidents. If no comprehensive safety / security study or plan has been commissioned, Castle Hill Action Group request to know why?

Response 5

From the outset of the design process, safety has been considered for passengers, neighbouring areas and staff. One of the Sustainability Objectives for the project (presented in Table 4.2 of the EIS) is Community Benefit, which includes a target for the project to demonstrate *safety initiatives to deter crime*. Section 6.7.1 of the EIS describes station design, including measures and objectives for ensuring a safe environment for rail users, staff and the general public. The stations would be designed in accordance with Crime Prevention Through Environmental Design (CPTED) principles. In particular, access and safety for customers getting off or joining trains and using car parks and interchanges at night has been carefully considered during the design process. Emergency help points would also be provided within the station. A safe environment would be encouraged through the following elements which have been incorporated into the design:

- Well-designed and efficiently controlled lighting systems.
- Visible CCTV surveillance.
- Appropriate staffing during operational hours.
- Clear visibility lines and use of natural light.

A key land use integration element of the project design includes optimisation of the station precincts and car park layouts to provide opportunities for active uses near stations, which helps to improve precinct safety and surveillance.

Transport – Pedestrian and bicycle access

Issue 6

Request for consideration of an underpass for pedestrians spanning Carrington Road, similar to the existing overpass at the intersection of Castle Hill Road and Pennant Hills Road, to service Showground Station.

Response 6

The design of the stations has been based on significant patronage growth over time and for rapid transit operations (ie turn-up-and-go). The needs of and impacts on pedestrians for the construction and operation phases of the project were analysed during the design process. The LINSIG analysis undertaken as part of the traffic assessment, took into account the access needs of pedestrians at key intersections. Pedestrian crossing times and resultant phasing adjustments were factored into the analysis to provide an indication of intersection operational scenarios. Based on the investigations undertaken, it is considered that grade separated access (underpath or overpass) across Carrington Road is not required. Pedestrian footpaths would be maintained along both sides of Carrington Road, with new signals incorporating pedestrian crossings to be provided at the intersection of Carrington Road and Doran Drive. Pedestrian crossings would also be provided on Middleton Avenue and the new access road off Showground Road. The provision of signalised intersections on Carrington Road is primarily associated with alleviating traffic congestion of the local road network and allowing safe access and egress for vehicles and pedestrians to Showground Station.

Property – Property value

Issue 7

Concerns regarding a decrease in property values due to commuters parking in residential streets.

Response 7

Notwithstanding the identification and provision of commuter parking at selected stations, there may, as occurs at most stations across the rail network, still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station, ie good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Planning – Future growth

Issue 8

It is clear that NWRL was planned with the purpose of bringing additional people into the region. Objection to the disregard this shows to current local residents.

Response 8

The North West of Sydney is an area of future population and jobs growth. One of the objectives of the NWRL is to support the Government's challenge to accommodate population growth in the north west by providing a significant expansion to Sydney's rail network and increasing the potential for a range of housing and employment opportunities. The long-term planning process being undertaken for the Sydney metropolitan region aims to sustainably manage growth by providing for a more compact, networked city with improved accessibility, capable of supporting more jobs, homes and lifestyle opportunities within the existing urban footprint. The NWRL would support metropolitan planning objectives by putting in place a key transport project which extends the connectivity of the existing rail network and supports growth centres in the north west.

The NWRL will improve accessibility and connectivity to strategic employment centres in the north west of Sydney, which is expected to attract an increasing number of people and in turn support investment by urban developers as well as businesses as they seek to take advantage of the increase in demands for goods and services. The project will result in positive community and business impacts in the long term.

Environment – Flora and fauna

Issue 9

While environment is mentioned, environmental impacts are not addressed satisfactorily. Castle Hill Action Group is particularly concerned regarding ecological impacts around the proposed Showground Station and the potential for major traffic and parking impacts at Ashford Avenue, Middleton Avenue and Cockayne Reserve.

Response 9

Ecological impacts were addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Impacts to the ecology of Cockayne Reserve are not anticipated to occur as a result of the NWRL project.

Section 9.5.4 of EIS 2 provides an assessment of the operational traffic around Showground Station. This analysis concludes that there would not be a significant impact to the performance of any intersection around Showground Station, provided the existing roundabouts at Middleton Avenue / Carrington Avenue and Victoria Avenue / Carrington Avenue are converted to traffic signals.

Showground Station has been designed as a park-and-ride station with the provision of 600 parking spaces. Notwithstanding, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station, ie good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Section 9.6.6 of EIS 2 provides an assessment of the construction traffic impacts around Showground Station. This analysis shows that the introduction of construction traffic would not result in a significant impact to the performance of any intersection around the Showground Station construction site.

Parking for construction workers would be provided within the boundaries of the construction site as shown on Figure 7.2 of EIS 2.

6.2.2 Robert Road Group

Communication – Consultation

Issue 1

Belief that residents around Robert Road have been given no credible reason why this bus route has been chosen and they have been unable to get responses from NWRL representatives.

Response 1

Section 9.5.2 of EIS 2 details the alternatives which were considered for bus access to and from Cherrybrook Station, including the advantages and disadvantages of all options.

Significant consultation has occurred with residents in the vicinity of Cherrybrook Station, including the Robert Road Group, with input resulting in improved outcomes for the station precinct and local residents.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 2

Belief that NWRL is not undertaking a genuine consultation, does not have regard for the impacts on residents of Robert Road, and is not listening to opinions, advice or alternatives proposed by the community.

Response 2

Significant consultation has occurred with residents in the vicinity of Cherrybrook Station, including the Robert Road Group, with input resulting in improved outcomes for the station precinct and local residents.

TfNSW has employed Place Managers to undertake consultation and be the single point of contact with the local community. Issues and suggestions raised by the local community have been considered by the wider NWRL team.

Issue 3

Comment that information from NWRL representatives has been inconsistent and incomplete, both in documentation, meetings, and Community Information Sessions.

Response 3

TfNSW has presented the local community with the latest information available at all stages of consultation.

Construction – Traffic and transport

Issue 4

Request for clarity regarding construction traffic during the period of construction at the proposed Cherrybrook Station, particularly in relation to potential impacts on Robert Road. Opposition to any impacts on Robert Road residents from light vehicles during construction.

Response 4

Construction traffic routes to and from Cherrybrook Station are detailed in Section 9.6.4 of EIS 2. The proposed construction access and egress arrangements are:

- A signalised intersection at Glenhope Road / Castle Hill Road (utilised until the permanent Robert Road access is constructed).
- Left in, left out, right out at a signalised intersection at Franklin Road (signalised for the construction period only).
- A temporary left turn slip lane and ingress driveway off Castle Hill Road to the west of Franklin Road.
- Light vehicle access and egress from Robert Road. This would become a heavy vehicle access and egress point when the permanent roadworks are complete and temporary signals at Franklin Road are removed.

Construction – Construction hours

Issue 5

Concerns regarding construction hours at the proposed Cherrybrook Station, and request for clarification from NWRL that construction hours at this site will be restricted to the Above Ground Construction Hours. Opposition to any work being undertaken outside these hours.

Response 5

In relation to Stage 2 construction, works would be required to be undertaken outside of standard daytime construction hours at Cherrybrook Station to support tunnel fit-out works as detailed in Table 7.19 of EIS 2.

Construction – Noise and vibration

Issue 6

Concerns regarding noise impacts during construction of the proposed Cherrybrook Station.

Response 6

Some Stage 2 construction activities are predicted to exceed the Noise Management Levels at Cherrybrook Station (refer to Table 10.24 in EIS 2). Table 10.48 in Chapter 10 of EIS 2 identifies mitigation measures to manage potential construction noise and vibration impacts. These are reproduced in Chapter 9 of this report.

Design – Station and stabling location

Issue 7

Comment that the station was expected to be located near Franklin Road and was not previously a concern to Robert Road residents. Request for relocation of the station as was originally proposed or within Cumberland Forest to avoid residential impacts.

Response 7

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Environment – Visual impact

Issue 8

Request for a structure utilising the Additional Construction Zone to shield Robert Road residents from visual impacts.

Response 8

The 'additional construction zone' refers to the portion of the Cherrybrook Station construction site that is required to the west of that shown in the 2008 concept plan approval. The incorporation of this area into the site was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Section 16.5.3 of EIS 2 details the visual impacts of Cherrybrook Station. In relation to Robert Road, the visual impact is assessed as minor adverse. In addition, Figure 6.11 of EIS 2 shows a landscaped area to be developed adjacent to Robert Road which would provide visual screening to the station. An additional structure within the 'additional construction zone' is not considered necessary.

Issue 9

Concerns regarding visual impacts during construction of the proposed Cherrybrook Station.

Response 9

There is likely to be visual impacts to surrounding receivers during the construction period. Table 16.8 of EIS 2 identifies mitigation measures to reduce visual impacts during the construction period. These are reproduced in Chapter 9 of this report.

Environment – Flora and fauna

Issue 10

Concerns regarding the ecological impacts of the Additional Construction Zone.

Response 10

The 'additional construction zone' refers to the portion of the Cherrybrook Station construction site that is required to the west of that shown in the 2008 concept plan approval. The incorporation of this area into the site was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's

Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 11

Request for the preservation of blue gums and other native trees that currently exist along Robert Road and Oliver Way.

Response 11

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Station planning has avoided direct impacts to the area of Blue Gum High Forest adjacent to Cherrybrook Station determined to be in good condition.

Operation – Noise and vibration

Issue 12

Concerns regarding levels of noise due to high levels of traffic on Robert Road which it is believed will exceed the noise criteria specified in the Australian Standard. Noise impacts will decrease comfort levels for residents.

Response 12

The appropriate noise criteria for road traffic noise have been determined based on the *Road Noise Policy* (DECCW, 2011). Exceedances of up to 5 dB have been predicted for road traffic noise on Robert Road during the peak periods. Mitigation measure OpNV13 in Table 10.47 of EIS 2 describes the requirement to undertake a detailed assessment of the road traffic noise impacts, including identification of mitigation measures at Cherrybrook Station during detailed design.

Issue 13

Request for a structure utilising the Additional Construction Zone to shield Robert Road residents from noise impacts.

Response 13

The noise assessment undertaken as part of EIS 2 determined that the operation of Cherrybrook Station would not result in exceedances of the relevant noise criteria at residences on Robert Road. As such, further consideration of physical noise mitigation is not warranted.

Operation – Public safety

Issue 14

Concerns increased levels of traffic will turn Robert Road into a hazardous traffic environment for residents and visitors. The hill at John Road restricts visibility for drivers, increasing the risk of a head-on collision.

Response 14

TfNSW would liaise with the relevant road authority in relation to road safety concerns arising from the NWRL.

Operation – Air quality

Issue 15

Concerns regarding levels of air quality due to high levels of traffic on Robert Road. Air quality impacts will decrease comfort levels for residents.

Response 15

Section 19.1.6 identifies the potential operational air quality impacts. Due to the location of Cherrybrook Station in close proximity to other major roadways, an increase in traffic around the station precinct would be anticipated to have a negligible impact to local air quality. Additionally, the mode shift from road to rail from the operation of NWRL would be expected to improve air quality in the region.

Operation – Traffic access route

Issue 16

Comment that there are alternative roads which would be more suitable than Robert Road which would be low cost and low impact, including Castle Hill Road, County Drive and Franklin Road. Belief that these roads are more suitable to withstand higher volumes of traffic and larger vehicles, will be safer and less hazardous, as well as being currently underutilised. Belief County Drive is the most appropriate road to have the largest amount of bus traffic.

Response 16

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Vehicular access and egress to and from Cherrybrook Station is required from Robert Road, however it is noted that the design gives priority to vehicles accessing from Castle Hill Road.

Issue 17

EIS 2 Technical Paper: Construction Traffic and Transport Management states that the intersection of County Drive and Castle Hill Road has a classification of "F". This represents the base indication of the worst case in peak traffic. Table 13 on page 33 refers to the Cherrybrook Site -Intersection Performance and indicates that the referenced intersection has a LOS of "D" and a DOS of .090 in the am, while in the pm the LoS is E and the DoS is E. The LOS Criteria for intersections is provided on Table 4 page 12 and shows the various LOS from A to F with F being the worst case scenario. Therefore the intersection is categorised as being near operating capacity not as advised as category F which is Over Capacity, unstable operation.

In addition the waiting time at the lights has a bearing on the category nominated for any particular intersection. However the point which has been overlooked at this intersection is that the count appears to be taken with the two right hand turn lanes and possibly the centre lane in mind. The left hand lane has not been taken into consideration. The left hand lane is indicating green twice during a single green mode of the right hand lanes. In short this means that the left hand lane is in the category of A, B and perhaps C which puts the left hand turn lane in the category of A= Good Operation, B =Good with acceptable delays and spare capacity, and C =Satisfactory.

This is a lot better than the original verbal advice provided to us by TfNSW where the designation of the intersection was nominated as F = Over Capacity, Unstable operation for the intersection as a whole.

Response 17

The EIS 2 Technical Paper 2 states that the intersection of Castle Hill Road / County Drive operates at capacity and with lengthy delay in the PM. The analysis suggests the addition of the construction vehicles will increase the average delay per vehicle, but the Level of Service is forecast to remain at E. This is the average for the whole intersection and does not refer to individual movements.

The left hand lane in County Drive (accommodating left turn movements from County Drive into Castle Hill Road) has been taken into account in the LINSIG traffic analysis. In peak periods this movement may not be as heavy as the right turn movement or the through movement into Highs Road. As such the individual left hand movement may have a Level of Service better than D / E for the intersection as a whole.

Issue 18

Traffic Heading East on John Road (EIS 2 Technical Paper: Construction Traffic and Transport Management)

The number of buses heading east on John Rd at morning peak is 19 and the total number of persons who caught the buses was 78 at both stops (an average of approximately four per bus). Of that number, approximately 20% drove from another area and left their car on John Rd and the afternoon stats are worse. The conclusion of the traffic study undertaken by a RTA / RMS authorised Traffic Controller is as below:-

8.1 Discussion

As mentioned, the major arguments / assumptions for using Robert Road as the main feeder road to the station seem to be that County Drive and Castle Hill roads cannot be used as the main feeder route to the station because:

a. There is a need to maintain bus stops along John Road, and
b. The intersection of County Drive and Castle Hill road is already saturated with traffic so buses cannot use County Drive.
c. Robert Road is well below its traffic capacity and can handle far more traffic.

These arguments do not stand up to analysis.

a. There is no need to maintain bus stops along John Road. Bus stop 1 is within 20 metres of County Drive and Bus stop 2 is barely used. Further Stop 2 is only 250 metres away from bus stop 1.
b. The intersection of County Drive and Castle Hill road is not saturated with traffic.
c. Robert Road is at traffic capacity and cannot handle far more traffic.

Response 18

The conclusions of the Robert Road Group traffic study are noted. There remains a need to retain bus stops along John Road in order to ensure existing and potential future patrons have good accessibility to existing and future bus services along John Road.

In relation to the intersection of County Drive and Castle Hill Road evidence from traffic counts reaffirms that the intersection is at or near capacity on the average weekday peak hours. The volume of traffic turning left from County Drive into Castle Hill Road on the NWRL survey count day in November 2011 was 38 and 25 vehicles in the AM and PM peak hours, respectively. In the AM peak hour, this left turn volume represented around 5% of the total southbound flows on County Drive. In the AM peak the percentage was around 15%.

The traffic analysis undertaken for the project is presented in Chapter 9 of EIS 2. This shows that the intersection of Castle Hill Road / Robert Road is currently operating at a level of service A, indicating Robert Road is not currently operating at capacity. Additionally, the assessment shows that this intersection would continue to operate at satisfactory levels throughout construction and operation.

Issue 19

Traffic Heading South on County Drive

1. Traffic currently heading south up County Drive to Castle Hill Road is free flowing in the mornings between John Road and Castle Hill Road. Shortly after John Road, County Drive, heading south, expands into 4 lanes as traffic approaches the intersection of County Drive and Castle Hill Road.
2. [Attached to submission: photos taken at 5 minute intervals on Wednesday 21st November 2012 7.00am to 8.00am at County Drive I Castle Hill Road Intersection.] There is not any traffic congestion turning left at the County Drive/ Castle Hill Intersection during peak period.
3. There is rarely any traffic congestion when travelling east down Castle Hill Road towards Thompson's corner, until Edward Bennett Drive. The traffic congestion occurs generally only up to Edward Bennett Drive as the congestion is created due to Thompsons Corner at West Pennant Hills.
4. County Drive and Castle Hill Road are built for the purpose of handling large volumes of traffic and large heavy vehicles. They do not have the traffic hazards and weight restrictions that the narrow suburban street of Robert Road has.
5. County Drive was originally designed as a two lane two way road with a wide median strip. County Drive was then converted into one lane each

way with the other lane being used for parking and bus stops. Should County Drive be restored to its original two lane two way road, it can carry far more traffic. As an argument, one could turn the kerb side lanes on County Drive to a bus lane, giving buses free traffic flow down County Drive.

Response 19

1. Traffic analysis and observations on site show that southbound traffic along County Drive on the approach to Castle Hill Drive is often not free flowing due to queuing back along the right turn lanes. The volume of traffic turning right from County Drive into Castle Hill Road in the AM peak on the November 2011 survey count day was approximately 600 vehicles per hour.
2. The volume of traffic turning left from County Drive into Castle Hill Road on the NWRL survey count day in November 2011 was 38 and 25 vehicles in the AM and PM peak hours, respectively. In the AM peak hour this left turn volume represented around 5% of the total southbound flows on County Drive. In the AM peak the percentage was around 15%.
3. The Robert Road Group's comment is noted.
4. It is acknowledged that Castle Hill Road and County Drive are higher order roads in terms of hierarchy and function.
5. It is acknowledged that the outer kerbside lanes of the carriageway along the section of County Drive (north of the intersection with Castle Hill Road) do not accommodate through traffic under current arrangements.

Issue 20

Review of Google Traffic management data at Country Drive / Castle Hill Intersection.

In addition to the traffic data collected, Google Maps also has an application called Google Traffic Management. It allows the user to pick any day, any time in the past to check what the conditions were in terms of traffic. Colours overlaid on the Google Maps roads correspond to the speed of traffic, with green meaning "free sailing", yellow "medium congestion", red "heavy congestion" and black refers to "a parking lot". We picked a number of days at random and checked County Drive between 6 am and 9 am. Never in all the occasions we checked relevant to peak hour, was the lane turning left at Castle Hill Road from County Drive in the red "heavy congestion" as suggested by the EIS 2. It was always green.

Turning right into Castle Hill Road varied between yellow and red. South along County Drive, as one drives out of the circle from New Line Road, a bottle neck began (red) as cars are funnelled into one lane. In the afternoon, red (congestion) is clearly seen when travelling north along County Drive as one nears the circle to turn right into New Line Road again due to the single lane restriction of County Drive. The intersection of County Drive and Castle Hill Road is not saturated with traffic.

Response 20

The traffic analysis undertaken for EIS 2 has been based on actual traffic measurements in accordance with accepted traffic engineering practice.

As indicated above the current volumes of peak hourly left turning traffic from County Drive into Castle Hill Drive don't represent a significant proportion of total southbound traffic flow in County Drive. It is acknowledged that buses or other vehicles wishing to turn left from this left lane into Castle Hill Road may not encounter delay or congestion under current conditions. The volume of traffic turning right from Castle Hill Road into County Drive on the NWRL survey count day in November 2011 was 93 and 131 vehicles in the AM and PM peak hours, respectively. Analysis and observations using this count data reaffirm that the volume of right turning traffic is such that delays occur for this movement within and external to the peak hour. Westbound buses destined for New Line Road and Dural would encounter delays when making this right turn movement, even under current conditions.

Issue 21

Robert Road is at traffic capacity and cannot handle more traffic. Adding bus routes to Robert Road is not a realistic option.

- Robert Road is a narrow road (7.5 metres wide).
- There are often cars parked on Robert Road, making the road effectively a one lane road with cars having to give way to oncoming traffic. There is a need to maintain on street parking on Robert Road, as Robert Road has four private estates each with 7 and 35 houses each, all having to use Robert Road as on street parking.
- Currently Robert Road has 120 vehicle movements per hour or one every 30 seconds.
- With the completion of Cherrybrook Station, and signalling of the intersection of Robert Road and Castle Hill Road, Robert Road traffic will increase significantly with cars "rat running" to Castle Hill Road.
- With the completion of Cherrybrook Station traffic will increase significantly with cars using it to access the station.
- Robert Road is not designed for heavy traffic movements.

Response 21

EIS 2 identified traffic management changes designed to facilitate use of Robert Road by buses. TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

A detailed operational traffic assessment is presented in Chapter 9 of EIS 2. Whilst it is acknowledged that traffic volumes would increase on Robert Road due to its role as a station access road, it is also noted that the design of the station provides priority to vehicular access off Castle Hill Road. Table 9.4 of EIS 2 shows that the intersection of Castle Hill Road / Robert Road would continue to operate at a satisfactory level of service during operation of the NWRL.

Issue 22

Request to reopen Franklin Road for commuter access to the station, reopen County Drive for two lanes of traffic each way, and widen Castle Hill Road.

Response 22

Access to Cherrybrook Station would be via Castle Hill Road, Robert Road and Franklin Road. The design of the access has given priority to vehicles from Castle Hill Road over Robert Road. Franklin Road would be opened to allow left in and left out to and from Castle Hill Road.

Issue 23

Request for an ingress lane alongside Castle Hill Road within the Additional Construction Zone, to allow traffic heading east in the direction of Thompsons Corner to easily exit Castle Hill Road and flow freely into the proposed Cherrybrook Station, without the need for traffic signals. This ingress lane would commence just after Robert Road.

Response 23

The option of an ingress lane off Castle Hill Road into the station during operation was considered and was assessed as not feasible from a road safety and traffic flow efficiency perspective.

Issue 24

Request for an additional "Right Hand Turn Only" lane on Castle Hill Road at the Glenhope Road traffic signals to manage the traffic entering the proposed Cherrybrook Station. Alternatively, create an egress lane off Castle Hill Road heading west descending under Castle Hill Road and into the proposed Cherrybrook Station, avoiding the need for further traffic signals.

Response 24

Once Cherrybrook Station is operational it is not proposed to provide for traffic access into and out of the station at the Glenhope intersection and consequently no right turn provision is proposed. A grade separated egress lane during operation is not supported because of the proximity of the station

box excavation to Castle Hill Road and to avoid private property acquisition on the opposite side of Castle Hill Road.

Issue 25

Suggestion to utilise a roundabout for residents returning home along Franklin Road.

Response 25

The proposed intersection of the station access road and Franklin Road would allow all movements, negating the need for a roundabout.

Issue 26

Suggestion for traffic lights at the east end of the proposed Cherrybrook Station turning right onto Franklin Road, to allow vehicles to turn either left or right onto Castle Hill Road.

Response 26

Providing traffic lights at Franklin Road during operation would result in three sets of traffic lights in close proximity along Castle Hill Road, resulting in potential delays and long queue lengths and is not proposed.

Property – Property damage

Issue 27

Concerns regarding damage to property foundations as a result of construction works at the proposed Cherrybrook Station. Request for NWRL to fund the repair of any damage caused.

Response 27

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (conditions E26 to E31).

Property – Property condition surveys

Issue 28

Request for property condition surveys funded by NWRL to be conducted before the commencement of construction of the proposed Cherrybrook Station. This would involve an independent expert assessing and reporting on the foundations of the properties during and post construction.

Response 28

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (conditions E26 to E31).

Property – Property value

Issue 29

Objection to traffic impacts on Robert Road as it is believed this will have a negative impact in excess of 30% on property values for residents. This reduction in property value will reduce quality of life.

Response 29

Based on experience around other rail stations within Sydney and elsewhere, the proximity to a rail station would be anticipated to have a positive impact on property prices over the long term.

Transport – Bus integration

Issue 30

Suggestion that commuters catch the bus from County Drive, alleviating the need for buses to turn left onto John Road.

Response 30

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 31

Suggestion to construct a buses only right hand lane off Franklin Road and back onto Castle Hill Road for entry and exit from the proposed Cherrybrook Station to prevent traffic build up and keep Franklin Road safer for school students at Tangara and residents of Inala.

Response 31

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Transport – Parking availability

Issue 32

Comment that street parking along Robert Road is crucial for residents due to the lack of off-street parking for residents in the area. Parking hours should be restricted for non-residents and the parking station at the proposed Cherrybrook Station should be free to encourage commuter use and avoid parking in residential streets.

Response 32

Notwithstanding the identification and provision of commuter parking at selected stations, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station ie, good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Four hundred park and ride spaces within the Cherrybrook Station precinct would be provided free of charge.

Issue 33

Request for a structure utilising the Additional Construction Zone to incorporate additional parking at the proposed Cherrybrook Station.

Response 33

The provision of 400 park-and-ride spaces at Cherrybrook Station has been determined based on forecast demand. Provision of additional parking within the station precinct could discourage a mode shift to alternative access modes to the station such as walking, cycling and bus.

Issue 34

Request for clarity regarding construction vehicle parking during the period of construction at the proposed Cherrybrook Station, particularly in relation to potential impacts on Robert Road.

Response 34

Construction worker parking would be provided within the construction site. Mitigation measure T10 in Table 9.25 of EIS 2 identifies the consideration of the need for, and provision of, remote parking location and shuttle bus transfers for construction sites where sufficient parking cannot be provided within site boundaries.

Transport – Kiss-and-ride

Issue 35

Suggestion for a kiss-and-ride zone at Franklin Road.

Response 35

A kiss-and-ride zone would be provided within the station precinct in close proximity to the station entry point. This is consistent with the station access hierarchy of providing kiss-and-ride access closer to the station entry than park-and-ride.

Transport – Pedestrian and bicycle access

Issue 36

Request for a structure utilising the Additional Construction Zone to incorporate easy access into the proposed Cherrybrook Station.

Response 36

Pedestrian access to Cherrybrook Station is provided along footpaths from Robert Road to the station entry plaza as detailed in Figure 6.12 of EIS 2.

Issue 37

Submission to the Stage 1 Major Civil Construction Works EIS was attached to the respondent's submission. Concerns raised that issues were not adequately addressed.

Response 37

Matters raised in the submission to Stage 1 Major Civil Construction Works EIS were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

6.2.3 Robert Road Residents Group

Note: In November 2012 a revised end state scheme for the Cherrybrook Station precinct (prepared by local residents) was tabled and discussed at a meeting with a number of residents of Robert Road. That revised scheme was assessed as part of the preparation of this
Submissions Report.

Property – Property value

Issue 1

Regardless of whether or not Robert Road is converted into a main access road into Cherrybrook Station, these residents will have immediate, substantial diminution of their property values due to Robert Road being converted to a main road and the location of the main entrance into Cherrybrook Station being situated directly across the road from their properties.

Response 1

Based on experience around other rail stations within Sydney and elsewhere, the proximity to a rail station would be anticipated to have a positive impact on property prices over the long term.

Issue 2

Residents of Robert Road bought into Robert Road on the basis that the road would continue to be a low traffic street with close proximity to the upcoming Franklin Road Railway Station. Consequently, they have paid market value based on these factors.

Response 2

Based on experience around other rail stations within Sydney and elsewhere, the proximity to a rail station would be anticipated to have a positive impact on property prices over the long term.

Issue 3

Residents of Robert Road have made decisions not to sell their property on the basis that the road would be a low traffic street with close proximity to the upcoming Franklin Road Railway Station.

Response 3

Based on experience around other rail stations within Sydney and elsewhere, the proximity to a rail station would be anticipated to have a positive impact on property prices over the long term.

Issue 4

Creating a cul-de-sac and maintaining Robert Road in its current form would avoid diminution in the value of many properties in Robert Road and its surrounding streets.

Response 4

Based on experience around other rail stations within Sydney and elsewhere, the proximity to a rail station would be anticipated to have a positive impact on property prices over the long term.

Robert Road provides an important access road to Cherrybrook Station for residents from the north. Closure of Robert Road would result in broader traffic and access implications for the surrounding area.

Design – Station design

Issue 5

The Cherrybrook Station Precinct will be located directly across the road from these residents' properties. The proposed protection of these homes, which will be most impacted by the Cherrybrook Station precinct is inadequate and chaotic.

Response 5

EIS 2 provides a range of mitigation measures to manage impacts on adjacent residential properties during operation of the NWRL. These mitigation measures are reproduced in Chapter 9 of this report.

Design – Alternatives

Issue 6

The Robert Road Residents propose that County Drive and Castle Hill Road be used as the access road into Cherrybrook Station versus Robert Road.

Response 6

Access to the station would be provided via Castle Hill Road, Franklin Road and Robert Road. The station precinct has been designed to give priority to access via County Drive and Castle Hill Road over Robert Road.

Issue 7

The Robert Road Residents suggest removing the proposed island of trees directly out the front of 1 Robert Road (shown in Appendix to submission).

Response 7

The landscaped area has been designed to provide visual screening to the station precinct. The final treatment of this area would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 8

The Robert Road Residents suggest extending the proposed cul-de-sac road to allow vehicular access for the houses of 210 Castle Hill Road (also referred to as 1c Robert Road) and 1b, 1, 1a, 1/3, 2/3 and 3/3 Robert Road into and out of the cul-de-sac (shown in Appendix to submission).

Response 8

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 9

The Robert Road Residents propose creating a vehicle entry / exit point into / out of the cul-de-sac road as far north east of 1/3 Robert Road as possible (shown in Appendix to submission).

Response 9

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 10

The Robert Road Residents propose moving the portion of Robert Road proposed by NWRL as the entry point into the Cherrybrook Station spine road, as far east as possible (shown in Appendix to submission).

Response 10

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents. Moving Robert Road east at this point would require additional property acquisition and would result in an unsatisfactory road alignment.

Issue 11

The Robert Road Residents propose that NWRL acquire the vacant block situated at 8 Robert Road. The purchase of this property would allow the portion of Robert Road proposed by NWRL as the entry point into the Cherrybrook Station spine road, to be shifted further east at an earlier point than what has been proposed (shown in Appendix to submission).

Response 11

Additional property acquisition is not required for the station precinct. The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 12

The Robert Road Residents propose that NWRL acquire the vacant block situated at 8 Robert Road to allow 5 Robert Road to become part of the cul-de-sac (shown in Appendix to submission).

Response 12

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 13

The Robert Road Residents propose that NWRL acquire the vacant block situated at 8 Robert Road to allow the driveway at 5 Robert Road to be shifted from the north side of the frontage to the south side of the frontage to allow it to become part of the cul-de-sac.

Response 13

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 14

The Robert Road Residents believe acquisition of the vacant block situated at 8 Robert Road by NWRL will provide the following advantages for The Robert Road Residents:

1. Creates sufficient continuous shield / buffer from acoustic and visual disturbances for the houses most affected by the Cherrybrook Station.
2. Allows safe exit for the houses situated at 1/3, 2/3, 3/3, la and 5 Robert Road (where the vacant block situated at 8 Robert Road is able to be purchased by NWRL) as under NWRL's proposal, cars exiting these houses will be required to back out of their properties onto the main road, given there is no turning room on the shared driveway. Under the proposal (shown in Appendix to submission) cars will be able to back out into the cul-de-sac and approach the entry / exit in a forward facing direction.
3. Allows The Robert Road Residents to enter Robert Road from the cul-de-sac road, at a point further away from the intersection between the proposed spine road and Robert Road, thereby reducing the chance of accidents.
4. Allows a nominal amount of on-street parking.

Response 14

Additional property acquisition is not required for the station precinct. The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 15

The proposal for NWRL to purchase the vacant block at 8 Robert Road provides a satisfactory outcome for The Robert Road Residents, providing protection from Cherrybrook Station Precinct but with a negligible variation to the plans proposed in EIS 2. The 3 dimensional model displayed at the Community Information Sessions on 8 November at Castle Hill and 10 November at Cherrybrook Uniting Church, largely mirrors The Robert Road Residents' proposal (shown as Appendix to submission).

Response 15

The proposed arrangements presented in EIS 2 provide appropriate access to all properties. The final access arrangements would be determined during the detailed design phase in consultation with RMS, Hornsby Shire Council and local residents.

Issue 16

The Robert Road Residents propose that Robert Road be converted into a cul-de-sac (shown as Appendix to submission) based on the following:

1. There is no requirement to use Robert Road heading south as an access point into the Cherrybrook Station Precinct.
2. The creation of a cul-de-sac would avoid the build-up of traffic and potential accidents in a local street that has not been built to be utilised as a main road.

Response 16

Robert Road provides a key access point to the station from the north, however it is noted that the design has given priority to access off Castle Hill Road in order to reduce "rat-running" via Robert Road.

Construction – Noise and vibration

Issue 17

The Robert Road Residents will have work carried out across the road from their homes for the next 5-6 years (Stage 1) and therefore request that NWRL provide the greatest protection possible to each home.

Response 17

EIS 1, EIS 2 and the Construction Environmental Management Framework (Appendix B of EIS 2) identify mitigation measures to manage impacts to adjacent residents during the construction period.

Issue 18

In Stage 2, the Robert Road Residents will face an Additional Construction Zone situated across the road from their homes for the construction of the main entrance of Cherrybrook Station. Request for NWRL to provide the greatest form of protection possible to each of the homes of The Robert Road Residents.

Response 18

The 'additional construction zone' refers to the portion of the Cherrybrook Station construction site that is required to the west of that shown in the 2008 concept plan approval. The incorporation of this area into the site was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1, EIS 2 and the Construction Environmental Management Framework (Appendix B of EIS 2) identify mitigation measures to manage impacts to adjacent residents during the construction period.

Issue 19

Proposal to create a continuous shield / buffer zone of high density trees to the maximum depth possible, east of the cul-de-sac road, to provide the residents at 210 Castle Hill Road and 1b, 1, 1a, 1/3, 2/3 and 3/3 the maximum protection from acoustic disturbance possible (shown in Appendix to submission). The Robert Road Residents propose the height and density of the trees provide the highest level of acoustic protection possible. Planting the trees early in the construction phase would allow the trees to mature and therefore protect the properties as much as possible from acoustic disturbances during construction.

Response 19

EIS 1 and EIS 2 identify a number of noise mitigation measures to be implemented during construction to reduce impacts to adjacent residential receivers It is noted that a vegetated buffer would be expected to provide minimal noise attenuation.

Issue 20

Proposal by The Robert Road Residents to create a shield of high density trees in front of 1/3 and 5 Robert Road to the maximum depth to allow as much protection from acoustic disturbance to these houses as possible (shown in Appendix to submission).

Response 20

EIS 1 and EIS 2 identify a number of noise mitigation measures to be implemented during construction to reduce impacts to adjacent residential receivers. It is also noted that a vegetated buffer would be expected to provide minimal noise attenuation.

Issue 21

Proposal by The Robert Road Residents to create a residential acoustic wall on the eastern side of the continuous shield of trees (shown in Appendix to submission. Examples of residential acoustic walls attached to submission). Proposal that this wall be installed prior to the commencement of the construction phase.

Response 21

EIS 1 and EIS 2 identify a number of noise mitigation measures to be implemented during construction to reduce impacts to adjacent residential receivers.

Issue 22

Request that double glazing and insulation be installed for the homes of each of the residents prior to the commencement of the construction phase to allow noise protection during and post construction.

Response 22

Based on the noise modelling and assessment undertaken, EIS 1 and EIS 2 identify a number of noise mitigation measures to be implemented during construction to reduce impacts to adjacent residential receivers. At this stage, individual property treatments are not considered necessary. However, the Construction Noise and Vibration Management Strategy would allow for this type of mitigation if feasible and reasonable.

Transport – Parking availability

Issue 23

Proposal to create "Residents Only" parking in the proposed cul-de-sac.

Response 23

This is a matter for local council.

Issue 24

As restricted parking is proposed outside The Robert Road Residents' homes during the construction phase, the southern end of Robert Road should be closed off prior to the commencement of construction.

Response 24

During construction it would be necessary to remove on-street parking on Robert Road from Castle Hill Road to the northern extent of the site.

Issue 25

Proposal that the cul-de-sac road be constructed prior to the commencement of the construction phase in order to maintain a nominal amount of on street parking during construction.

Response 25

During construction it would be necessary to remove on-street parking from Robert Road from Castle Hill Road to the northern extent of the site.

Issue 26

On street parking is imperative throughout Robert Road given the number of houses and community estates that have limited off street parking. EIS 2 proposes to remove on street parking from Robert Road. Residents and their guests will be forced to park in Dalkeith Road. Given the current number of residents parking on Robert Road (particularly in the evenings and on weekends), this may result in Dalkeith Road effectively becoming a one lane street. Cars attempting to exit Dalkeith Road onto Robert Road simultaneously with cars attempting to enter Dalkeith Road from Robert Road will result in a bank up of cars on Robert Road.

Response 26

The requirement to remove on-street parking along Robert Road relates to providing sufficient width for safe vehicular operations. TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 27

If heading south up Robert Road was accepted by NWRL as not becoming an access road into Cherrybrook Station Precinct, in our view, it is imperative that this street does not become a parking facility for commuters using Cherrybrook Railway Station. To ensure this does not occur, we propose that there be restricted parking of up to 3 hours on Robert Road, with the exception of residents.

Response 27

Notwithstanding the identification and provision of commuter parking at selected stations, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station, ie good pedestrian and cycling links, adequate bike parking at stations and frequent and direct bus services from the surrounding residential areas.

These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Issue 28

The Robert Road Residents propose that parking within Cherrybrook Station Precinct is free to encourage commuters to use the designated parking area.

Response 28

Four hundred park and ride spaces within the Cherrybrook Station precinct would be provided free of charge.

Operation – Traffic access route

Issue 29

The Robert Road Residents believe that Robert Road should not be used as a main road into Cherrybrook Station.

Response 29

Whilst access to Cherrybrook Station is proposed from Robert Road, the access arrangements have been designed to give priority access to vehicles from Castle Hill Road.

Issue 30

Robert Road is currently designed to accommodate low level traffic for local residents. Users of Robert Road appreciate the caution required when navigating the road, including the need to give way to oncoming traffic. (Photos of traffic / movements / parking included in submission). Any further traffic along this road will increase the likelihood of head on collisions.

Response 30

Whilst access to Cherrybrook Station is proposed from Robert Road, the access arrangements have been designed to give priority access to vehicles from Castle Hill Road.

Issue 31

All residents occupying the section east of Franklin Road have no option but to pass through Franklin Road or Castle Hill Road in order to access the Cherrybrook Station Precinct, whether travelling by public transport or otherwise. Therefore, access to the station would be via one of these roads. Where access is gained from Castle Hill Road, The Robert Road Residents propose that transport would enter the station at the proposed Robert Road traffic lights (shown as Appendix to submission).

Response 31

Whilst access to Cherrybrook Station is proposed from Robert Road, the access arrangements have been designed to give priority access to vehicles from Castle Hill Road.

Issue 32

Non-local residents occupying areas north of New Line Road and areas west of County Drive have no option but to pass through County Drive in order to access the Cherrybrook Station Precinct, whether travelling by public transport or otherwise. With the exception of buses travelling along John Road to Franklin Road, there is no requirement to put any further strain on the small local roads east of County Drive (shown as Appendix to submission).

The Robert Road Residents propose a low impact / low cost option. That is, all transport would continue to flow through County Drive and left onto Castle Hill Road to then access the station at the proposed Robert Road traffic lights (shown as Appendix to submission). In this way, County Drive would continue to be utilised for the purpose it was intended as more fully described by the then Castle Hill MP, Michael Richardson (document attached in submission). As local residents, we can confirm that during the morning peak hour traffic, the traffic heading south on County Drive towards Castle Hill Road is minimal and free flowing. The result is that County Drive, in this direction, is currently underutilised and is able to take significantly more traffic than it currently does.

Response 32

Whilst access to Cherrybrook Station is proposed from Robert Road, the access arrangements have been designed to give priority access to vehicles from Castle Hill Road.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Operation – Traffic impacts / volume

Issue 33

In approximately 5-6 years' time, when the NWRL is completed, a significant increase in traffic is anticipated on the following roads:

- Traffic heading south up County Drive between John Road and Castle Hill Road.
- Traffic heading east on Castle Hill Road between County Drive and Robert Road.

To avoid buses being caught in this anticipated traffic, EIS 2 proposes that buses run left off County Drive into John Road and then right into Robert Road.

The Robert Road Residents respond as follows:

a. County Drive and Castle Hill Road are built for the purpose of handling large volumes of traffic and large heavy vehicles (ie buses). They do not have the traffic hazards and weight restrictions that the narrow suburban street of Robert Road has.
b. EIS 2 effectively suggests that Robert Road is better equipped than County Drive and Castle Hill Road to handle large volumes of traffic and large heavy vehicles. This solution appears to be a high cost / high impact solution against the use of existing main roads, being a low cost / low impact solution.
c. Traffic currently heading south up County Drive to Castle Hill Road is free flowing in the mornings between John Road and Castle Hill Road. Shortly after John Road, County Drive, heading south, expands into 4 lanes as traffic approaches the intersection of County Drive and Castle Hill Road.
d. There is rarely any traffic congestion when travelling east down Castle Hill Road towards Thompson's Corner, until Edward Bennett Drive. The traffic congestion occurs generally only up to Edward Bennett Drive as the congestion is created due to Thompsons Corner at West Pennant Hills.
e. As per 8.1.3 of the technical paper in EIS 2, the NWRL expects small volumes of traffic to be generated from the West Pennant Hills Valley to the south of Cherrybrook Station. Facing east down Castle Hill Road from Old Northern Road, there are no streets on the left hand side of the road which are able to access Castle Hill Road between County Drive and Old Northern Road. Therefore, it appears that the only potential for an increase in traffic heading east down Castle Hill Road would be generated from Old Northern Road, Castle Hill. The Robert Road Residents believe that an increase in traffic heading east from Old Northern Road is unlikely to occur given that Castle Hill Station would be significantly closer to this traffic than Cherrybrook Station. Further, any cars heading east on Castle Hill Road which would be dropping passengers to the Cherrybrook Station on their way to the city in 6 years' time would presumably already be part of the current traffic heading east along Castle Hill Road. As mentioned in bullet point c. above, this current traffic is minimal up to Edward Bennett Drive.
f. As per the video footage recorded by INCO traffic management (which can be accessed via the website www.saverobertroad.com), during the morning peak hours, it seems that there is minimal volume of traffic queuing in the left hand turning lane on County Drive turning east onto Castle Hill Road at the intersection of County Drive and Castle Hill Road. Also during the morning peak hours, it can be seen that traffic heading east on Castle Hill Road is free flowing.
g. It follows from bullet point e. and f. above that these roads would appear to be able to take significantly more traffic both now and in 6 years' time.

Response 33

A detailed assessment of operational traffic is presented in Chapter 9 of EIS 2. EIS 2 acknowledges that there would be increased traffic volumes on roads in the immediate vicinity of station precincts. In relation to Cherrybrook Station, Table 9.4 of EIS 2 presents the operational intersection performance. This shows the introduction of the NWRL would not result in a significant change to the performance of any intersections around the station.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Operation – Public safety

Issue 34

As traffic enters Robert Road from John Road, drivers travel up the crest of a steep hill which forms the beginning of Robert Road. This hill restricts the visibility for drivers to see oncoming cars travelling in the opposite direction down Robert Road towards John Road. Further, cars travelling down John Road turning left into Robert Road have absolutely no visibility until such time as they have turned into Robert Road, which gives them little time to adjust for oncoming cars coming over the crest of the hill. Equally, the visibility of drivers travelling down Robert Road towards John Road, to see cars travelling up the hill on Robert Road (coming off John Road}, is also poor. To introduce any further traffic to this intersection will increase the likelihood of head on collisions. The introduction of buses in this section will not only be impractical and more than likely not possible to achieve, it will almost certainly result in head on collisions. (Photos of traffic at intersection of Robert Road and John Road included in submission).

Response 34

A detailed assessment of operational traffic is presented in Chapter 9 of EIS 2. EIS 2 acknowledges that there would be increased traffic volumes on roads in the immediate vicinity of station precincts. Robert Road is designed for two way traffic movement.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 35

The introduction of buses along any part of Robert Road, including entering and exiting Robert Road from John Road, will be impractical and more than likely not possible to achieve, it will almost certainly result in head on collisions. (Photos included in the submission.)

Response 35

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Environment – Visual impact

Issue 36

Proposal by The Robert Road Residents to create a continuous shield/buffer zone of high density trees to the maximum depth possible, east of the cul-de-sac road, to provide the residents at 210 Castle Hill Road and 1b, 1, 1a, 1/3, 2/3 and 3/3 the maximum protection from visual disturbance possible (shown in Appendix to submission). The Robert Road Residents propose that the height and density of the trees provide the highest level of visual protection possible. Planting early in the construction phase would allow trees to mature and to act as a genuine visual buffer during the construction phase.

Response 36

The station precinct drawing (Figure 6.11 of EIS 2) identifies a landscaped buffer between Robert Road and the station precinct. The final treatment of this area would be determined during the detailed design phase.

Issue 37

Proposal by The Robert Road Residents to create a shield of high density trees in front of 1/3 and 5 Robert Road to the maximum depth to allow as much protection from visual disturbance to these houses as possible (shown in Appendix to submission).

Response 37

The station precinct drawing (Figure 6.11 of EIS 2) identifies a landscaped buffer between Robert Road and the station precinct. The final treatment of this area would be determined during the detailed design phase.

Transport – Bus integration

Issue 38

EIS 2 suggests that if the NWRL adopted the proposal of: *"Buses to head south on County Drive and continue up towards Castle Hill Road, turn left into Castle Hill Road and head east towards the Cherrybrook Station INSTEAD OF the EIS 2 proposal of buses to head south on County Drive, turn left into John Road and right into Robert Road and head south up Robert Road into the Cherrybrook Station",* this would mean that those residents on John Road and Franklin Road would now not be able to catch the bus to the city, unless a second set of buses and bus routes were established.

In response, The Robert Road Residents propose that:

- Those commuters currently catching a bus into the city would not choose to have their bus now detour through Cherrybrook Station, given that they have chosen to catch a bus into the city rather than a train.
- Existing bus routes to the city should remain as is, and a separate shuttle bus/bus route be established for commuters within the Cherrybrook Station catchment area for the sole purpose of transport to and from the Cherrybrook Station. This would be consistent with the opportunity noted in 8.1.5 of the technical paper of EIS 2 for the West Pennant Hills Valley to have a shuttle bus service. This would enable County Drive and Castle Hill Rd to easily handle any additional buses transporting commuters to the station, south up County Drive and east along Castle Hill Road into the Cherrybrook Railway Station.

If NWRL deemed it imperative to have existing city buses pass through Cherrybrook Station, The Robert Road Residents comment as follows:

- The proposal in EIS 2 of running buses south on County Drive, left into John Road and right into Robert Road, is intended to capture commuters to and from the city who are currently using the bus stops on John Road between County Drive and Robert Road (Captured Bus Stops).
- The Captured Bus Stops total 2 (1 heading east to the city and 1 heading west returning from the city) and are situated on either side of John Road. Further, these bus stops are situated approximately 50 metres east of County Drive.
- The average number of commuters (as recorded in the report prepared by INCO traffic management which can be accessed via the website www.saverobertroad.com) boarding the bus to the city from the east bound Captured Bus Stop on any one day during morning peak hours is 58. Of these 58 commuters, 6 drive to the bus stop leaving 52 commuters who walk.
- As a result, the NWRL proposal to convert Robert Road into a main access road and affect the lives/value of properties of some 265 residents weighed against 52 commuters per day walking an additional 50 metres to County Drive to access the County Drive bus stop, would seem inequitable.

Response 38

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

6.2.4 Kayla Way NWRL Action Group

Construction – Air quality

Issue 1

The issue of dust has not been adequately addressed in EIS 2. The air quality around Cherrybrook Station and the health of surrounding residents will be severely affected if adequate measures are not taken. Dust will accumulate in external air conditioning units causing them to malfunction. Dust from construction will accumulate on the external surfaces of the surrounding houses and affect their appearance. Request for filters for external air conditioning units, compensation for the cost of energy required to run air conditioning units (to prevent dust from entering homes with windows open) and regular house wash services for neighbouring properties. Request for 50 metre wide vegetation buffer to reduce the amount of dust that reaches surrounding houses.

Response 1

Chapter 19 of EIS 2 provides an assessment of potential air quality and dust impacts associated with Stage 2 construction activities. Table 19.4 of EIS 2 provides a range of mitigation measures to manage these potential impacts and minimise dust during construction. These are reproduced in Chapter 9 of this report.

Wherever feasible, vegetation along the boundary of the construction sites would be maintained to provide visual screening adjacent to receivers.

Potential dust impacts were also addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 2

Any fuel stored near the Northern boundary of Cherrybrook Station will cause toxic vapours to permeate the air adjacent to the site. If there is a fire, nearby residence will be severely affected by the smoke. Request for any fuel storages areas to be relocated at least 100 metres away from nearby residences.

Response 2

Fuel storage would be undertaken in accordance with relevant materials handling procedures and EPA requirements. This would include storage and bunding, adequate signage and regular maintenance as appropriate.

Construction – Business impacts

Issue 3

There will be prolonged construction impacts to local businesses due to changes in accessibility, noise and traffic as a result of Cherrybrook Station. In particular, the Cherrybrook Music Studio (private music studio) operating at 2 Kayla Way will be impacted. Adequate compensation and mitigation for loss of business due to the prolonged impacts eg sound proofing, double glazed windows or other appropriate property treatments.

Response 3

EIS 2 identifies a range of mitigation measures to reduce potential impacts associated with noise and vibration, construction traffic, accessibility and other aspects affected local businesses. These mitigation measures are reproduced in Chapter 9 of this report.

As residences on Kayla Way are predicted to be "highly noise affected" (ie construction noise modeling predicts exceedances of the relevant noise management level of greater than 20 dB) during construction of the adjacent car park consideration would be given to applying additional feasible and reasonable mitigation measures such as respite periods, alternative accommodation or property treatments as per the Construction Noise and Vibration Strategy. Mitigation measures in the Construction Noise and Vibration Strategy would be aimed at pro-active engagement with affected sensitive receivers including those in Kayla Way.

Construction – Sites / compounds

Issue 4

The location of the Cherrybrook Station construction office and facilities adjacent to Kayla Way is an example where the amenity of nearby residences has not been considered in the design of the station precinct. Impacts will include noise from office areas and odour from toilet facilities. Request for these facilities to be moved away from the North East Boundary. Air conditioning units should be placed on the Castle Hill Road side of the buildings. A 50 metre vegetation buffer should be placed between the Kayla Way boundary and nearest construction building to minimise impacts.

Response 4

Construction office facilities are not expected to be a major noise generating activity within the construction site compared to the operation of construction equipment and machinery. The site has been designed to locate less noise intensive activities, such as site offices close to residential receivers.

Wherever feasible, vegetation along the boundary of the construction sites would be maintained to provide visual screening adjacent receivers. However, it is noted that a vegetative buffer would be expected to provide minimal noise attenuation benefits.

Table 10.48 of EIS 2 identifies a range of noise and vibration mitigation measures to be implemented during construction, including provision of a six metre high noise barrier at Cherrybrook Station.

Issue 5

If there is limited onsite parking at Cherrybrook Station during construction, where will visitors and workers park? Kayla Way residents demand that NWRL provide restriction measures / signage to prevent site workers parking in surrounding streets.

Response 5

Parking for construction workers would be provided within the Cherrybrook Station construction site as shown on Figure 7.6 in EIS 2. Mitigation measure T10 in Table 9.25 of EIS 2 identifies the consideration of the need for, and provision of, remote parking location and shuttle bus transfers for construction sites where sufficient parking cannot be provided within site boundaries.

Construction – Heavy vehicle movements

Issue 6

What measures will be taken to ensure heavy vehicle movements around Cherrybrook Station will not impact Kayla Way and Franklin Road?

Response 6

The proposed heavy vehicle routes to and from the Cherrybrook Station construction site are mainly along Castle Hill Road (as shown in Figure 9.11 in EIS 2). Minor sections of both Robert Road and Franklin Road, close to Castle Hill Road, would also be utilised. Construction traffic routes are not proposed along the length of Franklin Road past Kayla Way.

Construction – Noise and vibration

Issue 7

Noise levels during the construction of the proposed Cherrybrook Station 60 space car park have been exceeded by more than 20 dBA. Why is the car park there in the first place? The 4 – 5 metre narrow buffer will not be enough to mitigate the noise impacts from the car park. Suggestion to relocate the car park to be adjacent to the proposed multi-level park and ride car park and include a 50 metre buffer vegetation buffer between Kayla Way fence and nearest station building (Proposed Precinct Plan attached to submission).

Response 7

The location of the at grade 60 space car park at Cherrybrook Station was selected as it provides a convenient alternative to the multi-storey car park, and would act as an overflow car park.

Table 10.48 of EIS 2 identifies a range of mitigation measures which would be implemented during construction to reduce the potential impacts associated with noise and vibration. These mitigation measures are reproduced in Chapter 9 of this report.

As residences on Kayla Way are predicted to be "highly noise affected" (ie construction noise modeling predicts exceedances of the relevant noise management level of greater than 20 dB) during construction of the adjacent car park, consideration would be given to applying additional feasible and reasonable mitigation measures such as respite periods, alternative accommodation or property treatments as per the Construction Noise and Vibration Strategy. Mitigation measures in the Construction Noise and Vibration Strategy would be aimed at pro-active engagement with affected sensitive receivers including those in Kayla Way.

Wherever feasible, vegetation along the boundary of the construction sites would be maintained to provide visual screening to adjacent receivers. However, it is noted that a vegetative buffer would be expected to provide minimal noise attenuation benefits.

Issue 8

During vibratory roller activities at the Cherrybrook Station car park sites, vibration may be experienced at the nearest residential receivers. On the basis that the nearest residential buildings are approximately 15 metres from the proposed car park areas, vibration levels are anticipated to remain well below the safe vibration levels associated with minor cosmetic building damage. This 15 metre basis reference is incorrect. The scale on the station precinct diagram seems to suggest a distance of 4 – 5 metres from the car park. Suggest relocating the car park to be adjacent to the proposed multi-level park and ride car park, and include a 50 metres buffer vegetation buffer between the Kayla Way fence and the nearest station building (Proposed Precinct Plan attached to submission).

Response 8

During vibratory roller activities at the Cherrybrook Station car park sites, vibration levels may be perceptible at the nearest residential receivers.

The proposed at-grade car park is partly located approximately 5 metres from the nearest residential buildings. However, safe working distances can still be achieved with the use of smaller equipment, as described in Section 3.3 of the Construction Noise and Vibration Strategy.

Wherever feasible, vegetation along the boundary of the construction sites would be maintained to provide visual screening adjacent to receivers. However, it is noted that a vegetative buffer would be expected to provide minimal noise attenuation benefits.

Issue 9

Concern that noise barriers (six metres) to be installed around Cherrybrook Station will block natural light at surrounding residences. If this is the case, need another strategy to allow natural light through with as many trees as possible (preferably a 50 metre vegetation buffer zone on the northern boundary).

Response 9

The location of noise barriers to the south west of residences on Kayla Way may result in some blocking of direct natural light. It should be noted, however, that the noise wall is required to reduce the potential impacts associated with construction noise, especially from night time construction works required as part of Stage 1 construction (assessed as part of EIS 1 Major Civil Construction Works).

Wherever feasible, vegetation along the boundary of the construction sites would be maintained to provide visual screening to adjacent receivers, however a width of 50 metres at Cherrybrook Station would not be feasible.

Issue 10

Pumps and water treatment plants to operate 24 hours a day at Cherrybrook Station are too close to residential properties. How can aiming to keep the *"combined noise from this equipment…to not exceed the rating background level at nearest residential receiver be guaranteed"?* Suggestion to move noise generating buildings like the water treatment plant away from residential areas.

Response 10

Pumps and water treatment have been located at the lowest point on the site and adjacent to a waterway to allow effective treatment and disposal of tunnel water and stormwater from the construction site. Pumps and water treatment machinery are not highly noise intensive equipment and potential noise impacts from these items on Kayla Way residents can be effectively mitigated.

Construction – Spoil and waste management

Issue 11

A low concentration of lead was reported east of Cherrybrook Station. Further delineation and / or waste classification may be required if excavation and offsite disposal of soil is to take place in this area, during the construction of Cherrybrook Station. Surrounding soil may become contaminated if this lead travels either in the form of stormwater run-off or lead dust. TfNSW to outline measures to deal with the contaminated soil and prevent it from reaching the environment.

Response 11

Table 8.3 of EIS 2 commits to further delineation and / or waste classification of material at Cherrybrook Station during construction if excavation and offsite disposal of soil is to take place in this area.

Table 8.7 of EIS 2 identifies a range of mitigation measures relating to contamination, including appropriate management of known and unknown contaminated soils. These are reproduced in Chapter 9 of this report.

Construction – Access

Issue 12

Franklin Road and Robert Road should be closed off to all vehicular traffic (upon construction commencement and permanently), all entry and exit to the station should be via Castle Hill Road.

Response 12

During construction, the major heavy vehicle routes and access / egress points to and from the site would be along Castle Hill Road (as shown on Figure 7.6 of EIS 2).

During operations, access and egress points are proposed from both Robert and Franklin Road, however it is noted that the design of the site provides priority for vehicles accessing the site from Castle Hill Road (as shown on Figure 6.11 of EIS 2). The closing of Franklin Road or Robert Road to all vehicular access from Castle Hill Road would result in greater traffic impacts and potentially traffic safety implications on Castle Hill Road.

In relation to operational bus access, TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Construction – Surface water and flooding

Issue 13

Without adequate mitigation measures, water run-off from the station precinct could affect nearby residences during construction phase. Adequate measures should be taken to prevent surface run-off entering the adjoining backyards and a well maintained vegetation buffer will assist in filtering any contaminants.

Response 13

Table 18.9 of EIS 2 identifies a range of mitigation measures in relation to surface water management which would be implemented during construction. These mitigation measures are reproduced in Chapter 9 of this report.

NWRL Principal Construction Contractors will develop and implement a Soil and Water Management Plan for their scope of works as required by Section 15 of the Construction Environment Management Framework (Appendix B of EIS 2). NWRL Principal Construction Contractors would also develop and implement progressive erosion and sediment control plans (ESCPs) for all active worksites in accordance with *Managing Urban Stormwater: Soils & Construction Volume 1* (Landcom, 2004) (known as the "Blue Book").

Construction – Cumulative impacts

Issue 14

There will be prolonged (2013-2016) cumulative impacts (noise, air quality, traffic, health/mental) on Kayla Way residents due to the construction of Cherrybrook Station. Kayla Way residents demand adequate compensation for the six years of enduring these cumulative impacts.

Response 14

The potential impacts have been assessed as part of EIS 1 and EIS 2. Additionally, Chapter 20 of EIS 2 provides an assessment of the internal cumulative impacts of the NWRL, ie the cumulative impacts of the combined Stage 1 and Stage 2 construction.

EIS 1 and EIS 2 identify a range of mitigation measures for environmental aspects in order to minimise and manage the potential impacts throughout the construction period.

Construction – Light spill

Issue 15

Light spill from construction of the 60 space car park at Cherrybrook Station will impact surrounding residents. The 4 - 5 metre narrow buffer will not be enough to mitigate the noise impacts from the car park. Suggestion to relocate the car park to be adjacent to the proposed multi-level park and ride car park and include a 50 metre buffer vegetation buffer between Kayla Way fence and nearest station building (Proposed Precinct Plan attached to submission).

Response 15

Construction works for the Cherrybrook Station would be normally undertaken during daytime working hours to reduce noise and light spill impacts on nearby residents. Where lighting of the site at night is required (such as for security) the minimisation of light spill to nearby residents would be a priority.

Mitigation measure V2 in Table 16.8 of EIS 2 states that cut off and directed lighting would be used to ensure glare and light trespass are minimised. This is reproduced in Chapter 9 of this report.

Design – Station design

Issue 16

The Cherrybrook locality is characterised by generally large, low density dwellings predominantly built within the last 30 years, surrounded by established vegetation, green open spaces and natural corridors across the undulating topography. As a result, Cherrybrook Station should be underground and not an open cut design to minimise noise from trains and station announcements.

Planning for the Cherrybrook Station and traffic flows are not consistent with the overall objective of the design of the station as outlined in EIS 2 (the station has been designed as a suburban park-and-ride station that integrates with the surrounding natural and built environment. The station precinct has been designed to respond to the area's character). Additionally, if the design objective of the station is to respond to the area's character, how can TfNSW justify that a car park so close to the boundary of Kayla Way meets these design objectives?

Calls for TfNSW to demonstrate how the design goal was achieved for Cherrybrook Station and request for an alternative. Suggestion to:

- Relocate the car park to be adjacent to the proposed multi-level carpark.
- Incorporate a vegetation 50 metre buffer zone between Kayla Way boundary and the nearest Cherrybrook Station building.
- Block Franklin Road to vehicular traffic at the Southern boundary of the Cherrybrook Station precinct (suggested Precinct Plan attached to submission).

Response 16

The rationale for station design is presented in Section 6.7.1 of EIS 2. This station is proposed as an open cut station which has considerable customer benefits including natural lighting, ventilation and improved vertical circulation. The design provides substantial cost savings and environmental benefits associated with the station construction and ventilation of the operating rail tunnels. Further details regarding Cherrybrook Station are presented in Section 6.9 of EIS 2.

Operational noise and vibration investigations undertaken for Cherrybrook Station were undertaken and were presented in Chapter 10 and Technical Paper 3 of EIS 2. Section 10.7 Ground-borne Operational Noise and Vibration of EIS 2 assessed ground-borne vibration and ground-borne noise. The investigations found that compliance with the ground-borne vibration objectives (and the human comfort vibration criteria from Assessing Vibration – A Technical Guideline) is predicted for all residential receivers and the majority of other sensitive receiver locations above or near to the proposed NWRL alignment. The investigations found that ground-borne noise levels are predicted to comply with the ground-borne noise design objectives at all locations.

The operational noise assessment from Cherrybrook Station was presented in Section 10.9 of EIS 2. This section states that PA systems and ventilation shafts at the stations would be designed to comply with the relevant criteria. It is acknowledged that the operation of the at-grade car park would result in exceedances of the relevant operational noise criteria in the absence of mitigation measures. The EIS identified possible mitigation measures for this area including a four metre high barrier along the north east boundary of the car park or the closure of the car park during night-time periods. These options would be further explored during the detailed design phase.

The car park proposed near the boundary of properties on Kayla Way is a small on grade car park for 60 vehicles. Furthermore a landscape buffer is proposed to be provided between the car park and the Kayla Way residences, however a distance of 50 metres is not feasible due to the rail alignment and location of the station.

The suggested loss of access along Franklin Road would have a detrimental impact on vehicular accessibility to the station.

In relation to operational bus access, TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Environment – Flora and fauna

Issue 17

Concerns that the increase of traffic on Franklin Road (from Cherrybrook Station) will impact endangered species found in the area.

Response 17

The increase in traffic on Franklin Road would not be expected to have a significant impact on any flora and fauna. Whilst Franklin Road and Robert Road are identified as access and egress points to and from the station, the design has given priority to vehicles from Castle Hill Road.

Issue 18

Kayla Way residents are concerned termites will be dislodged from trees during construction. Termite barriers should be installed at the boundary of Kayla Way to prevent termites or any other insect / spider moving from the construction site to local residences. Also request for regular pest inspections at adjoining properties and treatment where necessary.

Response 18

Whilst vegetation clearing would be required to enable construction of Cherrybrook Station, this would be carried out with insignificant impacts to adjacent properties. Additionally, large areas of existing vegetation adjacent to the construction site would be retained, along with vegetation on the perimeter of the site where feasible.

Environment – Visual impact

Issue 19

The green landscape areas on Figure 6.11 within Cherrybrook Station precinct are shown near Castle Hill Road and not adjacent to the boundary with Kayla Way. Not having wide enough green landscape areas adjacent to the boundary with Kayla Way will lead to substantial visual impacts to adjacent residents. Can TfNSW justify why wide green areas are located adjacent to Castle Hill Road and not near the boundary with nearby residents? Green landscape areas near the Kayla Way boundary will lead to a better outcome for surrounding residents in terms of visual impacts, reduction of heat island effect of the concrete and asphalt areas. A minimum 50 metre of buffer space will reduce these impacts. Request for more detail on the extent of landscaping in the Cherrybrook Station areas adjoining Kayla Way. Calls for extensive landscaping to mitigate the impacts from the station.

Response 19

Much of the indicative layout of the future Cherrybrook Station is determined by the placement of the Station box, and the alignment of the rail line. The rail line alignment is in turn governed by local topography and geology and interaction with numerous existing constraints and utilities. For these reasons the removal of landscaped areas from Castle Hill Road would not necessarily allow an increase of landscaped area adjacent to Kayla Way as the station box will not be moved from its current location.

A landscaped buffer zone has been provided between the on grade car park and the residences on Kayla Way, however a 50 metre buffer zone is not feasible.

Issue 20

The visual impacts from construction of the 60 space car park at Cherrybrook Station will affect surrounding residents. Suggestion to relocate the car park to be adjacent to the proposed multi-level park and ride car park and include a 50 metre buffer vegetation buffer between Kayla Way fence and nearest station building (Proposed Precinct Plan attached to submission).

Response 20

Section 16.5.3 of EIS 2 provides an assessment of visual amenity for the proposed Cherrybrook Station. Residents on Kayla Way are likely to experience a minor adverse visual impact during operation and Stage 2 construction. Where feasible, perimeter vegetation would be retained during construction to provide some filtering of views to the construction site.

Operation – Noise and vibration

Issue 21

The noise and vibration impacts from the increase of traffic on Franklin Road (due to Cherrybrook Station) will have detrimental impacts on the quality of life for residents of Kayla Way.

Response 21

Section 10.9 of EIS 2 provides an assessment of operational road traffic noise. The predicted worst case noise increase at building facades 10 metres from Franklin Road is for an increase from 55 dB to 65 dB during the morning peak period. This worst case would potentially impact two properties on Kayla Way fronting Franklin Road. Mitigation measure OpNV13 in Table 10.47 of EIS 2 provides for a detailed assessment of road traffic noise impacts, including identification of preferred mitigation measures for the station access roads at Cherrybrook Station. This is reproduced in Chapter 9 of this report.

Issue 22

The noise and vibration from car engines and commuters using the proposed park-and-ride on the north eastern boundary of Cherrybrook Station will result in sleep disturbance to nearby residents. Suggestion to relocate the park-and-ride to be adjacent to the proposed multi-level park and ride and incorporate a 50 metre buffer vegetation buffer between Kayla Way fence and the nearest station building (suggested Precinct Plan attached to submission).

Response 22

Section 10.9 of EIS 2 provides an assessment of operational noise from car parks. The north-east at-grade car park at Cherrybrook Station is predicted to result in exceedances of the relevant criteria of up to 4 dB. The EIS identifies possible mitigation measures to reduce the potential for sleep disturbance, including a possible 4 metre high noise barrier along the north-east boundary of the car park or closing the at-grade car park during night-time periods.

Figure 6.11 of EIS 2 shows a landscaped barrier between the Kayla Way residences and the car park, however a 50 metre vegetated buffer is not feasible. It is also noted that a vegetated buffer would be expected to provide minimal noise attenuation benefits.

Issue 23

The noise and vibration impacts from increased traffic movements on Franklin Road will result in sleep disturbance for nearby residents. Suggestion to reduce these impacts by:

- Building a new access road through vacant land at the centre of the Cherrybrook Station precinct adjoining the 'Onsite Detention'.
- Closing off Franklin Road at the Kayla Way boundary and Robert Road to vehicular traffic.
- Adding an extra lane adjacent to Castle Hill Road (Proposed Precinct Plan attached to submission).

Response 23

Section 10.9 of EIS 2 provides an assessment of operational road traffic noise. The predicted worst case noise increase at building facades 10 metres from Franklin Road is for an increase from 55 dB to 65 dB during the morning peak period. This worst case would potentially impact two properties on Kayla Way fronting Franklin Road. Mitigation measure OpNV13 in Table 10.47 of EIS 2 provides for a detailed assessment of road traffic noise impacts, including identification of preferred mitigation measures for the station access roads at Cherrybrook. This is reproduced in Chapter 9 of this report.

A new station access road through the centre of the site adjacent to the onsite detention basin would require the clearing of additional vegetation to the north of the site in order to link to existing roadways. This vegetation has been mapped as good quality Blue Gum High Forest (listed as a critically endangered ecological community under the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*). This station has been carefully planned to avoid clearing of this important area of vegetation.

Closing of Franklin Road would have a detrimental impact on vehicular accessibility to the station.

The addition of an extra lane on Castle Hill Road would not be feasible due to the need to avoid property acquisition to the south of Castle Hill Road.

Issue 24

The new road linking Franklin Road and Robert Road will result in noise impacts from buses and vehicles. Suggestion to build a new access road through vacant land at the centre of the Cherrybrook Station precinct adjoining 'Onsite Detention', close off Franklin Road at the Kayla Way Boundary to vehicular traffic and add an extra lane on adjacent to Castle Hill Road (Proposed Precinct Plan attached to submission).

Response 24

A new station access road through the centre of the site adjacent to the onsite detention basin would require the clearing of additional vegetation to the north of the site in order to link to existing roadways. This vegetation has been mapped as good quality Blue Gum High Forest (listed as a critically endangered ecological community under the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*). This station has been carefully planned to avoid clearing of this important area of vegetation.

Issue 25

Some properties in Kayla Way (adjacent to Franklin Road) will be more exposed to noise impacts from Cherrybrook Station as the top of the boundary fence is below the height of the road meaning this will not provide any noise attenuation unlike other Kayla Way properties set further back. Suggestion to close off Franklin Road to traffic travelling to the station and use Castle Hill Road in its place.

Response 25

Section 10.9 of EIS 2 provides an assessment of operational road traffic noise. The predicted worst case noise increase at building facades 10 metres from Franklin Road is for an increase from 55 dB to 65 dB during the morning peak period. This worst case would potentially impact two properties on Kayla Way fronting Franklin Road. Mitigation measure OpNV13 in Table 10.47 of EIS 2 provides for a detailed assessment of road traffic noise impacts, including identification of preferred mitigation measures for the station access roads at Cherrybrook. This is reproduced in Chapter 9 of this report.

Access and egress points are proposed from both Robert Road and Franklin Road, however it is noted that the design of the site provides priority for vehicles accessing the site from Castle Hill Road (as shown on Figure 6.11 of EIS 2). The closing of Franklin Road or Robert Road with all vehicular access from Castle Hill Road would result in greater traffic impacts and potentially traffic safety implications on Castle Hill Road.

Operation – Traffic impacts / volume

Issue 26

Franklin Road is a quiet residential street with very low traffic volumes. Concerns that once Cherrybrook Station is operational, traffic volumes will increase significantly (cars and buses) and vastly impact residents quality of life, particularly those of Kayla Way.

Response 26

Traffic is likely to increase on Franklin Road as described in Section 9.5.2 of EIS 2. Access and egress points are proposed from both Robert Road and Franklin Road, however it is noted that the design of the site provides priority for vehicles accessing the site from Castle Hill Road (as shown on Figure 6.11 of EIS 2).

EIS 2 identifies operational mitigation measures to manage potential amenity impacts to adjacent residents. These mitigation measures are reproduced in Chapter 9 of this report.

Operation – Business impacts

Issue 27

Once NWRL is operational there will be impacts to local businesses due to changes in accessibility, noise and traffic as a result of Cherrybrook Station. In particular, the Cherrybrook Music Studio (private music studio) operating at 2 Kayla Way will be impacted. Adequate compensation and mitigation for loss of business due to the impacts eg sound proofing, double glazed windows or other appropriate property treatments.

Response 27

EIS 2 identifies a range of mitigation measures to reduce the potential impacts associated with noise and traffic. These mitigation measures are reproduced in Chapter 9 of this report.

Operation – Air quality

Issue 28

The air quality impacts from the increase of traffic on Franklin Road (due to Cherrybrook Station) will have detrimental impacts on the quality of life for residents of Kayla Way. In particular, pollution from car exhausts at the proposed park-and-ride on the north eastern boundary will impact residents.

Response 28

Chapter 19 of EIS 2 provided an assessment of air quality impacts. During operations, it is acknowledged that there would be a redistribution of traffic to and around the station precincts. This is not anticipated to have a significant impact on local air quality or result in adverse health effects in the context of the existing traffic volumes in the region. The NWRL is generally anticipated to result in a reduction in traffic volumes as mode share shifts from road to rail thereby minimising vehicle emissions.

Issue 29

Increased traffic movements on Franklin Road will result in air pollution (car exhausts, etc…), impacting residents health in the area. Suggestion to reduce these impacts by:

- Building a new access road through vacant land at the centre of the Cherrybrook Station precinct adjoining the 'Onsite Detention'.
- Closing off Franklin Road at the Kayla Way boundary and Robert Road to vehicular traffic.
- Adding an extra lane adjacent to Castle Hill Road (Proposed Precinct Plan attached to submission).

Response 29

Chapter 19 of EIS 2 provided an assessment of air quality impacts. During operations, it is acknowledged that there would be a redistribution of traffic to and around the station precincts. This is not anticipated to have a significant impact on local air quality or result in adverse health effects in the context of the existing traffic volumes in the region. The NWRL is generally anticipated to result in a reduction in traffic volumes as mode share shifts from road to rail thereby minimising vehicle emissions.

Operation –Traffic access route

Issue 30

Objection to the use of Franklin Road as an access route to Cherrybrook Station. The proposed access routes will lead to a significant increase in traffic along Franklin Road and Robert Road with an estimated 100 cars and 32 buses per hour to travel along each of these roads. Calls for TfNSW to put more thought into alternatives. Suggestion to:

1. Close Franklin Road at the Southern boundary of Kayla Way to vehicular traffic.
2. Add extra pedestrian and bike lanes on Franklin Road.
3. Add an extra lane to Castle Hill Road in the Eastbound bound direction for the AM peak and the reverse in the PM peak (there are precedents of this strategy all over Sydney for example Military Road, Victoria Road,

Harbour Bridge where one lane is added to the peak direction to make traffic flow easier). If the access lane within the station is placed adjacent to Castle Hill Road it will ease the traffic flow around the station.

4. Start a new bus route to serve Cherrybrook and Dural. This could be a loop service serving the catchment area of Cherrybrook Station.
5. Consider building a new access road in the centre of the station with a connection to Robert Road. This could be a loop road for the station exit via the new station access road to Castle Hill road. The station loop bus could access the station in the AM peak via the westbound lanes on Castle Hill Road and PM peak via the eastbound lanes.

Response 30

1. Closing of Franklin Road will have a detrimental impact on vehicular accessibility to the station.
2. The provision of bike lanes on Franklin Road is not proposed as part of the NWRL project. This would need to be implemented by Hornsby Shire Council. Proposed pedestrian movement on Franklin Road is shown on Figure 6.12 of EIS 2.
3. The addition of an extra lane on Castle Hill Road would not be feasible due to the need to avoid property acquisition to the south of Castle Hill Road.
4. The provision of new bus routes are outside the scope of the NWRL project. TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.
5. A new station access road through the centre of the site adjacent to the onsite detention basin would require the clearing of additional vegetation to the north of the site in order to link to existing roadways. This vegetation has been mapped as good quality Blue Gum High Forest (listed as a critically endangered ecological community under the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999)*. This station has been carefully planned to avoid clearing of this important area of vegetation.

Operation – Public safety

Issue 31

Once Cherrybrook Station is operational, peak traffic movements along Franklin Road will increase significantly therefore the safety of children / adults attending the surrounding schools and care facilities will be at risk.

Response 31

Whilst peak traffic movements would increase along Franklin Road during operations, the associated removal of some kerbside parking, footpath improvements and signalling upgrades would improve safety. TfNSW would liaise with the relevant road authority to ensure appropriate road traffic safety requirements are met.

Issue 32

The creation of a large public area within the Cherrybrook Station precinct adjacent to Kayla Way poses concerns for security of Kayla Way residents. Request for higher boundary fences (climbing deterrent) and security cameras monitored by station security at the northern boundaries of the station precinct.

Response 32

Section 6.5 of EIS 2 details the design principles for station including "the urban design elements of the project must consider and respond to 'safer by design' principles".

Additionally, mitigation measure OpV10 in Table 16.7 of EIS 2 provides for the adoption of Crime Prevention through Environment Design principles in the design and maintenance of the NWRL including unobstructed views into and outside of underpasses, effective drainage and ventilation, wide corridors and appropriate lighting. This is reproduced in Chapter 9 of this report.

Issue 33

Increased traffic movements on Franklin Road will result in safety impacts due to limited visibility for residents exiting Kayla Way on the incline (driving) and pedestrian activity. Kayla Way residents object to the widening of Franklin Road due to these impacts and suggest these impacts are reduced by:

- Building a new access road through vacant land at the centre of the Cherrybrook Station precinct adjoining the 'Onsite Detention'.
- Closing off Franklin Road at the Kayla Way boundary and Robert Road to vehicular traffic.
- Adding an extra lane adjacent to Castle Hill Road (Proposed Precinct Plan attached to submission).

Response 33

Whilst peak traffic movements would increase along Franklin Road during operations, the associated removal of some kerbside parking, footpath improvements and signaling upgrades would improve safety. TfNSW would liaise with the relevant road authority to ensure appropriate road traffic safety requirements are met.

Design – Master planning

Issue 34

Residents of Kayla Way are uncertain about the use of large portions of adjoining land marked "Future Use to be Determined by Master Plan" which does not comply with the objective of making the station fit into the natural habitat and has resulted in uninformed submissions. The potential to add large buildings in the area is considered to be detrimental to the local character of the area and by marking 'for future determination' removes involvement by local residents in the decision making process.

Objection to any buildings built in these areas. TfNSW should submit details about the future of these areas. If this not known, widen the vegetation buffer areas to 50 metres and then have a noise barrier.

Response 34

As well as addressing the demand for better transport access, the NWRL would provide a catalyst for the further development of North West Sydney. It provides the opportunity to implement a fully integrated approach to transport and land use planning that connects people and the communities in which they live, work, learn and play.

Opportunities within the immediate station precinct, such as areas marked "Future Use to be Determined by Master Plan" on the indicative layouts for each station, would be developed over a number of years in response to planning outcomes and strategies developed by local Councils and the Department of Planning and Infrastructure, in consultation with the community.

Future development not directly related to the project would require separate planning approvals under relevant local / State planning processes. The NWRL Project would be designed and constructed to accommodate potential future development (by providing a robust street pattern, local access arrangements and an integrated design approach, including structural support, servicing and access).

Property – Property damage

Issue 35

Damage to properties in any form – eg vibration damage, impact by vehicles on site during construction - is unacceptable. Rectification works should be undertaken as required.

Response 35

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to impacts to third party property and structures (conditions E26 to E31).

Transport – Bus integration

Issue 36

Suggestion to close off Franklin Road to traffic heading to Cherrybrook Station and instead, operate a bus loop service for Cherrybrook / Dural residents along Castle Hill Road. This would reduce noise, vibration, air quality and safety impacts on residents in the Cherrybrook Station area.

Response 36

Closing of Franklin Road will have a detrimental impact on vehicular accessibility to the station.

The provision of new bus routes are outside the scope of the NWRL project. TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

6.2.5 Arundel Way Neighbourhood Association

Operation – Traffic access route

Issue 1

Strong objection to Robert Road being used as a bus feeder road to the proposed Cherrybrook Station. Preference to use County Drive and then Castle Hill Road, as County Drive was designed for heavy traffic. Buses heading south should continue on County Drive and turn left onto Castle Hill Road and head towards Cherrybrook Station. Contrary to the NWRL proposal, traffic heading south on County Drive turning left onto Castle Hill Road at peak times encounters very little traffic. Traffic heading east on Castle Hill Road in morning peak times does not slow down until after the proposed station site has been passed.

Response 1

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Operation – Traffic impacts / volumes

Issue 2

Robert Road is a narrow road designed for low numbers of vehicles. It was not designed for heavy traffic, particularly buses.

Response 2

Cherrybrook Station requires good access for patrons arriving from the prime catchment to the north of the station including Cherrybrook and Dural. Robert Road and Franklin Road provide the most direct suitable access for buses and other vehicles. The rationale for access to Cherrybrook Station is detailed in EIS 2 Technical Paper 2 Section 8.1.7 and details of the preliminary traffic assessment, including modeling of intersection performance, are given in EIS 2 Technical Paper 2 Section 8.1.8. The design of both Robert Road and Franklin Road are suitable to carry the predicted traffic. Austroads (2009, Part 4 – Network Management, p 69) advises that roads of higher classification should cater for major bus movements including express buses. Lower classes of road should cater more for local bus operations.

Importantly, TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Operation – Public Safety

Issue 3

Concerns regarding pedestrian safety on Robert Road. Currently, pedestrians cross the road at many points, and often, to access the park at the corner of Dalkeith Road. No pedestrian crossing exists.

Response 3

The proposed Cherrybrook precinct provides for a new pedestrian crossing on the new access road and new signalised pedestrian crossing facilities at both Robert Road / Castle Hill Road, and at Glenhope Road / Castle Hill Road. A pedestrian crossing to access the local park at Dalkeith Road is not currently included in the design and is a matter for Council.

Issue 4

Cars exiting Arundel Way and other cul-de-sacs off Robert Road, such as Louise Way and Oliver Way, will not be able to do so safely. Concerns that buses and other large vehicles will obstruct vision causing the likelihood of accidents to increase.

Response 4

Cherrybrook Station requires good access for patrons arriving from the prime catchment to the north of the station including Cherrybrook and Dural. Robert Road and Franklin Road provide the most direct suitable access for buses and other vehicles. The rationale for access to Cherrybrook Station is detailed in EIS 2 Technical Paper 2 Section 8.1.7. Robert Road and Franklin Road provide suitable access for vehicles and buses with removal of parking and some minor kerb adjustments. The design of both Robert Road and Franklin Road are suitable to carry the predicted traffic.

Importantly, TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Communication – Consultation

Issue 5

Request for the Arundel Way Neighbourhood Association to be involved in all discussion and proposals regarding the future use of Robert Road in relation to NWRL.

Response 5

Stakeholder and community involvement is an integral component of the construction and operation of the NWRL. TfNSW would continue to consult during detailed design and throughout construction.

6.2.6 Castle Hill & Hills District Agricultural Society

Construction – Community facility impacts

Issue 1

Detailed property adjustment plans are expected to be provided to allow formal agreement to be reached on alterations to the Showground. Alternative accommodation should be provided prior to the dismantling of any of the existing facilities.

Response 1

Whilst the potential impacts on the Castle Hill Showground have been substantially reduced in response to stakeholder submissions, it is acknowledged that the Showground Station construction site and precinct would displace some Showground facilities. The following arrangements would be progressed with the Castle Hill & Hills District Agricultural Society:

Facility identified	Proposed actions	Other mitigation measures during construction
Trotting Stables (32)	Relocate within the Showground precinct. However, the area identified may not be practicable and alternatives would need to be considered.	Relocation to occur prior to substantial construction subject to the resolution of alternative arrangements and any additional statutory approvals required.
Amenities block (15)	Relocation to the area identified is not considered practicable due to proximity to the construction site and difficulty connecting to water and sewerage. Investigations for upgrading existing facilities, such as Amenities Block 12 would need to be considered.	Alternative arrangements to be in place in time to meet the needs of significant activities that rely on these facilities.
Danny Scott Stables (27)	This facility would not be directly affected. Access would be maintained via the perimeter road.	The construction site would be secured with a construction hoarding.
Milton Evans Stables (26)	This facility would not be directly affected. Access would be maintained via the perimeter road.	The construction site would be secured with a construction hoarding.
Competitors' car and float parking (Hills Centre car park and area around building 15)	This area would not be available once the precinct is complete.	Parking issues during construction are addressed separately (refer to responses 2 and 12).
Ticket Kiosks (and area) on Doran Drive	This important function will need to be relocated and requires further discussion.	Alternative arrangements to be in place in time to meet the needs of significant activities that rely on these facilities.
Perimeter Road (behind stables 26 and 27)	This access arrangement would be maintained.	This access arrangement would be maintained.
Services (power, water, etc...)	Provision of services would not be altered.	Any temporary interruptions would be managed in consultation with affected parties.

The timing of alternative arrangements would be determined in consultation with stakeholders and based on the functional requirements of regular and special events. It is noted that resolution of alternative arrangements may not be fully progressed prior to the dismantling of the Trotting Stables (32) and Amenities Block (15).

Issue 2

Alternatives will need to be provided for the Showground access roads and facilities (services eg lighting, power etc…, access, parking areas for customers / buses / horse floats, the perimeter road behind the stables, Doran Drive entrance, horse area) which will be lost during construction to allow the show to proceed. Relocation requests should be discussed with representatives.

Response 2

Access to the Showground precinct during construction would be available from the new signalised intersection on Showground Road.

Provision for public access to and from the Showground Station precinct via the western side (adjacent to Cattai Creek) of the construction site and / or the eastern side of the site would be provided. At this stage, opportunities for safe pedestrian and cyclist access have been identified. However, access for vehicles may be constrained by the construction activities and would be subject to further discussions with the successful construction contractor.

It is acknowledged that NWRL construction activities would result in access and parking constraints during the Castle Hill Annual Show and other major events. However, event based Construction Traffic Management Plans would be developed in advance of each major event describing access and parking arrangements, in consultation with event organisers. Construction activities may be adapted or reduced during major events to facilitate access or additional parking (for example at the Council Chambers).

Issue 3

The proposed Showground boundary, along New Street 'A' (Haul Road) shown on the construction site plan indicates additional impact on the horse parking area to that shown on the Showground Station layout. Final cadastral boundaries and lease agreements need to be completed with the Lands Department prior to completion of the works.

Response 3

TfNSW will acquire land required for construction and operation of the NWRL in accordance with relevant legislation.

Issue 4

Compensation for loss of parking at the Showground could take the form of relocating the Committee Rooms closer to the main ring which would allow better utilisation of that area along the Showground Road frontage. This could be achieved by removing and replacing the Committee Rooms to the fenced off area next to the covered grandstand. This building could include a second level to house the announcer's box above. This would replace the structure that was removed by Council in the 1990s. The area along the perimeter road could then be built up with a retaining wall and fencing to provide horse competitor access to that side of the arena.

Response 4

Relocation of the Committee Rooms is not considered reasonable. This facility would not be impacted by construction.

Issue 5

The Danny Scott Stables (27) and The Milton Evans Stables (26) are not physically affected by the boundary shown in EIS 2. This boundary will need to be fenced, to provide security between the showground and the new street. This would then prevent access to the stables and require major modification and / or relocation.

Response 5

All construction sites would be secured by fencing or hoarding designed to prevent any trespass into construction zones.

Issue 6

There is a significant problem with theft and vandalism after show hours at the Showground. This is addressed by our use of security and police. Consideration should be given to additional policing required for construction site security during the Show.

Response 6

All construction sites would be secured by fencing or hoarding designed to prevent any trespass into construction zones. Additionally, during tunnel boring activities, the Showground Station construction site would be used 24 hours per day, seven days per week, thereby having construction staff present at all times which would minimise safety and security issues.

Issue 7

The Showground amenities block, toilet block and stables will need reconnection to the sewerage system along with water and electricity (power) connections. The current system is inadequate for current use. The impact of the greater number of construction personnel using the existing system will have a substantial impact, as it does during our annual show and on most weeks due to increased 5 nights a week usage of the arena.

Response 7

The construction of the NWRL would not increase use of the sewerage system as adequate temporary construction worker facilities would be provided. It is noted that the Hills Centre for Performing Arts would be disconnected from the sewerage system.

Water and sewerage connections would be provided as part of the new rail station.

Issue 8

The only vehicle entrance at showtime at the Showground is via Doran Drive where there are two ticket kiosks. It operates as 'in' only with 3 lanes for traffic to queue. The relocation of the kiosks and queuing area whilst construction is undertaken and also following completion, requires further consideration and preparation of construction traffic management plans and further discussions.

Response 8

Access to the Showground precinct during construction would be available from the new signalised intersection on Showground Road.

It is acknowledged that NWRL construction activities would result in access and parking constraints during the Castle Hill Annual Show and other major events. However, event based Construction Traffic Management Plans would be developed in advance of each major event describing access and parking arrangements as well as queuing arrangements for ticket kiosks, in consultation with event organisers. Construction activities may be adapted or reduced during major events to facilitate access or additional parking (for example at the Council Chambers).

Issue 9

Access to the Showground during construction has been suggested via the haul road (New Street 'A') off Showground Road. An alternative access, referred to in the Modification Report for the Showground Station, is on the western side of the site off Carrington Road adjacent to Cattai Creek. This option would alleviate the mix of showground traffic and the heavy traffic from the construction site. This location would approximate the proposed road for the Carpark.

Response 9

Access to the Showground precinct during construction would be available from the new signalised intersection on Showground Road.

Provision for public access to and from the Showground precinct via the western side (adjacent to Cattai Creek) of the construction site and / or the eastern side of the site would be provided. However, access for vehicles may be constrained by the construction activities and would be subject to further discussions with the successful construction contractor.

Issue 10

During the Show and for other major events at the Showground access is from Doran Drive off Carrington Road and egress left only onto Showground Road. This arrangement is still required at Showtime to retain a separate egress. This exit could be along the road between the Carpark and Cattai Creek on the western side of the site off Carrington Road, as referred to in the Modification Report for the Showground Station. The entrance could be along the haul road off Showground Road with restrictions on the use by construction traffic during these events.

Response 10

Access to the Showground precinct during construction would be available from the new signalised intersection on Showground Road.

Provision for public access to and from the Showground precinct via the western side (adjacent to Cattai Creek) of the construction site and / or the eastern side of the site would be provided. However, access for vehicles may be constrained by the construction activities and would be subject to further discussions with the successful construction contractor.

It is acknowledged that NWRL construction activities would result in access and parking constraints during the Castle Hill Annual Show and other major events. However, event based Construction Traffic Management Plans would be developed in advance of each major event describing access and parking arrangements, in consultation with event organisers. Construction activities and construction traffic may be adapted or reduced during major events to facilitate access or additional parking (for example at the Council Chambers).

Issue 11

The perimeter road around the Showground is required for the show and other major events held on the showground. It is required to provide access for emergency services such as an ambulance, police and fire services. Currently shown in EIS 2, this access will not be possible between the stables (buildings 26 & 27) and "New Street A".

Response 11

A new intersection at "New Street A" and Doran Drive will provide access to the Showground perimeter road, including for emergency services. Access to the stable buildings (26 and 27) will be maintained.

Issue 12

There will be approximately 400 car spaces removed at the Showground in the areas adjacent to the Hills Centre parking, the area around the Stables, and the area lost with the building of the haul road. The area available for parking of buses and horse floats will be more than halved. The loss of parking areas will force the Society to possibly restrict parking to officials and exhibitors only during the Show. This would force show patrons to park elsewhere. The Society requests compensation for the loss of parking during the construction stage. This could take the form of a bus shuttle from alternative parking areas within the vicinity.

Response 12

It is acknowledged that NWRL construction activities would result in access and parking constraints during the Castle Hill Annual Show and other major events. It is also acknowledged that approximately 200 car spaces would be lost in the Showground precinct during construction. However, event based Construction Traffic Management Plans would be developed in advance of each major event describing access and parking arrangements, in consultation with event organisers. Construction activities may be adapted or reduced during major events to facilitate access or additional parking (for example at the Council Chambers).

The suggested use of alternative areas for parking during events, such as Fred Caterson Reserve, is supported. Assistance in the form of funding for a shuttle bus would be considered prior to individual events.

Issue 13

As there will be no room for visitor parking on the showground during the annual Show period, the area opposite the pedestrian gate on Showground Road and adjacent to the Tennis Courts on Gilbert Road, should be set aside for visitor parking. Parking is required for approximately 800 – 1000 cars at any one time. It may be necessary to park cars in other locations of the Fred Caterson Reserve and this would necessitate the operation of a shuttle bus and cancelling of activities at these venues during showtime to allow sufficient car parking space. The cost of the shuttle bus is to be paid by the Rail Construction authority. Consideration will need to be given to find additional parking space for horse floats over and above what will remain available on the showground.

Response 13

The suggested use of alternative areas for parking during events, such as Fred Caterson Reserve, is supported. Assistance in the form of funding for a shuttle bus would be considered prior to individual events.

It is acknowledged that NWRL construction activities would result in parking constraints during the Castle Hill Annual Show and other major events. However, event based Construction Traffic Management Plans would be developed in advance of each major event describing parking arrangements, in consultation with event organisers. Construction activities and construction traffic may be adapted or reduced during major events to facilitate additional parking, including for horse floats (for example at the Council Chambers).

Issue 14

Security of the showground precinct will require an appropriate fence (eg similar to security fences for schools) from Showground Road to Cattai Creek following the construction of New Street 'A'.

Response 14

All construction sites, including internal haul road, would be secured by fencing or hoarding designed to prevent any trespass into construction zones and to provide protection to adjoining land uses.

During operation, "New Road A" would be a public road and fencing is not proposed.

Operation – Community facility impacts

Issue 15

A separate entrance (only) to the Showground along Doran Drive or New Street A and egress along the carpark road adjacent to Cattai Creek would be required once NWRL is completed. Following completion of the project, an access around the horse area will also need to be redesigned to take the horse and float parking that will be lost from The Hills Centre carpark (which the Society still has some claim of ownership) that is currently used. This would need the perimeter road to be maintained.

Response 15

TfNSW would redirect the perimeter road to the north of the car park to allow perimeter road access to the cattle and donkey ring, horticulture pavilion and cattle bus pavilion.

Issue 16

Discussions are currently being undertaken for a possible memorial site at the entrance to the Showground off New Street 'A'.

Response 16

Noted. Should further details be made available, TfNSW can discuss any issues or opportunities.

Communication – Consultation

Issue 17

The way the department has listened to and implemented community suggestions is to be commended. The Society is delighted that our suggestion of Showground Station was accepted. We also appreciate the keeping of Doran Drive as it holds local significance for both the Hills Shire Council and the Castle Hill & Hills District Agricultural Society.

Response 17

Castle Hill & Hills District Agricultural Society's comment is noted and appreciated.

6.2.7 Beecroft Netball Club

Construction – Community facility impacts

Issue 1

Beecroft Netball Club's support for the project is on the basis that suitable interim facilities are provided to allow netball and other sports of Beecroft Sports Club (football and cricket) to be played safely and effectively in the local vicinity of Beecroft and Cheltenham during the construction phase of the North West Rail Link.

The temporary state requirements for the club are:

Netball courts with lights:

- Ensure 2 – 3 courts are provided as a replacement.
- Fencing around two of the courts to ensure balls are not lost and impact on the other sports being played in the area.
- Wet weather area shelter for parents or children.
- Ensure lights are provided.

Oval – with lights:

- Full access to the site during construction including the ability to bring an ambulance on site.
- Ensure lights are provided.

3 cricket nets with lights:

- 3 cricket training courts.
- These could be relocated onto the Cheltenham Oval in the current kick wall area used by the Soccer Club, with the run-up areas protruding onto the ground.

Amenities building:

- Adequate Security to protect storage items / property.
- Change rooms.
- Toilets.
- Secure storage for each division.
- Canteen.

Car park:

- Parking by all divisions and local community – expected to be on the local roads or in the area to the north of the oval.

Children's playground:

- This is not required in the temporary state during construction.

Response 1

TfNSW will endeavor to provide alternative facilities during the period of construction. Any disruption of the existing sporting facilities during construction would be minimised wherever practicable, and would be offset through the provision of temporary facilities of an equivalent standard. This would be planned in consultation with Hornsby Shire Council and local user groups including the Beecroft Sports Club and its affiliates.

TfNSW would undertake ongoing consultation with relevant stakeholders to determine the final outcome for the replacement community facilities at Cheltenham Oval. Following construction of the facility, items that had been displaced would be able to be re-established, such as the netball training courts and the sports amenities building. There would also be opportunities to create a positive legacy for the local community and facilitate improvements to the sporting and recreational area. It is proposed to upgrade the existing sports amenities building, and effectively conceal the rail service facility, as shown in Figure 6.51 to Figure 6.52 of EIS 2. Subject to consultation with the local community, other users of the area and Hornsby Shire Council, a more detailed design of this option would be progressed.

Issue 2

The Club conditionally supports the North West Rail proposal and looks forward to working with the Department of Planning and Infrastructure, along with the Hornsby Shire Council, to ensure safe and suitable facilities are provided for the Beecroft and Cheltenham communities.

Response 2

TfNSW would continue to undertake consultation with the Beecroft Sports Club (and its affiliates) and other relevant stakeholders to determine appropriate outcomes for community facilities at Cheltenham during and post construction.

Operation – Community facility impacts

Issue 3

The specific end state requirements for the Beecroft Sports Club are:

Netball courts with lights:

- Replace the courts with a suitable footing / bed to be able to accommodate 4 courts.
- Ensure 3 courts are provided as a minimum replacement.
- Fencing around two of the courts to ensure balls are not lost and impact on the other sports being played in the area.
- The third court would have removable posts and could be multi surface to ensure mixed usage by soccer and netball during wet weather.
- Wet weather area shelter for parents or children.
- Ensure lights are provided.

Oval – with lights:

- Full access to the site including the ability to bring an ambulance on site.
- Ensure lights are provided.
- Kickwall area for Junior Soccer players.

Cricket nets with lights:

- 3 Cricket training courts.
- Ensure lights are provided.

Amenities building:

- A single dwelling on the site which could be either single or double storey to allow sufficient area for other elements required on the site.
- Integration with the NWRL Facilities room.
- Adequate security to protect storage items / property.
- Change rooms.
- Toilets and showers.
- Large meeting room.
- Extensive, secure storage for each division.
- Canteen.
- Council storage room (if required by council).

❖ Large covered area.

Car park:

❖ Parking by all divisions and local community.

Children's playground:

❖ Large playground area.

Response 3

Further consultation with the local community, other users of the area and the Hornsby Shire Council would be undertaken as detailed design of the reinstated facilities is progressed. The request for reinstatement / construction of the features listed is noted.

6.2.8 West Pennant Hills Valley Progress Association

Planning – Approval process

Issue 1

West Pennant Hills Valley Progress Association does not believe that the needs of its residents have been adequately addressed in the planning of the proposed Cherrybrook Station. Patronage from south of Castle Hill Road is barely considered in the information presented in the EIS 2 and, when actually referred to, is often misleading or incorrect.

Response 1

As an established arterial road, Castle Hill Road provides good existing links to the east and west. The station would have high visibility from Castle Hill Road and the layout and access arrangements present an opportunity to improve the existing pedestrian environment and vehicular safety along and across Castle Hill Road to West Pennant Hills.

As described in Section 9.5.2 of EIS 2, the majority of the traffic generated by Cherrybrook Station is expected to be from the suburbs to the north and west of the station including Cherrybrook, Dural, Castle Hill and Glenhaven. A smaller volume of traffic is expected to be generated from the West Pennant Hills Valley to the south of the site.

Operation – Traffic access route

Issue 2

It would appear that little consideration has been given to access Cherrybrook Station from the West Pennant Hills Valley (WPHV). While it is appreciated that the majority of patronage for the NWRL will come from north of Castle Hill Road, it is highly likely that there will be significant movement from the south. The misunderstanding by the EIS document of WPHV resident needs is well demonstrated by its assertions that the feeder roads serving the WPHV are Old Northern Road and County Drive. Both these roads approach Castle Hill Road from the north and do not serve the WPHV. It is therefore clear that the EIS has given no serious consideration of our access requirements to the station.

Response 2

While a small volume of traffic is expected to be generated from the West Pennant Hills Valley to the south of the site, the majority of the park-and-ride traffic generated by the station is expected to be from the suburbs to the north and west of the station, such as Cherrybrook, Dural, Castle Hill and Glenhaven. Therefore a majority of traffic would approach the station precinct along Castle Hill Road from Old Northern Road or County Drive.

Figure 9.1 in EIS 2 shows kiss-and-ride and park-and-ride inbound access routes for Cherrybrook Station. Access for vehicles from West Pennant Hills Valley would be predominantly via a right hand turn from the proposed new signalised intersection on Castle Hill Road to Robert Road.

Buses servicing the West Pennant Hills Valley area will be able to access the station from Castle Hill Road via either Robert Road or Franklin Road. Additionally, the proposal caters for existing bus routes to serve Cherrybrook Station including a potential new local shuttle bus route from the south.

Issue 3

In order to achieve a better outcome for residents of the WPHV than that currently offered by the EIS, the Association suggests that better access arrangements for WPHV residents from south of Castle Hill Road be provided.

Response 3

Figure 9.1 in EIS 2 shows kiss-and-ride and park-and-ride inbound access routes for Cherrybrook Station. Access for vehicles from West Pennant Hills Valley would be predominantly via a right hand turn from the proposed new signalised intersection on Castle Hill Road to Robert Road.

Buses servicing the West Pennant Hills Valley area will be able to access the station from Castle Hill Road via either Robert Road or Franklin Road. Additionally, the proposal caters for existing bus routes to serve Cherrybrook Station including a potential new local shuttle bus route from the south.

Construction – Traffic and transport

Issue 4

The WPHV will experience extreme changes to both pedestrian and vehicular traffic flows, particularly throughout the construction phase as a result of the Cherrybrook Station implementation, yet little consideration has been given to the Association's concerns.

Response 4

Construction Traffic Management Plans and Traffic Control Plans would be developed for the site to manage pedestrian and vehicular movements during construction.

Chapter 5 of EIS 2 and Chapter 3 of this report set out the consultation that has occurred with the community and key stakeholders and which has informed the development of the NWRL project. Local residents, businesses and community groups would continue to be provided with information prior to and throughout the construction period as identified in Section 4 of the Construction Environmental Management Framework (Appendix B of EIS 2).

Issue 5

As construction activity gets underway and heavy vehicles interrupt normal traffic operations along Castle Hill Road, vehicles will seek to avoid this route. In particular eastward and south bound traffic will use Highs Road to avoid delays along Castle Hill Road and then use the local WPHV rat run to either cross / access North Rocks Road or head to the M2. Traffic travelling from the south or east will be doing the reverse, 24 hours per day, 7 days per week. Currently, the residents of the WPHV endure heavy congestion during the morning and evening peak periods and once construction begins, this will likely extend throughout the day.

Response 5

The designated heavy vehicle route to and from the Cherrybrook Station construction site is along Castle Hill Road as shown in Figure 9.11 of EIS 2. Heavy vehicles accessing the M2 / M7 would use Pennant Hills Road, Old Northern Road and Windsor Road. The use of local roads would be minimised as far as feasible. This would prevent increased construction traffic travelling through the West Pennant Hills Valley. Construction traffic would be generated during both the peak and off peak periods, however, heavy vehicle arrivals and departures at sensitive locations would be limited during peak periods, where required.

The construction traffic analysis for Stage 2 construction is detailed in Table 9.14 of EIS 2. This shows that the intersection performance during construction would remain satisfactory and similar to the existing situation.

Issue 6

To maintain the smooth functioning of Castle Hill Road, the Association suggests that grade separated pedestrian access from south of Castle Hill Road be provided at Glenhope Road. This could be accommodated by an extra lane on the south side of Castle Hill Road, by moving the northern edge of Castle Hill Road during the station construction phase.

Response 6

Grade separated pedestrian access is not proposed as part of the NWRL. Safe pedestrian access to the station precinct from the south side of Castle Hill Road would be available by way of the signalised intersections at Castle Hill Road / Glenhope Road and Castle Hill Road / Robert Road.

The provision of an extra lane on the south side of Castle Hill Road would necessitate property acquisition and is not proposed as part of the NWRL.

Transport – Rail integration

Issue 7

West Pennant Hills Valley Progress Association's view is that all commuters using NWRL will be concerned that the proposed interchange at Chatswood Station will not be user friendly as there will be commuter congestion problems crossing the platform. The trains that commuters will be joining at Chatswood will be full, forcing them to have to wait for the next train. There will be inadequate marshaling and security on the Chatswood platform with so many trains running and security personnel will not be present up to the departure of the last train. A trip that involves two and more changes will be one change too many. These concerns need to be resolved in a manner which gives the travelling public confidence or else NWRL will prove unattractive and may be a failure.

Response 7

Chatswood Station is suited to allow efficient interchange from the NWRL rapid transit service to the suburban network. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak periods. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing). Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Issue 8

In order to achieve a better outcome for residents of the WPHV than that currently offered by the EIS, the Association suggests that the unsatisfactory arrangements for commuters at Chatswood Station be resolved.

Response 8

Chatswood Station is suited to allow efficient interchange from the NWRL rapid transit service to the suburban network. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak periods. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing). Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Operation – Traffic impacts / volume

Issue 9

Once Cherrybrook Station is operational, it will be important to maintain unhindered traffic flow along Castle Hill Road. With the addition of two sets of traffic lights plus the extra traffic generated by the station, it will be necessary to ensure that all measures are taken to reduce the number of times that traffic on Castle Hill Road is stopped by vehicles, buses and pedestrians trying to access the station.

Response 9

Traffic modelling results for intersections along Castle Hill Road at Cherrybrook Station are presented in Section 9.5.2 of EIS 2.

The operational traffic assessment showed that with the exception of Castle Hill Road / County Drive / Highs Road intersection, all other intersections within the vicinity of the station are predicted to operate within capacity and with satisfactory levels of service. Some of these intersections are expected to

operate at the same or slightly better with the inclusion of NWRL, therefore indicting the positive effect of modal shift from vehicle use to rail use is equal to or slightly better than the impact of station precinct specific traffic.

The Castle Hill Road / County Drive / Highs Road intersection is predicted to operate beyond capacity either with or without the inclusion of the NWRL. Therefore as the degree of saturation and level of service are essentially the same for both scenarios, it was concluded that the predicted congestion is a result of general forecast traffic growth rather than a result of the NWRL.

Issue 10

Castle Hill Road is a significant arterial link. Whenever traffic flow is interrupted or delayed, traffic then heads into the local residential areas seeking a way around the disruption. It is therefore expected that the installation of traffic lights at the intersection of Glenhope Road / Castle Hill Road will increase traffic flow through the WPHV.

Response 10

Traffic modelling results for intersections along Castle Hill Road at Cherrybrook Station are presented in Section 9.5.2 of EIS 2.

Glenhope Road would be a signalised T-intersection with two through lanes in each direction on Castle Hill Road, along with a turning lane on each approach for traffic turning into Glenhope Road. This intersection arrangement is required in order to facilitate vehicular access into the station.

The existing Glenhope Road / Castle Hill Road intersection operates at a Level of Service B (good performance with acceptable delays and spare capacity) but with the NWRL the intersection performance is predicted to improve to a Level of Service A with an increase in capacity and reduction in queue length. Therefore increased traffic flow through the West Pennant Hills Valley is not expected to occur as a result of the NWRL.

Transport – Kiss-and-ride

Issue 11

The Association suggests that kiss-and-ride parking bays be provided on the south side of Castle Hill Road within easy walking distance of the grade separated pedestrian access. Kiss-and-ride patrons could avoid the station precinct if there was a facility for them on the south side of Castle Hill Road. This could be accommodated by an extra lane on the south side of Castle Hill Road, by moving the northern edge of Castle Hill Road during the station construction phase.

Response 11

The provision of kiss-and-ride facilities cannot be accommodated on arterial roads such as Castle Hill Road. Additionally, the station access hierarchy presented in Figure 6.6 of EIS 2 shows that kiss-and-ride should be located in relatively close proximity to the station entry.

The provision of an extra lane on the south of Castle Hill Road would necessitate property acquisition and is not proposed as part of the NWRL.

Transport – Bus integration

Issue 12

The Association suggests that bus bays on the south side of Castle Hill Road be positioned in a similar location to the suggested kiss-and-ride parking bays. This could be accommodated by an extra lane on the south side of Castle Hill Road, by moving the northern edge of Castle Hill Road during the station construction phase.

Response 12

The provision of bus bays at this location on Castle Hill Road cannot be accommodated. Additionally, the station access hierarchy presented in Figure 6.6 of EIS 2 shows that bus bays should be located in relatively close proximity to the station entry.

The provision of an extra lane on the south of Castle Hill Road would necessitate property acquisition and is not proposed as part of the NWRL.

Issue 13

The nominated route for the potential shuttle bus service from the WPHV has not been properly thought through. The problem is that Highs Road is two lanes at its intersection with Castle Hill Road, and is only 2 lanes for about 30 metres when it reverts to one lane each way. Heading north or turning right at Castle Hill Road is a challenge, with the green phase being barely enough to let 3 cars through. Due to the shortness of the lane, and the majority of the traffic heading west / left turn, traffic flow comes to a standstill, especially during the evening peak periods. A shuttle bus would be lucky to clear the intersection during the green phase in the morning peak and it would then sit in traffic until Franklin Road.

A much better option would be to access Castle Hill Road via Glenhope Road or Coonara Avenue, drop off passengers in the proposed bus bay on the south side of Castle Hill Road and return via Highs Road. This would not only form a functional loop, it would also cover a greater area of the WPHV. In addition, there would be no need for the shuttle bus to enter the congested station precinct.

Response 13

The vehicular access arrangements proposed represent a robust and efficient layout that provides the required connectivity for the expected movements by customers accessing the station precinct from surrounding catchments.

Traffic light phasing at Highs Road would be reviewed (in consultation with RMS) in conjunction with any provision of a shuttle bus service from the West Pennant Hills Valley to ensure efficient operation of any new service.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 14

In order to achieve a better outcome for residents of the WPHV than that currently offered by the EIS, the Association suggests that the bus services be evaluated once the NWRL is operational.

Response 14

Noted.

The NSW Long Term Transport Master Plan notes that, across the Sydney bus network, a number of bus services need to be re-examined to improve operating patterns that are consistent with the function required by customers.

Issue 15

The Association considers the proposal to cease a large number of the current commuter bus services to Sydney's economic corridor very short sighted. By the time the NWRL is operational, the demand for public transport will have increased significantly. It must be recognised that not all destinations will be served efficiently by the NWRL, for example, the Lane Cove bus interchange. It would be more appropriate to evaluate the efficiency and cost effectiveness of the bus network once the NWRL is operational, not now.

Response 15

Noted. The NSW Long Term Transport Master Plan notes that, across the Sydney bus network, a number of bus services need to be re-examined to improve operating patterns that are consistent with the function required by customers.

Transport – Pedestrian and bicycle access

Issue 16

Grade separated pedestrian access from south of Castle Hill Road be provided at Glenhope Road to prevent pedestrians taking risks to cross slow moving traffic, and thereby being a danger to themselves and a road hazard to drivers.

Response 16

Grade separated pedestrian access is not proposed as part of the NWRL. Safe pedestrian access to the station precinct from the south side of Castle Hill Road would be available by way of the signalised intersections at Castle Hill Road / Glenhope Road and Castle Hill Road / Robert Road.

6.2.9 Beecroft Cheltenham Civic Trust

Environment – Flora and fauna

Issue 1

Beecroft Cheltenham Civic Trust (The Trust) notes that the proposed haulage road parallel to the M2 Motorway between the Cheltenham Services Facility and Kirkham Street is still part of the proposal, albeit now as a temporary road. The Trust strongly objects to any haulage road through the bushland reserve and suggests that the relevant government agencies work out direct access onto the M2 Motorway.

The Trust notes that the proposed area for the Cheltenham Services Facility has been reduced, and welcomes this change.

Response 1

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The final location of the Kirkham Street access road would be determined with consideration of all relevant aspects including constructability, cost and environmental impacts.

Issue 2

The intention to "reinstate" the site of the haulage road to Cheltenham Services Facility is noted, however, if a temporary haulage road is to be built through the bushland reserve its exact location will be crucial if the bush is to be reinstated. The topography of the bushland, where the proposed haulage road is to be located, is particularly rugged, with significant rock formations having cross falls of five metres or more. This would necessitate major batters, the filling of gullies and removal of rises (including major weathered sandstone outcrops), destroying the bushland in the area to the extent that would make it impossible to reinstate to its original condition.

Response 2

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The final location of the Kirkham Street access road would be determined with consideration of all relevant aspects including constructability, cost and environmental impacts.

Issue 3

Should any haulage road proceed for the Cheltenham Services Facility, a bushland management plan needs to be prepared in consultation with Hornsby Shire Council (which owns the affected land). Work should include site reinstatement to the council's satisfaction. Suggestion to also include construction of an all-weather walking track.

Response 3

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

TfNSW agrees that consultation with Hornsby Shire Council will be important in the successful revegetation of this site. This has previously been committed to as part of the Submission Report for Stage 1 – Major Civil Construction Works.

Issue 4

Concerns that together with the loss of bushland around the Cheltenham Services Facility, the proposed haulage road will impact on an area of close to 1000 m^2 (1 ha) of pristine bushland, recreation area and public recreation facilities, including Blackbutt Gully Forest vegetation, which is found within the critically endangered ecological communities of Sydney Turpentine Forest (STIF) and Sydney Blue Gum High Forest (SBGHF).

Response 4

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

It is acknowledged that the proposed access road will impact upon an area of 1000 m^2 (0.1 ha).

The vegetation along the proposed access road was mapped as Coastal Shale-Sandstone Forest as part of the ecological assessment undertaken for the EIS for Stage 1 Major Civil Construction Works.

Environment – Soils and geology

Issue 5

Should any haulage road proceed for the Cheltenham Services Facility, a bushland management plan needs to be prepared and should include collection of seeds from adjoining sites at appropriate times and site monitoring for not less than five years. Where possible, rock should be physically removed with slings, stockpiled and protected on site for re-use and replaced as part of the reinstatement process rather than broken up on site.

Response 5

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Any ecological related impacts during construction would be managed through implementation of a Flora and Fauna Management Plan to be developed by the relevant construction contractor.

A bushland management / rehabilitation plan would be prepared in consultation with Hornsby Shire Council. This has previously been committed to as part of the Submission Report for the Stage 1 – Major Civil Construction Works.

Communication – Consultation

Issue 6

There appears to have been no consultation with the NSW Police, NSW Fire and Emergency Services or NSW Ambulance Service about their emergency access requirements should there be an incident at the Cheltenham Services Facility.

Response 6

Consultation has been undertaken with emergency services regarding the design of the NWRL and access requirements.

Construction – Access

Issue 7

The project team should reconsider the alternative single lane access road, controlled by lights, that largely follows the existing walking track. The justification that this alternative option is unlikely to proceed because a proposed road, with two lanes, has already been approved as part of EIS 1 is not sufficient for dismissing the alternative option. Belief that:

- The degree of disturbance along the alternative route along the line of walking track will be significantly less than the proposed route along the M2 Motorway fence line.
- It will be easier, more cost effective and environmentally better to regenerate along the alternative route because the terrain is flatter, more even and contains deeper soils.
- A single lane controlled by lights is sufficient to cope with construction traffic.
- The amount of STIF likely to be affected by the alternative route would be substantially less.
- EIS 1 did not properly assess all locations for the access road and therefore is flawed. Calls for the approval process to be reappraised given that an alternative route has been recognized and needs proper evaluation.
- EIS 1 approval was for a permanent road. As the road is now temporary, matters for consideration under s.79C of the *Environmental Planning and Assessment Act 1979* are different. The main activity is effectively reinstatement and regeneration of the bushland and not road construction. EIS 1 should be revisited.

Response 7

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 8

Support for use of the M2 Motorway as the access route for the fifteen month period necessary to build the Cheltenham Services Facility. Heavy vehicles leaving the site should travel in an eastern direction to Christie Road, cross over the motorway, and return in a westerly direction to Pennant Hills Road. Trucks entering the site should return from Pennant Hills Road and travel in an easterly direction to the site. The M2 Motorway was used for the removal of fill from excavation for the Epping-Chatswood Rail line; there is no reason why it should not be used again.

Response 8

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Issue 9

No consideration has been given to emergency access to Cheltenham Oval site in the event of an incident on the NWRL. Emergency services will need to access the site by the most direct route, which is from the M2 Motorway as it is virtually on grade with the site and the distances involved are short. Accessing the site by way of local roads is less direct, and the time lost could make a significant difference in an emergency.

Response 9

Consultation has been undertaken with emergency services regarding the design of the NWRL and access requirements. It is anticipated that adequate emergency access would be provided via Castle Howard Road during operations.

Construction – Heavy vehicle movements

Issue 10

Kirkham Street is a local road and was never designed for heavy traffic. Presently, it is subject to a 3 tonne load limit which would ordinarily prevent spoil removal vehicles. Currently, the street is heavily congested during morning and evening peak times, which has contributed to surface degradation. Concerns that heavy vehicle movements will cause substantial damage to the road's structure.

Response 10

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Additionally, the use of load limited roads is permitted by heavier vehicles if the destination is on the road. Mitigation T18 in Table 9.25 of EIS 2 identifies the requirement to undertake dilapidation reports for all affected local roads from the construction access / egress point to the arterial road. This is reproduced in Chapter 9 of this report.

Issue 11

Infrastructure on Kirkham Street will be affected by heavy vehicle movements. Sydney Water's water reticulation mains are old and already fail regularly, largely due to the effect of existing traffic. The impact of an additional 70 heavy vehicle movements per day could cause a significant increase in the rate of water main failure in the area.

Response 11

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for the Major Civil Construction Works contain conditions relating to impacts to third party property and structures (conditions E26 to E31).

Issue 12

The majority of traffic from both the Cheltenham Services Facility and the work site at Epping will be redirected northwards, adding another 170 heavy vehicle movements per day along Beecroft Road between Carlingford Road and Pennant Hills Road. Beecroft Road is already a major traffic artery which is seriously congested in peak hours, and adding this volume of heavy traffic will only exacerbate existing problems.

Response 12

The Epping construction site will see an increase in traffic activity for the period of construction in the vicinity of this site. The magnitude of these forecast increases and the associated impacts have been documented in EIS 2. Peak period delays will increase at intersections in the vicinity of the site both as a result of NWRL traffic and background traffic growth. These impacts will be mitigated by facilitating access via Ray Road as well as Beecroft Road and minimising truck traffic generation during peak periods where reasonable and feasible. Following completion of construction, the Epping and Cheltenham Services Facilities would only generate traffic during times of occasional maintenance activity.

Construction – Traffic and transport

Issue 13

The predicted 70 heavy vehicle movements per day will overload Kirkham Street and cause congestion problems. The street is the major link between Beecroft Village and residential areas south of the M2 Motorway that feed into it. Currently, the street is heavily congested during morning and evening peak times and this situation will become exacerbated. Furthermore, there will be conflict between existing traffic movements turning north out of Kirkham Street and proposed heavy traffic. Heavy trucks will need to use both lanes of Beecroft Road to complete such turns, with consequent delay to other traffic.

Response 13

The predicted 70 heavy vehicle movements per day from Cheltenham Services Facility equates to an average of one movement every 10 minutes during daytime construction hours, which would have a negligible impact on Kirkham Street and intersection performance at the Beecroft Road / Kirkham Street intersection.

Construction – Public safety

Issue 14

Traffic congestion and heavy vehicle movements will present a danger to children crossing Kirkham Street during school hours.

Response 14

The predicted 70 heavy vehicle movements per day from Cheltenham Services Facility equates to an average of one movement every 10 minutes during daytime construction hours. This is not anticipated to have a significant impact on the safety of pedestrians crossing Kirkham Street.

Appropriate pedestrian management arrangements will be documented in the Construction Traffic Management Plan.

Issue 15

The majority of traffic from both the Cheltenham Services Facility and the work site at Epping will be redirected northwards, adding another 170 heavy vehicle movements per day along Beecroft Road between Carlingford Road and Pennant Hills Road. There are four schools (Cheltenham Girls' High School, Beecroft Public School, Arden Junior School and Mount St Benedict Girls High School), two nursing homes (Chesalon and Beecroft) and the Beecroft shopping centre along this route. Increased traffic congestion and heavy vehicle movements will present significant safety issues to these facilities.

Response 15

Condition E35 to the Stage 1 – Major Civil Construction Works approval requires the Proponent to develop Construction Traffic Management Plans to address, amongst other things, haulage management past sensitive uses (including education facilities). It is anticipated that a similar condition will be imposed on any EIS 2 approval. The land uses referred to are located on existing arterial roads which typically carry high traffic volumes and moderate to high proportions of heavy vehicles. That is, these land uses already have a direct interface with arterial roads. Notwithstanding, it has been demonstrated in EIS 2 that the proposed volumes and routes of NWRL generated construction traffic to and from the Epping and Cheltenham construction sites will not have adverse impacts upon traffic flow efficiency or safety. Following completion of construction, the Epping and Cheltenham Services Facilities would only generate traffic during times of occasional maintenance activity.

Construction – Community facility impacts

Issue 16

Concerns that the occupants of the four schools (Cheltenham Girls' High School, Beecroft Public School, Arden Junior School and Mount St Benedict Girls' High School), two nursing homes (Chesalon and Beecroft) and the

Beecroft shopping centre along the proposed heavy vehicle route on Beecroft Road, will be disadvantaged in the point of view of health and convenience.

Response 16

Condition E35 to the Stage 1 – Major Civil Construction Works approval requires the Proponent to develop Construction Traffic Management Plans to address, amongst other things, haulage management past sensitive uses (including education facilities). It is anticipated that a similar condition will be imposed on any EIS 2 approval. The uses referred to are located on existing arterial roads which typically carry high traffic volumes and moderate to high proportions of heavy vehicles. That is, these uses already have a direct interface with arterial roads. Notwithstanding, it has been demonstrated in EIS 2 that the proposed volumes and routes of NWRL generated construction traffic to and from the Epping and Cheltenham construction sites will not have adverse impacts upon traffic flow efficiency or safety. Following completion of construction, the Epping and Cheltenham Services Facilities would only generate traffic during times of occasional maintenance activity.

Issue 17

Local bush regeneration groups have worked hard for more than twenty five years to bring the area to its present condition. It is unacceptable that this work should be sacrificed for short-term purpose. Preference that any temporary haulage road is carefully located to minimise disruption to this area.

Response 17

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The final location of the Kirkham Street access road would be determined with consideration of all relevant aspects including constructability, cost and environmental impacts. A bushland management / rehabilitation plan would be prepared in consultation with Hornsby Shire Council. This has previously been committed to as part of the Submission Report for Stage 1 – Major Civil Construction Works.

Operation – Types of trains

Issue 18

Concerns regarding the reasons for the proposal to change heavy rail to metro style trains and belief that there has been no proper explanation given as to why the change has been considered. It contradicts the Government's pre-election promotion of heavy rail to Rouse Hill. Belief that a metro system works best in locations with large passenger volumes and short transit distances. Sydney, in comparison, has smaller volumes and much longer distances. Passengers travelling on NWRL, particularly at peak times, will be required to stand for most of the journey, up to 30 minutes or more.

Response 18

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

Sydney's Rail Future: Modernising Sydney's Trains introduces single deck, rapid transit transport trains on the NWRL project.

The NWRL has been identified as a key priority railway transport infrastructure project which would provide a significant expansion to Sydney's rail network in an area of future population and jobs growth.

Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods), will be operated with new generation single deck trains, advanced signalling and dedicated track. Over time, as demand increases, service frequency could increase up to 20 trains an hour – or one every three minutes.

The NWRL will introduce single deck, rapid transit trains on the Epping to Chatswood Rail Link. Sydney will also have a second crossing under the Harbour linking to a new CBD line and new stations, which will use rapid transit services that will also eventually operate on the Bankstown line and to Hurstville on the Illawarra line.

This plan will eventually enable Sydney Trains to carry another 90,000 to 100,000 people per hour in the peak.

The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Passengers travelling from Beecroft or Cheltenham to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Passengers travelling from Beecroft or Cheltenham to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Operation – Timetable / trip duration

Issue 19

If operated as a stand-alone metro style system, NWRL will have to be coordinated with existing heavy rail services, most of the time benefits which might otherwise appear will be lost.

Response 19

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

Sydney's Rail Future: Modernising Sydney's Trains introduces single deck, rapid transit transport trains on the NWRL project.

The NWRL has been identified as a key priority railway transport infrastructure project which would provide a significant expansion to Sydney's rail network in an area of future population and jobs growth.

Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods), will be operated with new generation single deck trains, advanced signalling and dedicated track. Over time, as demand increases, service frequency could increase up to 20 trains an hour – or one every three minutes.

The NWRL will introduce single deck, rapid transit trains on the Epping to Chatswood Rail Link. Sydney will also have a second crossing under the Harbour linking to a new CBD line and new stations, which will use rapid transit services that will also eventually operate on the Bankstown line and to Hurstville on the Illawarra line.

This plan will eventually enable Sydney Trains to carry another 90,000 to 100,000 people per hour in the peak.

The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Passengers travelling from Beecroft or Cheltenham to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Passengers travelling from Beecroft or Cheltenham to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Issue 20

EIS 2 is silent on matters such as frequency in both peak and off-peak hours and also whether there will be faster services in peak hour where certain stations are skipped. Belief that if all services are to be all stations and running at 30 minute intervals then TfNSW has failed in its Mission Statement.

Response 20

As clearly stated in EIS 2, rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods), will be operated with new generation single deck trains, advanced signalling and dedicated track. Over time, as demand increases, service frequency could increase to up to 20 trains an hour – or one every three minutes. Service frequencies would be reduced to approximately 6 trains per hour (every 10 minutes) during the weekday off peak periods.

Transport – Rail integration

Issue 21

EIS 2 fails to give a proper explanation of the longer-term integration of the proposed metro system with the heavy rail network. Concerns that future plans to link NWRL to the Richmond line will be lost with the proposal of metro style trains. The proposal to bore new tunnels for the NWRL at a size to suit new, single decked carriages is short sighted and means that NWRL will essentially operate as a stand-alone system incapable of being integrated with the wider Sydney rail network.

Response 21

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

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The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Passengers travelling from Beecroft or Cheltenham to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Passengers travelling from Beecroft or Cheltenham to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

The design of the NWRL at Cudgegong Road Station and around the stabling facility safeguards for the future expansion of the line to the west. Consistent with the Long Term Transport Master Plan, TfNSW are currently investigating options for the expansion of rapid transit services to Marsden Park.

Issue 22

EIS 2 fails to address the existing proposal for a connecting line between Epping and Parramatta. This cannot be disregarded as this proposal is a vital part of any expanded Sydney rail network. It was designed as a connection between the existing Western and North Shore heavy rail lines, and by its very nature can only be practicable as a heavy rail link. Concerns that building the NWRL as a metro system and using the Epping-Chatswood link for the purpose would either render the link redundant or necessitate the construction of a second, heavy rail link between Epping and Chatswood.

Response 22

The NWRL alignment would allow for any future Parramatta to Epping Rail Link to join the tunnels approximately 800 metres north of Epping.

Transport – Epping-Chatswood Rail Link

Issue 23

Commuters joining at Stations between Epping and Hornsby and travelling to the city via Chatswood can presently complete the trip without having to change trains. Under the NWRL proposal, commuters would be forced to make two changes – from heavy rail to the metro at Epping and from the metro back to the heavy rail at Chatswood. Concerns this will cause both transit inconvenience, platform congestion and longer travel times. Belief that the TfNSW mission statement that "the customer is at the centre of everything we do in transport" is flawed in this instance. Suggestion that if this proposal goes ahead, there will be a substantial negative effect on residents north of Epping to use public transport, and may in fact prove a disincentive for them to use public transport.

Response 23

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

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Passengers travelling from Beecroft or Cheltenham to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Issue 24

Given the large catchment from which NWRL will draw, it is a fair assumption that most, if not all, seats will be occupied by the time trains arrive at Epping. This compares unfavourably with the present situation, where a commuter joining at Beecroft can be reasonably sure of finding a seat.

Response 24

Each train operating on the NWRL will have eight carriages and be capable of transporting up to 1,300 people.

The number of seats per train is yet to be determined, but will be based on customer research about their needs.

The rapid transit service will be different to all others in Sydney, not least because people will be getting on and off all the way along the line, at major centres like Macquarie Park, Macquarie University and Chatswood. In fact, about one third of all customers aren't expected to travel past Chatswood.

Issue 25

Request for more information regarding whether Hornsby to Epping commuters have the option of staying on the train at Epping and continuing to the city via Strathfield.

Response 25

Passengers travelling from Beecroft or Cheltenham to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Transport – Disability access

Issue 26

Travelers in wheelchairs or with other disabilities will be seriously disadvantaged and inconvenienced under the Epping to Chatswood Rail Link proposal, resulting in difficulty changing trains because of platform congestion.

Response 26

All stations on the NWRL line would be fully accessible and facilitate wheelchair access. There would be a cross-platform interchange at Chatswood which would allow ease of interchange for all passengers.

Transport – Network capacity

Issue 27

The Harbour Bridge is near capacity, dealing with 18 train movements per hour in each direction, when the maximum capacity is 20 movements. Four of those movements are trains to Hornsby via Macquarie Park, leaving 14 movements per hour to be directed to the North Shore line. Belief that this suggests inefficiencies in the allocation of rolling stock. Even allowing that four of these movements for Western line services to Penrith / Emu Plains via Blacktown and another four are directed to the Richmond line, there are still 6 movements per hour to deal with services between Chatswood and Hornsby that do not proceed to a Western line service. Taking two of these and adding the two movements not presently being used would allow four heavy rail services to be directed to the NWRL without disruption to existing Northern services. An additional four to six trains per hour will be required once NWRL is operating.

Response 27

Section 2.5 of EIS 2 describes Sydney's Rail Future: Modernising Sydney's Trains, which was released in June 2012, and is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

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The NWRL will introduce single deck, rapid transit trains on the Epping to Chatswood Rail Link. Sydney will also have a second crossing under the Harbour linking to a new CBD line and new stations, which will use rapid transit services that will also eventually operate on the Bankstown line and to Hurstville on the Illawarra line.

This plan will eventually enable Sydney Trains to carry another 90,000 to 100,000 people per hour in the peak.

The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Passengers travelling from Beecroft or Cheltenham to the CBD will have the option of a direct trip via Strathfield on the suburban network operating with simpler timetables and improved frequencies.

Passengers travelling from Beecroft or Cheltenham to destinations such as Chatswood, Macquarie Park and North Sydney would have the option of using the NWRL from Epping (interchanging from the Northern Line). The NWRL will provide a "turn up and go" service, with trains every five minutes. At Chatswood, customers will walk across the platform to change to

an existing service. Trains will be organised to ensure passengers only wait a few minutes to switch from a NWRL train to another train towards the city in peak. Peak period services on the North Shore Line will increase from the current 18 trains per hour to at least 20 trains per hour (prior to a new Harbour Crossing).

The trip from Beecroft to Epping is currently approximately 5 minutes. A trip from Epping to Wynyard, travelling on the NWRL and including interchange, is expected to take no more than 40 minutes, which is equivalent to the current travel time.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Issue 28

NWRL does not address the fundamental problem facing rail travel in Sydney region, which is congestion. In particular, both Wynyard and Town Hall stations are operating at or beyond capacity already and the addition of more passengers from the NWRL will only exacerbate the current constraints. The primary focus should be on removing congestion, so that increased traffic volumes can be handled without difficulty.

Response 28

The NWRL project does not address the current or future operation of Wynyard and Town Hall Stations.

Planning – Long term transport planning

Issue 29

While there are long-term plans to extend the proposed metro network, there is no firm timeline for this action. Unless such a timeline is confirmed, rail commuters will be justifiably cynical about these plans. Boring tunnels to suit existing heavy rail lines would at least ensure that NWRL can be integrated, so that if the longer term plans do not eventuate the inconvenience to travelers will be minimised.

Response 29

A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades

The NWRL is being designed to accommodate single deck, rapid transit trains which would be fully integrated into Sydney's public transport network as part of Sydney's Rail Future. Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods) will be operated with new generation single deck trains, advanced signalling and dedicated track.

The NWRL and future Tier 1 Rapid Transit network will be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

6.2.10 Beecroft Sports Club Incorporated

Construction – Community facility impacts

Issue 1

The loss of facilities during construction will have a significant negative impact on the Beecroft Sports Club and its divisions. The Beecroft Sports Club conditionally supports NWRL on the assumption that:

1. Alternative facilities, which are to the satisfaction of all divisions of the club, will be provided for use during the period of construction.
2. Existing facilities will be reinstated following the completion of construction.

Response 1

It is acknowledged that the Cheltenham Services Facility site would impact some existing community facilities. The facilities of the club include a children's playground, netball courts, tennis courts, cricket practice nets and car parking.

During the construction period, TfNSW will endeavor to provide alternative community facilities. Any disruption of the existing sporting facilities during construction would be minimised wherever practicable and would be offset through the provision of temporary facilities of an equivalent standard. This would be planned in consultation with Hornsby Shire Council and local user groups including the Beecroft Sports Clubs and its affiliates.

TfNSW would undertake ongoing consultation with relevant stakeholders to determine the final outcome for the replacement community facilities at Cheltenham. Following construction of the facility, items that had been displaced would be able to be re-established, such as the netball training courts and the sports amenities building. There would also be opportunities to create a positive legacy for the local community and facilitate improvements to the sporting and recreational area. It is proposed to upgrade the existing sports amenities building, and effectively conceal the rail service facility, as shown in Figure 6.51 to Figure 6.52 of EIS 2. Subject to consultation with the local community, other users of the area and Hornsby Shire Council, a more detailed design of this option would be progressed.

Issue 2

The arrangements for temporary facilities for the Beecroft Sports Club are yet to be confirmed, and will be the subject of future discussions involving the Club and the appointed construction contractor. Interim requirements during construction are:

Oval – with lights:

- Full access to the site during construction including the ability to bring an ambulance on site.
- Ensure lights are provided.

Netball courts with lights:

- Ensure 2 – 3 courts are provided as a replacement.
- Fencing around two of the courts to ensure balls are not lost and impact on the other sports being played in the area.
- Wet weather area shelter for parents or children.
- Ensure lights are provided.

3 cricket nets:

- 3 Cricket training nets.
- These could be relocated onto the Cheltenham Oval in the current kick wall area used by the Soccer Club, with the run-up areas protruding onto the ground.

Amenities building:

- Adequate security to protect storage items / property.
- Change rooms.
- Toilets.
- Secure storage for each division. Football will require onsite storage with ready access during the football season (March – September).
- Canteen.

Car park:

- Parking by all divisions and local community – expected to be on the local roads or in the area to the north of the oval.

Children's playground:

- This is not required in the temporary state during construction.

Response 2

During the construction period, TfNSW will endeavor to provide alternative community facilities. Any disruption of the existing sporting facilities during construction would be minimised wherever practicable and would be offset through the provision of temporary facilities of an equivalent standard. This would be planned in consultation with Hornsby Shire Council and local user groups including the Beecroft Sports Clubs and its affiliates.

Issue 3

As a consequence of the construction, there may be the opportunity to redesign the layout of the Cheltenham Oval site as a whole, and consider repositioning some facilities to maximise use of the space. From recent discussions, it would appear that this may require re-assessment towards the end of construction, in order to appreciate the final area available for locating the various facilities. If there was an opportunity during the construction to level the ground, this would have significant ongoing benefits in terms of enabling the repositioning of facilities, and ease of construction. We would welcome the opportunity to work with NWRL on the final design/layout of this area when the time comes.

Response 3

TfNSW would undertake ongoing consultation with relevant stakeholders to determine the final outcome for the replacement community facilities at Cheltenham. Following construction of the facility, items that had been displaced would be able to be re-established, such as the netball training courts and, if required, the sports amenities building. There would also be opportunities to create a positive legacy for the local community and facilitate improvements to the sporting and recreational area. It is proposed to upgrade the existing sports amenities building, and effectively conceal the rail services facility, as shown in Figure 6.51 to Figure 6.52 of EIS 2. Subject to consultation with the local community, other users of the area and Hornsby Shire Council, a more detailed design of this option would be progressed. The request for level ground surface following conclusion of construction to aid final land use is noted.

Operation – Community facility impacts

Issue 4

Support for the proposal for the new building housing the Cheltenham Services Facility to be combined with a reinstated amenities building. In addition to the reinstatement of the amenities building, support is based on the understanding that the following elements will be reinstated:

Oval – with lights:

- Maintain lighting.
- Replace kickwall area for Junior Soccer players.

Netball courts with lights:

- Replace the courts with a suitable footing / bed to be able to accommodate 4 courts.
- Ensure 3 courts are provided as a replacement.
- Fencing around two of the courts to ensure balls are not lost and impact on the other sports being played in the area.
- The third court would have removable posts and could be multi surface to ensure mixed usage by soccer and netball during wet weather.
- Wet weather area shelter for parents or children.
- Ensure lights are provided.

3 cricket nets:

- 3 cricket training nets comparable to those currently at Cheltenham Oval.

Amenities building:

- A single dwelling on the site which could be either single or double storey to allow sufficient area for other elements required on the site.
- Integration with the NWRL services facility.
- Adequate security to protect storage items / property.
- Two change rooms.
- Toilets and showers.
- Large meeting room.

- Appropriate, secure storage for each division, comparable to current storerooms.
- Canteen.
- Council storage room (if required by council).
- Large covered area.

Car park:

- Parking by all divisions and local community.

Children's playground:

- Large playground area.

Response 4

TfNSW would undertake ongoing consultation with relevant stakeholders to determine the final outcome for the replacement community facilities at Cheltenham. Following construction of the facility, items that had been displaced would be able to be re-established, such as the netball training courts and, if required, the sports amenities building. There would also be opportunities to create a positive legacy for the local community and facilitate improvements to the sporting and recreational area. It is proposed to upgrade the existing sports amenities building, and effectively conceal the rail services facility, as shown in Figure 6.51 to Figure 6.52 of EIS 2. Subject to consultation with the local community, other users of the area and Hornsby Shire Council, a more detailed design of this option would be progressed. The request for reinstatement / construction of the features listed is noted.

Issue 5

Quality, local sporting facilities are essential to the Community and critical in maintaining the Sports Club's viability. We reiterate our willingness to work with the NWRL and the Hornsby Shire Council to devise a plan for the period of construction and afterwards that is satisfactory to all parties.

Response 5

TfNSW would continue to undertake consultation with relevant stakeholders, including Hornsby Shire Council and Beecroft Sports Club, to determine the final outcome for the replacement community facilities at Cheltenham.

6.2.11 Castle Hill Players

Design – Station / stabling location

Issue 1

The plan for Showground Station as outlined in the EIS 2 is to be commended for its minimisation of adverse impact on the Castle Hill Showground, and The Pavilion Theatre in particular.

Response 1

Castle Hill Players' comment is noted.

Issue 2

The increased number of road access points and the relocation of Showground Station adjacent to Carrington Avenue are positive aspects.

Response 2

Castle Hill Players' comment is noted.

Project – Need for

Issue 3

Castle Hill Players believes the current plan for Showground Station will provide an asset to the area and will be of long term benefit to the Castle Hill Showground itself, provided all necessary steps are taken to provide for the current and future users and attenders of The Pavilion Theatre and other Showground functions.

Response 3

Castle Hill Players' comment is noted. During operations access would be maintained to the Showground precinct via Doran Drive, the new intersection at Showground Road and the new station precinct road network. Additionally, the proposed car park would be available for dual use during off peak periods. These arrangements would allow for the continued functionality of the Showground area.

Construction – Access

Issue 4

Castle Hill Players is concerned about the provision of unhindered access to the Showground during construction. It is absolutely vital that a satisfactory plan is made as soon as possible for access to the Showground once Doran Drive is closed.

Response 4

Access to the Showground precinct during construction would be available from the new signalised intersection on Showground Road.

Provision for public access to and from the Showground precinct via the western side (adjacent to Cattai Creek) of the construction site and / or the eastern side of the site would be provided. At this stage, opportunities for safe pedestrian and cyclist access have been identified. However, access for vehicles may be constrained by the construction activities and would be subject to further discussions with the successful construction contractor.

The NWRL construction site would be fully fenced to prevent unauthorised access / egress from the construction site.

Issue 5

Castle Hill Players supports the new entrance via Showground Road. The group expects this will be the route (shared with construction traffic) by which all Showground users will access the Showground until Doran Drive is reopened. If the new Carrington Road entrance near Cattai Creek could be completed first and continued into the lower part of the Showground prior to tunnelling, this could provide access for Showground users.

Response 5

Provision for public access to and from the Showground precinct via the western side (adjacent to Cattai Creek) of the construction site and / or the eastern side of the site would be provided. At this stage, access for vehicles to and from the Showground may be constrained by the construction activities and would be subject to further discussions with the successful construction contractor and considered during the development of the detailed construction program.

Construction – Noise and vibration

Issue 6

Castle Hill Players is concerned about noise from trucks and construction. There is no mention of noise impacts on the theatre in EIS 2. Noise is a major issue to theatre performances and Castle Hill Players would like a clear explanation of the exposure (if any) to construction and truck noise. The Pavilion Theatre is an old building and not sound proofed. The performances are usually in the evenings, but there are also some day time performances at the weekend.

Response 6

The Pavilion Theatre would be considered an 'other sensitive receiver'. The theatre itself would not be considered an active recreation area, although EIS 1 and EIS 2 apply this classification to the Showground as a whole. The Noise Management Levels (NMLs) for the Pavilion Theatre would be determined considering its usage. The Construction Noise and Vibration Strategy refers to the maximum internal noise levels in AS2107, which would be 30 dBA for drama theatres. An external NML of 50 dBA applies assuming windows and doors can remain closed during performances.

The noise impacts on the theatre would be quantified in more detail during the preparation of the site-specific Construction Noise and Vibration Impact

Statement at this location. No exceedances of the vibration goals are anticipated.

The theatre is over 200 metres from the construction site. During Stage 1 construction (assessed as part of EIS 1), minor exceedances of the NMLs (<10 dB) are possible during the initial earthworks and site establishment period (restricted to daytime hours). Compliance with the evening NMLs would be expected as an acoustic shed is proposed at this location to mitigate night-time and evening noise to nearby residential receivers. Noise from heavy vehicle movements transporting spoil may be noticeable in the evening and at other times but would not be louder than noise from existing heavy vehicles on Showground Road.

Due to the distance of the theatre from the works and the alignment, compliance with the NMLs would be expected for the Stage 2 construction works and during operation.

Construction – Traffic and transport

Issue 7

Castle Hill Players is concerned about the potential for construction workers' parking competing with general public parking around Showground facilities (such as The Pavilion Theatre). Castle Hill Players would appreciate efforts to keep all construction traffic, including the parking of workers' vehicles, well away from Showground parking areas and buildings especially. During busy periods parking is already difficult around the Pavilion Theatre with competition from other Showground users. We have a large number of older patrons and close parking to our theatre assists their continuing attendance.

Response 7

Construction worker parking would be provided within the construction site. Mitigation measure T10 in Table 9.25 of EIS 2 identifies the consideration of the need for, and provision of, remote parking location and shuttle bus transfers for construction sites where sufficient parking cannot be provided within site boundaries.

Prior to construction site establishment, Construction Traffic Management and Control Plans would be prepared in consultation with RMS. Construction site parking considerations would form a component of these plans.

6.2.12 Action for Public Transport (NSW)

Project – Timing

Issue 1

Concerns that NWRL will not operate effectively until complete metro system (single deck) with a new harbour crossing is in operation. Question raised why the NWRL is being constructed before the additional harbour crossing.

Response 1

The NWRL has been identified as a key priority railway transport infrastructure project which would provide a significant expansion to Sydney's rail network in an area of future population and jobs growth.

Sydney's Rail Future: Modernising Sydney's Trains released in June 2012 is an integral part of the NSW Long Term Transport Master Plan. It sets the long term strategy to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. A whole-of-network approach has been taken to long term planning for Sydney's Rail Future. It has closely analysed anticipated future demand across the network to identify areas requiring significant capacity increases. Change will not be delivered overnight. The implementation of the strategy will unfold over the next 20 years through the implementation of a long term program of service improvements, capital works and network upgrades.

Stage 4 of Sydney's Rail Future will see completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the NWRL to extend directly to the Sydney CBD.

Planning – Future growth

Issue 2

Concerns that the Epping to Bella Vista tunnel will be bored at about 6.1 metre diameter, and the narrow bore will put constraints on the future expansion of Sydney's rail network.

Response 2

The NWRL is being designed to accommodate single deck, rapid transit trains which would be fully integrated into Sydney's public transport network as part of Sydney's Rail Future. Rapid transit services, initially 12 trains per hour during peak periods (a train every five minutes in peak periods) would be operated with new generation single deck trains, advanced signalling and dedicated track. The NWRL and future Tier 1 Rapid Transit network would be physically separated from other Suburban and Intercity services (Tier 2 and Tier 3 respectively) that will operate with double deck trains to provide differentiated service levels.

Design – Station design

Issue 3

EIS 2 refers to the "design and operation of 8 new stations". Many of the new stations are underground. It is thus not possible for passengers on the trains to identify them by their surroundings, as happens with surface stations. The design of these new stations at platform level should be unique for each station. This could be assisted by the bold use of colour.

Each station should be readily identifiable from the train as it enters the station. The lack of easy identification is a major failing of the stations on the existing Epping - Chatswood Rail Link. The appearance of the platforms at those stations is of a uniform grey colour. These existing platforms should be refurbished in such a way as to make them also readily identifiable from the trains.

Response 3

Section 6.5 of EIS 2 describes the design of the NWRL. Specifically, Section 6.5.4 provides details regarding Station Identity and Wayfinding.

Conversion works for the ECRL to facilitate the rapid transit operations, which include any station alterations, would be considered and assessed separately.

Design – Station facilities

Issue 4

For stations with more than one entrance / exit, consideration should be given to assigning letters or numbers to each exit to facilitate identification by passengers for wayfinding or for arranging meetings etc. Wayfinding maps should also be placed at the exit points at each of the stations. Maps provided at existing stations on the Epping – Chatswood Rail Link are unsatisfactory and should be upgraded.

Response 4

Section 6.5 of EIS 2 describes the design of the NWRL. Specifically, Section 6.5.4 provides details regarding Station Identity and Wayfinding.

Conversion works for the ECRL to facilitate the rapid transit operations, which include any station alterations, would be considered and assessed separately.

Transport – Bus integration

Issue 5

Concerns that the M2 express bus services are to be withdrawn when the NWRL opens. The M2 will remain the fastest ride to the CBD from most north-west origins; it is a retrograde step to force users of those buses onto a slower service.

Response 5

Section 9.5 of EIS 2 provides details of the anticipated changes to bus services including the replacement of long haul M2 bus services from the western extent of the NWRL corridor with train services whilst preserving some M2 bus services mainly from the eastern part of the corridor.

Section 22.1 of EIS 2 noted that buses are affected by road congestion. Network constraints for buses are most acute on the approach to and within the Sydney CBD, particularly on the Harbour Bridge and around Wynyard Station.

The forecasts presented in Section 9.5.1 of EIS 2 identified that, in the absence of the NWRL, there would be a growth of 144% in M2 buses entering the Sydney CBD by 2021. These constraints mean that growth in bus services cannot accommodate the expected growth in public transport demand. Capacity constraints on the road network demonstrate the need for a mass transit system to facilitate continued growth. The NWRL would have a dramatic impact on travel conditions in the north-west and through to the CBD. Forecast travel time savings of around 10 to 30 percent between the north-west and the key employment destinations of Macquarie Park, Chatswood and Sydney CBD are anticipated by 2021. This represents a much improved travel time reliability compared with bus and private car.

This is consistent with the project objective to 'Deliver Stage 3 of Sydney's Rail Future to improve transport network reliability by facilitating a shift from road to rail for trips to and from the north west, to reduce bus / road congestion and improve amenity in Sydney CBD'.

Reducing congestion on inner city roads (through a reduction in buses entering Sydney CBD from the north-west) would result in additional benefits to bus services from other areas to the north.

Operation – Type of trains

Issue 6

NWRL stations are proposed to be spaced on average about three kilometres apart, as are those on the Epping - Chatswood Rail Link. Advantages of single-deck trains (quick acceleration, short station dwell times) vanish when the stations are so far apart. Request for a full explanation as to why single-deck technology is being introduced for NWRL, instead of on a line with closer stations, eg Central-Hurstville or Central-Ashfield-Homebush.

Response 6

The NWRL would be the first element of a new Tier 1 Rapid Transit Network for Sydney that will ultimately extend to the Bankstown and Hurstville lines.

Stage 5 of Sydney's Rail Future includes the extension of the new single deck service to Bankstown and Hurstville. The Western and Inner West lines would operate as part of the Suburban Network.

The advantages of the rapid transit approach (comfortable, frequent, fast and high capacity services) are not related to distance between stations.

6.2.13 Bicycle NSW

Communication – Consultation

Issue 1

Bicycle NSW is grateful for the opportunity to make this submission and looks forward to the opportunity to work with the NSW Government to contribute to the development and delivery of a better environment for cycling.

Response 1

Bicycle NSW's comment is noted.

Design – Bicycle facilities

Issue 2

Bicycle NSW supports the proposal to the extent that it references the dual requirements for bicycle parking at stations and for the provision of safe cycleway linkages to these stations.

However, Bicycle NSW objects to the proposal because it fails to provide sufficient detail with respect to plans for the creation of specific bicycle related infrastructure. It is our experience that for major projects the tendency has been one of failure to properly embed planning and so in turn failure to adequately resource the investment required to deliver required bicycle infrastructure, leading to a "too little too late" and a somewhat piecemeal approach towards the final stages of the project. The end result is bicycle infrastructure that is less attractive to potential users than it needs to be to deliver on stated government policy goals.

Bicycle NSW supports the submission made to the NWRL EIS 2 by our local affiliate bicycle user group "Bike North". In addition to providing very valuable insight into the level of detail and planning that is required in delivery of adequate bicycle infrastructure, the Bike North Submission demonstrates the importance of local community and user knowledge in informing design and delivery.

Response 2

The NWRL has allowed for safe, secure and weather protected bicycle facilities at all stations to encourage people to combine cycling with rail travel.

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

6.2.14 Bike North

Operation – Traffic impacts / volume

Issue 1

We are extremely supportive of a multi-mode approach to this project that encourages the use of active transport, walking and cycling, for the access of all railway stations. We are concerned however that the planned provision of extensive car parking will encourage inappropriate usage of cars for short journeys. There is a high risk that car parking associated with train stations will exacerbate local congestion.

Response 1

Bike North's support to the NWRL multi-mode approach is noted.

The provision of car parking spaces at each station has been determined based on the anticipated demand and then adjusted for each station to encourage increased uptake of cycling. The station access hierarchy and the design of the station precincts further encourages walking, cycling and bus access to the stations above the use of private cars.

Design – Bicycle facilities

Issue 2

We recognise and are encouraged that EIS 2 gives strong recognition to the value of cycling. It is clear however that planned provision for cycling falls short of the declared position. Improvements to provisions for cycling are required.

Response 2

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 3

The Plan shows the location of bicycle parking at each station which, in most cases, is located in suitable positions. In accordance with the desire to place pedestrians and bicycle users first in terms of access to station entrances, bicycle parking is placed:

- Adjacent to station entrances.
- In highly-trafficked areas.
- In sheltered and well-lit areas.

Response 3

Bike North comment is noted. The station access hierarchy encourages walking, cycling and bus access to the stations above the use of private cars.

Issue 4

A very limited number of bicycle spaces are planned to be provided at the start of station operations. No basis for the number of spaces has been provided however the numbers approximate 1% of the daily vehicle trips forecast to be saved by the NWRL during 2021. It is likely even at the current low mode share of commuter cycling in North Western Sydney that the planned bicycle parking provision will not be sufficient. The very current mode share of cycling presents further risk. A small increase in commuter mode share will generate a very large change in the numbers of cyclists. All stations along the NWRL will have high proportions of commuter trips starting in the area. This means demand for bicycle parking will be higher than would be the case if the stations served primarily as destinations for commuter cyclists

Response 4

Bicycle parking requirements have been determined by taking into account the forecast NWRL station access mode splits and then increased to encourage greater uptake of cycling, especially in areas where terrain and cycling routes provide easy access. The bicycle parking provisions indicated in Technical Paper 2 of EIS 2 are facilities that are planned to be provided at the opening of the NWRL. Safeguarding for the provision of additional bicycle parking spaces has been planned for and spaces would be installed as required.

Issue 5

Standards for bicycle parking are defined in *Australian Standard: AS 2890.3—1993. Parking facilities. Part 3: Bicycle parking facilities.* It is important that all three classes of bicycle parking shown in AS 2890.3-1993 are available at stations. All 3 classes of parking must have roofing cover giving protection from wet weather. The proportions of the bicycle parking forms must be considered. We suggest the following proportions may assist planning:

- Class 1 Fully enclosed individual Lockers – 15%.
- Class 2 Restricted access secure compounds – 50%.
- Class 3 General access locking points (rails, bars, etc…) – 35%.

Insufficient information has been provided in the EIS documents to determine whether the sites identified within the station precincts are large enough to accommodate bicycles appropriately. It should be expected that the different classes of parking will be positioned in slightly different locations. Provision for storage of personal items such as helmets, jackets and gloves should be considered.

Response 5

Bicycle parking types and quantities would be provided at all NWRL stations as defined in the scheduled requirements of *AS 2890.3—1993 Parking facilities. Part 3: Bicycle parking facilities.* The three classes of bicycle parking at each station would be in similar proportions to those recommended by Bike North.

Design – Station precincts

Issue 6

The Plan provides indicative vehicle and pedestrian movement diagrams in the vicinity of the stations, however, no plan is provided for bicycle movements. Bicycle NSW and Bike North recommend that The Plan includes

bicycle movements on these diagrams with particular consideration given to through-traffic and trip generators as follows:

- Through Traffic – Train stations can present significant obstacles to the movement of pedestrians and bicycles through an area. By co-ordinating with local councils, The Department can identify the major desire-lines through station precincts and implement appropriate measures to ensure bicycle through-traffic is catered for.
- Trip Generators – A Bicycle Access Plan needs to show how bicycle users will access major trip generators such as the bicycle parking at stations and shopping centres in the vicinity.

Response 6

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

The station precincts would provide shared pedestrian and cycle paths, off-road and / or designated on-road cycle paths depending on the station. Shared paths would be generous enough to accommodate not only growth in walking and cycling, but also the increasing use of mobility scooters and electric wheelchairs.

Station access for bicycles would be guided by the following urban design guidelines:

- Provide clear, direct bicycle routes throughout precincts and to associated facilities such as to shops, schools.
- Fully integrate bicycle paths into the precinct-wide circulation strategy, and into the bicycle network beyond the precincts; consult with relevant stakeholder groups.
- Provide clear markings or pavement types to separate pedestrians and cyclists on shared paths. Eliminate conflicts between pedestrians and cyclists at high activity zones, eg station entries and retail areas.
- Ensure cycle access routes and lanes are comfortable to use, with even and well-drained surfaces and places to rest.

Issue 7

The attractiveness of cycling to the stations along the NWRL is critically dependent on having safe and well designed routes. EIS 2 planning of catchment areas around stations has assumed a radius of 800 metre walking distance or approximately 10 minutes travel time. Planning for cycling does not appear to have been given the same consideration, however a 10 minute travel radius is also reasonable for bicycle travel.

Access routes to stations should therefore anticipate a catchment radius around stations of 3 km. Bike North asks that cycling organisations be included in the process of designing suitable access routes to the stations.

While the need for further work is required we note the following route requirements around the NWRL stations. We emphasise Cherrybrook Station in particular as having difficult conditions which will require significant works to resolve.

Response 7

The need for effective cycling links within an approximate 3 km catchment of each new rail station is noted. Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 8

The station diagrams indicate that no separated bicycle facilities will be provided in station precincts. This will result in bicycle users either sharing the road with buses, taxis and cars in a congested space or sharing the footpath in an even more congested space. Bicycle NSW and Bike North recommend that TfNSW adopts the approach recommended in the NSW Transport Masterplan and examines ways to incorporate separated bicycle facilities that integrate with local bicycle networks. The need for separated facilities is particularly pertinent in cases where the new station precincts are positioned on an existing bicycle thoroughfare. In this case, bicycle users are travelling through the station precinct, as opposed to travelling to the station precinct and need to be treated differently. Bicycle users travelling to a station

precinct and seeking to stop and park their bike will be slowing to navigate the many obstacles present at a destination point. Bicycle users travelling through a station precinct will be focussed on their overall journey which may result in unpleasant and even dangerous conditions for pedestrians.

Response 8

The station precinct would effectively be a local and shared environment for cyclists. Bicycle users not accessing the station precinct would be encouraged to use separate facilities outside the station precinct. Separate bicycle facilities that integrate with local bicycle networks would be considered as part of the station precinct detailed design stage. The station precincts would provide shared pedestrian and cycle paths, off-road and / or designated on-road cycle paths depending on the station.

Issue 9

The proposed design of Cherrybrook Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.11 and the omission of bicycle movements on Figure 6.12 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements. In particular:

- Are bicycles permitted to use the pedestrian bridge from Castle Hill Road at Glenhope Road?
- Are bicycles permitted to use the pedestrian path heading North past the on-site detention basin?

The primary bicycle route through this precinct is along the existing shared path on Castle Hill Road. This will continue to function as the primary bicycle route, providing access to the station from Glenhope Road. Other bicycle users are likely to approach the station from Robert Road or Franklin Road and will seek to access the station via the "new road". They will also use these roads to seek access to Castle Hill Road shared path. Bicycle NSW recommends that:

- Bicycle parking be provided on either side of the rail cutting to reduce the need for bicycles to cross the busy station entrance.
- A curb-separated, bi-directional bicycle path that connects Franklin Road and Robert Road be provided north-east of the "new road". The bi-directional path would feed bicycle users into the Primary Plaza Space.
- The pedestrian crossing at the Primary Plaza Space should include bicycle markings at the north end of the crossing which lead bicycle users to the parking area.

Response 9

The Cherrybrook Station precinct would provide safe access to cyclists and other station users. The bridge over the rail line from Castle Hill Road would provide for both pedestrian and cyclist access to the station. The path heading north past the on-site detention basin would be a dedicated shared path for the use of both pedestrians and cyclists.

Bike North's recommendations are noted and would be considered during the Cherrybrook Station precinct planning stage.

Issue 10

The proposed design of Castle Hill Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.15 and the omission of bicycle movements on Figure 6.16 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements.

Response 10

The Castle Hill Station precinct would provide safe access to cyclists and other station users. Details regarding bicycle access and safety would be provided as part of the station precinct planning stage.

Issue 11

The proposed design of Showground Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.19 and the omission of bicycle movements on Figure 6.20 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements.

Given the location of the bicycle parking just north of the station entrance, the Secondary Plaza Space along New Street B seems to provide access to the station while avoiding the dangerous kiss-and-ride areas. However, it is not clear if bicycle users will be permitted to use this plaza space. Bicycle NSW recommends that a separated, bi-directional path be marked along the north edge of the landscaped area between the bicycle parking and the Middleton Avenue extension.

Response 11

The Showground Station precinct would provide safe access to cyclists and other station users. Bike North's recommendations are noted and would be considered during the Showground Station precinct planning stage.

Issue 12

The proposed design of Norwest Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.23 and the omission of bicycle movements on Figure 6.24 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements.

Response 12

The Norwest Station precinct would provide safe access to cyclists and other station users. Details regarding bicycle access and safety would be provided as part of the station precinct planning stage.

Issue 13

The proposed design of Bella Vista Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.27 and the omission of bicycle movements on Figure 6.28 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements. The primary bicycle route through this precinct is along the existing shared path on Old Windsor Road. This will continue to function as the primary bicycle route with many bicycle users seeking to access the station at the pedestrian bridge over Old Windsor Road. Other bicycle users are likely to approach the station from Brighton Drive and Lexington Drive.

Bike North recommends that the pedestrian bridge over Old Windsor Road include a ramp for bicycle users to provide easy access to the bicycle parking near the station entrance. The proposed designs do not indicate whether bicycle users can use the pedestrian bridge or whether a lift or ramp is provided. The designs do not show how it is envisaged that bicycle users will access the bicycle parking.

Response 13

The Bella Vista Station precinct would provide safe access to cyclists and other station users. Bike North's recommendations are noted and would be considered during the Bella Vista Station precinct planning stage.

Bicycle users would be allowed to use the pedestrian bridge over Old Windsor Road.

Issue 14

The proposed design of Kellyville Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.31 and the omission of bicycle movements on Figure 6.32 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements. Bike North recommends that:

- The bicycle parking be moved to the north end of the large car park in close proximity to the major pedestrian flows (but without obstructing them). This location requires less interaction with busy motorised traffic than the current position, while still providing good passive surveillance.
- The pedestrian bridge over Windsor Road be designed with adequate width to accommodate both bicycles and pedestrians. The project documentation should clearly state that the bridge is for shared use.
- A shared path is provided along the south side of Samantha Riley Drive as this is a key access point for this station. It is critical that this path is constructed as part of the Kellyville Station Precinct so that an adequate connection is available for use by local councils in developing their own bicycle network.

Response 14

The Kellyville Station precinct would provide safe access to cyclists and other station users. Bike North's recommendations are noted and would be considered during the Kellyville Station precinct planning stage.

Bicycle users would be allowed to use the pedestrian bridge over Old Windsor Road.

Issue 15

The proposed design of Rouse Hill Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.35 and the omission of bicycle movements on Figure 6.36 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements. Access to the bicycle parking is restricted due to the busy road environments to the east and west (T-Way) of the station.

Bike North recommends that access to the bicycle parking from the north (Rouse Hill Drive) and south (White Hart Drive) be provided as a bi-directional bicycle path along the edge of the landscaped areas.

Response 15

The Rouse Hill Station precinct would provide safe access to cyclists and other station users. Bike North's recommendations are noted and would be considered during the Rouse Hill Station precinct planning stage.

Issue 16

The proposed design of Cudgegong Station does not indicate how safe and efficient bicycle access will be provided. The omission of bicycle lanes on Figure 6.35 and the omission of bicycle movements on Figure 6.36 make it difficult to assess whether appropriate bicycle facilities will be provided around the station to facilitate bicycle movements. Bike North recommends that:

- A bi-directional bicycle path is provided from the bicycle parking at Cudgegong Station to Cudgegong Road.
- A bi-directional bicycle path or shared path is provided on the west side of Cudgegong Road to join future networks on Schofields Road and Guntawong Road.

Response 16

The Cudgegong Station precinct would provide safe access to cyclists and other station users. Bike North's recommendations are noted and would be considered during the Cudgegong Station precinct planning stage.

Operation – Traffic access route

Issue 17

We recognise and are encouraged that EIS 2 gives strong recognition to the value of cycling. It is clear however that planned provision for cycling falls short of the declared position. Improvements to provisions for cycling are required in the following area:

- EIS 2 does not provide any definition of cycle routes to local stations.
- The EIS has not provided a planning strategy for cyclists which is consistent with studies and plans documented for pedestrians.

Response 17

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 18

Bike North believes that high quality cycling infrastructure must be provided from the Cherrybrook Station precinct to all parts of its catchment area. Provision of cycling facilities will be beneficial to the wider transport network in reducing vehicular demand, and increase the attractiveness of a sustainable and healthy mode of local transport.

The EIS has correctly identified the lack of cycling facilities to and from the proposed Cherrybrook Station precinct. Bike North is therefore extremely disappointed to learn that the EIS provides absolutely no consideration - let alone

providing facilities - to local cyclists, affording them only the "opportunity to access the station via the local road networks", with no mention of any provision for cycling facilities. Bike North regards this as absurd.

The "upgrade" of Franklin and Robert Roads without construction of a high quality separated cycleway causes the greatest concern. Franklin and Robert Roads provide the only direct routes for cyclists accessing Cherrybrook Station from the key catchment area to the north of the station. The significant increases in the amount of vehicular traffic along both Franklin and Robert Roads will make it virtually impossible for any cyclists to ride their bicycles to access Cherrybrook Station.

Bike North believes that a separated cycleway must be constructed along Franklin Road and Robert Road from the station precinct to John Road. The bicycle network to other parts of the Cherrybrook Station catchment could then be provided along existing local streets from the intersections of John Road and Franklin / Robert Roads, given the relatively low volumes of traffic on most roads beyond John Road. However, there are a few exceptions due to the hilly terrain around Cherrybrook Station.

Franklin Road provides the best terrain to Cherrybrook Station for Cherrybrook residents north of New Line Road. The terrain either side of Franklin Road is steep and disincentivises cycling. Franklin Road between John Road and Franklin Road is ideal due to, not only the best terrain with the gentlest gradients, but also the relatively low traffic volumes. On-road facilities are sufficient on this section. However, there is currently no provision to cross New Line Road at Franklin Road. With the high traffic volumes on New Line Road, it is impossible for either cyclists or pedestrians to safely cross at this point. Bike North believes that a new traffic light for pedestrians and cyclists must be constructed to enable cyclists to safely cross New Line Road at Franklin Road. Further to this, Bike North believes a cycleway must be constructed along New Line Road and Shepherds Drive from the intersection of Franklin Road to Cherrybrook Village shopping centre. This cycleway will provide access for a large part of the Cherrybrook Station catchment by connecting with the current cycleway linking Cherrybrook Village and Mark Place, and onto the on-road cycle facilities along Beechwood Parade and Purchase Road.

Response 18

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 19

In the vicinity of Castle Hill Station, a cycleway is required along Crane Road and Castlewood Drive providing a station connection from West Pennant Hills valley. A crossing of the bush area from Excelsior Road to Darcy Road should be investigated.

Response 19

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 20

In the vicinity of Showground Station, a cycleway is required along Middleton Avenue and Parsonage Road to Old Northern Road. Pathway access should be established from Doran Avenue to Salisbury Road. Such a path would provide major benefit to people working in the Salisbury Road business area, and improve travel conditions for cyclists.

Response 20

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 21

In the vicinity of Norwest Station, current cycle paths are from Barina Down Road to Fairmont Avenue and from Fairmont Avenue across Brookhollow Avenue to the Norwest Boulevard underpass. These must be upgraded.

A cycleway should be constructed along the length of Brookhollow Avenue to provide an alternate bicycle access route to the Norwest Station.

A cycleway should be constructed along Barina Downs Road providing safe access from Bella Vista and Crestwood residential areas.

A cycle way is required to connect Norwest Station with Fairway Drive.

Response 21

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

Issue 22

Developments around Cudgegong Road Station will result in large numbers of cyclists. A cycleway should be built along the full length of Schofields Road from Windsor Road to Railway Terrace.

A cycleway should be constructed along Cudgegong Road from Schofields Road to Rouse Road, and along Rouse Road to Windsor Road.

A cycleway should be constructed along Tallawong road from Schofields Road to Guntawong Road.

Response 22

Planning of local bicycle networks is not part of the NWRL project however, TfNSW would work with relevant authorities to integrate proposed station precincts with local bicycle networks.

6.2.15 Inala

Design – Public safety

Issue 1

Referencing Chapter 9.5.2 of EIS 2, following an audit of the existing traffic facilities in the Cherrybrook local road network adjoining the proposed railway station, as well as the existing accessibility for both vehicle and pedestrian traffic to Castle Hill Road, it is recommended that the proposal be modified as a result of our investigations to ensure that local amenity and safety is not compromised by the proposed transport facility.

Response 1

EIS 2 provides mitigation measures in order to protect the amenity and safety of local residents and the wider public. These are reproduced in Chapter 9 of this report.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 2

The proposed arrangement will increase bus movements and private vehicle access on Franklin Road and Robert Road, over and above that which currently exists. While these impacts will be significant over both roads, the impact on Franklin Road due to its alignment and frictional impacts (notwithstanding the localised widening to be provided on Franklin Road in the vicinity of the link road to this railway station) will be unacceptable service levels on the remaining section of Franklin Road, particularly in the vicinity of the high school and Inala learning facility.

Response 2

Changes to traffic on Robert Road and Franklin Road are described in Section 9.5.2 of EIS 2. Access and egress points are proposed from both Robert Road and Franklin Road, however it is noted that the design of the site provides priority for vehicles accessing the site from Castle Hill Road (as shown on Figure 6.11 of EIS 2). Levels of service along Franklin Road are expected to be acceptable under the proposed traffic scenario and with appropriate mitigation measures in place.

EIS 2 provides a range of operational mitigation measures to manage and reduce the potential amenity impacts to adjacent residents. These mitigation measures are reproduced in Chapter 9 of this report.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 3

While the proposed signalised junction at Castle Hill Road and other modifications would seem to best suit bus connections with the railway station, they do lead to a number of issues which directly impact on existing users as well as properties on Franklin Road, in particular:

- Additional bus movements as well as general traffic on a road with a substandard alignment and width.
- Additional pedestrian conflicts with existing secondary school and Inala facilities.
- Provide increased traffic movements at Franklin Road with Castle Hill Road at a junction where site distance is restricted and where increased traffic movements will likely lead to increased accidents (the original reasoning behind the historical decision to partial close the junction, it being a prelude to its planned eventual full closure at the time to reduce the risk of accidents).

Response 3

Whilst peak traffic movements would increase along Franklin Road during operations, the associated removal of some kerbside parking, footpath improvements and signalling upgrades would improve safety. TfNSW would liaise with the relevant road authority to ensure appropriate road traffic safety requirements are met.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Issue 4Issue 4

The following matters should be given consideration with a view to reducing the impact of the NWRL on the existing amenity and safety of the properties fronting Franklin Road as well Robert Road:

- Remove bus movements from Franklin Road along with Robert Road except for existing school services.
- Give consideration to rerouting all route buses from the local roads proposed for reasons of safety, due to the inability of the narrow roadways to accommodate two way bus flows as well as the impact on general residential and educational facilities.
- Discourage through commuter trips on both Franklin and Robert Road in preference for greater use of the higher order collector road County Drive, along with the State road Castle Hill Road, to better service rail patrons directly and without intrusion into the existing residential precinct.
- Confine all vehicular access to the railway station to the western end of the link road onto Castle Hill Road at which signal control is proposed and at which point sight distance far surpasses that available at Franklin Road junction with Castle Hill Road.
- Restrict all access to and from the Cherrybrook railway station to the link road to the western end only, providing a turnaround facility in the link road adjoining the bus set down / pick up areas to enable all incoming

buses to the station to turn around and exit to Castle Hill Road at the traffic signals.

- ❖ Maintain the current arrangement with respect to Franklin Road restricted access to Castle Hill Road, and eliminate the left deceleration entry which is to be located within a tight curve, where left turn exiting traffic from Franklin Road is subjected to further restricted sight distance by the auxiliary lane.
- ❖ Ensure that ample pedestrian facilities are provided over Franklin Road to accommodate both existing residents needs as well that projected by the railway station to ensure safe crossings over Franklin Road.

Response 4

Changes to traffic on Robert Road and Franklin Road are described in Section 9.5.2 of EIS 2. Access and egress points are proposed from both Robert Road and Franklin Road, however it is noted that the design of the site provides priority for vehicles accessing the site from Castle Hill Road (as shown on Figure 6.11 of EIS 2). Levels of service along Franklin Road are expected to be acceptable under the proposed traffic scenario and with appropriate mitigation measures in place.

TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.

Whilst peak traffic movements would increase along Franklin Road and Robert Road during operations, the associated removal of some kerbside parking, footpath improvements and signalling upgrades would improve safety. TfNSW would liaise with the relevant road authority to ensure appropriate road traffic safety requirements are met.

Loss of the left turn slip lane and left turn access into Franklin Road from Castle Hill Road would have a detrimental impact on vehicular accessibility to the station.

6.3 School Submissions

6.3.1 Tangara School for Girls

Construction – Public safety

Issue 1

The proposal regarding Cherrybrook Station does not adequately address the school's concerns about the safety of both the school and local communities along Franklin Road during the construction phase. or Girls

Response 1

Safety of the public surrounding the construction sites is a key concern of TfNSW. In relation to construction traffic, construction contractors would be required to address pedestrian, cyclist and road user safety as part of Construction Traffic Management Plans and Traffic Control Plans required by the Construction Environmental Management Framework (Appendix B of EIS 2).

Construction – Traffic and transport

Issue 2

Franklin Road is a difficult road for many vehicles at any time, due to many inconsistencies in road widths and alignments. Tangara School for Girls makes the following recommendations in relation to Franklin Road during construction:

1. Restrict all bus movements on Franklin Road to existing school bus services only. This would reduce the risks of constructing a railway station on the same road as a busy school and local community.
2. Keep the end of Franklin Road as it is – exit only, from Franklin Road into Castle Hill Road. Do not allow entry from Castle Hill Road. This should reduce the number of vehicles tempted to drive through as a shortcut to internal Cherrybrook roads, and would prevent total blockage of the road at peak periods.

3. Ensure parking for construction workers is on the Cherrybrook Station site, not on Franklin Road. Workers should only be able to enter the site from Castle Hill Road.
4. Provide highly visible flashing school zone signs along Franklin Road.
5. Provide clear speed restrictions at all times along Franklin Road.
6. Retain parking along Franklin Road along one side of the road, and restrict all parking to outside school peak hours, particularly opposite the school gates where vehicles enter and exit and car lines build up.
7. Children and other people cross over Franklin Road, a busy road. Install pedestrian crossings at additional locations along Franklin Road adjacent to Tangara School before construction begins.
8. Prohibit truck movements along Franklin Road during the school peak hours (7:45-8:45 am and 2:45-3:45 pm, or the broader RTA's official SCHOOL ZONE hours) during the construction phase.
9. Widen Franklin Road to a consistent width from Castle Hill Road up to John Road as soon as possible, properly kerbed and guttered, with safe and adequate pedestrian access for the increased numbers expected with the railway in use.

Response 2

1. During construction no bus movements in addition to those already servicing the School are envisaged on Franklin Road.
2. Scope may exist to examine an alternative approach to managing NWRL construction traffic at the Castle Hill Road / Franklin Road intersection. This will be investigated and documented via the Construction Traffic Management Plan and the Traffic and Transport Liaison Group processes.
3. As above, scope may exist to examine the NWRL staff parking option.
4. The flashing school zone signage request is a matter for Hornsby Shire Council's Traffic Committee.
5. The speed signage request is a matter for Hornsby Shire Council's Traffic Committee.
6. Scope may exist to retain parking along parts of Franklin Road as suggested.
7. Pedestrian management during construction along and across Franklin Road will be further addressed as part of the Construction Traffic Management Plan. Pedestrian crossings in the vicinity of Tangara School are a matter for Hornsby Shire Council's Traffic Committee.
8. Scope may exist to limit or restrict NWRL construction traffic along Franklin Road as suggested. This will be investigated and documented via the Construction Traffic Management Plan and the Traffic and Transport Liaison Group processes.
9. For the purpose of NWRL construction, widening of Franklin Road in its entirety would not be warranted.

Operation – Public safety

Issue 3

The proposal does not adequately address the school's concerns about the safety of both the school and local communities along Franklin Road after completion, when the station is in full use.

Response 3

Safety of the public surrounding the station precincts is a key concern of TfNSW. The design principles for the station include "the urban design elements of the project must consider and respond to 'safer by design' principles" (refer to Section 6.5.3 of EIS 2).

Operation – Traffic impacts / volume

Issue 4

Franklin Road is a difficult road for many vehicles at any time, due to many inconsistencies in road widths and alignments. Tangara School for Girls makes the following recommendations in relation to Franklin Road once Cherrybrook Station is in operation:

1. Restrict all bus movements on Franklin Road to existing school bus services only. This would reduce the risks of operating a railway station on the same road as a busy school and local community.

2. Keep the end of Franklin Road as it is – exit only, from Franklin Road into Castle Hill Road. Do not allow entry from Castle Hill Road. This should reduce the number of vehicles tempted to drive through as a shortcut to internal Cherrybrook roads, and would prevent total blockage of the road at peak periods
3. Provide highly visible flashing school zone signs along Franklin Road.
4. Provide clear speed restrictions at all times along Franklin Road.
5. Retain parking along Franklin Road along one side of the road, and restrict all parking to outside school peak hours, particularly opposite the school gates where vehicles enter and exit and car lines build up.

Response 4

1. TfNSW is committed to identifying the best outcome in relation to bus access to and from Cherrybrook Station. As such, additional investigations and options analysis will be undertaken. Further details are provided in Chapter 2 – Clarifications of this report.
2. Loss of the left turn slip lane and left turn access into Franklin Road from Castle Hill Road will have a detrimental impact on vehicular accessibility to the station.
3. The flashing school zone signage request is a matter for Hornsby Shire Council's Traffic Committee.
4. The speed signage request is a matter for Hornsby Shire Council's Traffic Committee.
5. Parking restrictions are a matter for Hornsby Shire Council's Traffic Committee. However, removal of on street parking is required to accommodate safe bus access.

6.3.2 Carrington Pre-School Kindergarten

Construction – Noise and vibration

Issue 1

From the modification of EIS 1, the Carrington Pre-School Kindergarten is now located directly opposite the proposed Showground construction site. Concerns raised regarding construction noise and vibration impacts from the initial works.

Response 1

A detailed assessment of the potential noise and vibration impacts associated with the Stage 2 construction of the Showground Station site has been undertaken, including specific consideration of noise at the pre-school on Carrington Road (classified as a sensitive receiver). Results of the construction noise impact assessment at Showground Station are presented in Section 10.11.7 of EIS 2.

The results indicate that:

- A noise exceedance of between 10 dB to 20 dB would occur at the childcare centre on Carrington Road as a result of construction works – station platform supporting structure, station building construction and car park construction.
- A minor noise exceedance of up to 10 dB would occur at the childcare centre on Carrington Road South as a result of construction works – installation of rail systems equipment.

Table 10.48 of EIS 2 identifies mitigation measures to manage potential noise impacts to the childcare centre. These are reproduced in Chapter 9 of this report.

Construction – Traffic and transport

Issue 2

Concerns regarding increased traffic movements of both cars and heavy vehicles to service the Showground construction site.

Response 2

The proposed access and egress location are at a new signalised intersection on Showground Road and a secondary point on Carrington Road. The construction traffic analysis in Table 9.16 of EIS 2 shows the existing intersections would continue to operate at an acceptable level of service during construction.

Measures to mitigate traffic and access impacts have been developed and are listed in Table 9.25 of EIS 2. These are reproduced in Chapter 9 of this report.

Construction – Air quality

Issue 3

Concerns regarding air pollution impacts on Carrington Pre-School Kindergarten from construction of the proposed Showground Station.

Response 3

Air quality emissions from the proposed Stage 2 construction works are assessed in Section 19.1.7 of EIS 2.

Table 19.4 of EIS 2 identified mitigation measures to manage potential air quality impacts. These are reproduced in Chapter 9 of this report.

Design – Accessibility

Issue 4

Concerns that increased traffic volumes and pedestrian activity on Carrington Road will result in accessibility issues to the Carrington Pre-School Kindergarten (located on Carrington Road). Suggestion to open up Ashford Avenue at Carrington Road to allow for alternative access into the Kindergarten.

Response 4

The proposed access and egress location are at a new signalised intersection on Showground Road and a secondary point on Carrington Road. The construction traffic analysis in Table 9.16 of EIS 2 shows the existing intersections would continue to operate at an acceptable level of service during construction.

In relation to operational traffic, the analysis in Table 9.6 of EIS 2 shows a deterioration in the level of service at some intersections around Showground Station. This indicated that conversion of this intersection from a roundabout to traffic signals would be required subject to RMS approval.

Measures to mitigate traffic and access impacts have been developed and are listed in Table 9.24 and Table 9.25 of EIS 2 for operations and construction respectively. These are reproduced in Chapter 9 of this report.

Operation – Noise and vibration

Issue 5

Noise and vibration concerns as a result of increased traffic volumes on Carrington Road.

Response 5

A detailed assessment of operational road traffic noise has been undertaken and is presented in Section 10.9.5 of EIS 2.

The results indicate that the predicted increase in road traffic noise levels in the vicinity of Carrington Road is less than 2 dB at all receivers. This complies with the relevant criteria.

Property – Property acquisition

Issue 6

To minimise impacts on the Carrington Pre-School Kindergarten, suggestion to rezone the Kindergarten to commercial to redevelop the area into retail or relocate the Kindergarten altogether to a nearby area (incorporated in or around the proposed Showground Station).

Response 6

The EIS identifies mitigation measures to manage potential construction and operational impacts to surrounding receivers including Carrington Kindergarten. Rezoning of land is outside the scope of the NWRL and subject to consideration by The Hills Shire Council.

6.3.3 Kindalin Childcare Centre

Construction – Community facility impacts

Issue 1

Kindalin Childcare Centre aims are to protect the health and wellbeing of the children at the Centre; maintain the operational capability of the Centre; and ensure that the construction phase of the North West Rail Link will be managed in a manner to allow the centre to operate with minimal disruption during the lengthy construction period. The proposed works are likely to result in conflicts with the existing childcare services.

Response 1

The EIS identifies mitigation measures to manage potential impacts as far as feasible and reasonable. These mitigation measures are reproduced in Chapter 9 of this report.

Additionally, consultation would continue with Kindalin Childcare Centre.

Issue 2

Kindalin Childcare Centre provides a structured program for children that include a range of activities. These include a combination of active and quiet activities, group and independent learning, with time spent both indoors and outdoors. Importantly, a two hour sleeping / rest period is provided between the hours of 1:00pm and 3:00pm. Successful management of the child care centre relies on the consistency of routines provided throughout the day. Disturbance and variation to timetables can interfere with the successful operation of the facility and has the ability to impact on the provision of quality care to the children.

Response 2

Kindalin's daily rest period is noted. Consultation would continue to liaise with Kindalin Childcare Centre.

Issue 3

It is noted that the proposed construction phase lasts for approximately 42 months (3 ½ years) (EIS – Chapter 14 Land Use and Community Facilities) and therefore has the ability to inflict significant long term impacts on the functioning of the childcare centre. These impacts are described as 'reduced amenity' within the EIS and are further identified within the Traffic, Noise and Vibration and Air Quality chapters (Chapters 9, 10 and 19) of the EIS.

Response 3

Kindalin's comment is noted.

Issue 4

As a Construction Management measure, Kindalin Childcare Centre requests details of operational measures to be implemented to monitor and clean the outdoor play areas of the child care centre in the event that dust and material from construction activities cannot be contained.

Response 4

Chapter 19 of EIS 2 provides an assessment of potential air quality and dust impacts associated with Stage 2 construction activities. Table 19.4 identifies mitigation measures to manage these potential impacts during construction. These measures are aimed at preventing the generation of dust beyond the boundary of the construction site. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 5

EIS 2 relies on management measures being implemented by the construction contractors during the detailed construction planning stage. There are no guarantees that these future management plans will address the specific concerns of individual businesses or include measures to provide site specific mitigation measures as required by Kindalin Childcare.

Response 5

The EIS identifies mitigation measures to manage these potential impacts.. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 6

No attempt has been made to implement site specific measures that would reduce the potential impacts of noise, traffic and air quality on Kindalin Childcare Centre during the construction works period.

Response 6

EIS 2 identifies mitigation measures to manage potential noise, traffic and air quality impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Issue 7

Kindalin Childcare Centre recognises that in addition to the direct impacts of noise, traffic and air quality on provision of services, they also have the ability to negatively impact on local businesses through reduced productivity, interaction with customers and workplace ambience.

Response 7

Potential local business impacts are assessed in Chapter 13 of EIS 2. Table 13.7 of EIS 2 identifies mitigation measures to manage potential impacts to local businesses. These are reproduced in Chapter 9 of this report.

Construction – Heavy vehicle movements

Issue 8

The traffic impacts are associated with construction works at Cherrybrook Station. This construction involves spoil removal activities and associated truck movements over a 24 hour operation / seven days per week and construction of a new access point (traffic lights) immediately adjacent to Kindalin Childcare Centre. The majority of truck movements are anticipated between the hours of 7am to 6pm and involve truck-and-dog or semi-trailer tippers able to carry 12.5 m^3. The technical paper (Construction Traffic and Transport Management, Tables 2.4 and 2.5) estimates overall tunnelling heavy vehicle movements for Cherrybrook Station at 29,600 trucks or 275 per day (one way).This is a significant increase in daily truck movements in the immediate vicinity of the site. The concerns of the childcare centre relate to the potential impacts associated with traffic impacts for the construction of Cherrybrook Station, specifically:

- Frequency of associated truck movements associated with daytime operations (7:00am – 6:00pm) including impacts on both indoor and outdoor activities.
- Impacts of traffic on the functioning of the car park area during peak traffic times for the centre (drop off and pick up) during the hours 7:30am and 10:00am and between 4:00pm and 6:00pm.

Response 8

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The proposed heavy vehicle routes to and from the Cherrybrook Station construction site are mainly along Castle Hill Road (as shown in Figure 9.11 in EIS 2). The construction traffic analysis undertaken for both EIS 1 and EIS 2 show that all intersections around the Cherrybrook Station construction site would operate at acceptable levels of service during the construction period.

Issue 9

Heavy vehicles will access the Cherrybrook Station site directly opposite Glenhope Road (in close proximity to Kindalin) involving changing the Glenhope Road T- intersection into a four way intersection with a new leg to the north (Technical Paper 1, p 30). Only secondary access to the site will occur via Franklin Road. Management measures include provision of traffic controllers to manage heavy vehicle movements at construction sites, and to monitor the need for pedestrian control.

Response 9

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1 and EIS 2 identify mitigation measures to manage potential impact associated with construction traffic.

Issue 10

Related to traffic concerns, impacts on Kindalin are increased traffic and vehicle movements along Castle Hill Road and Glenhope Road and the construction of traffic signals with pedestrian crossings at the intersection of Glenhope Road and Castle Hill Road.

Response 10

The construction traffic analysis undertaken for both EIS 1 and EIS 2 show that all intersections around the Cherrybrook Station construction site would operate at acceptable levels of service during the construction period.

Construction Traffic Management Plans and / or Traffic Control Plans would include management measures in relation to pedestrians.

Construction – Noise and vibration

Issue 11

The concerns of the childcare centre relate to the potential impacts associated with noise impacts for the construction of Cherrybrook Station, specifically:

- Noise of associated truck movements associated with daytime operations (7:00am – 6:00pm) including impacts on both indoor and outdoor activities.
- Sleep disturbance for children during daytime rest period (1:00pm to 3:00pm).

Response 11

Table 10.48 of EIS 2 identifies mitigation measures to manage potential noise impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Additionally, consultation would continue with Kindalin Childcare Centre.

Issue 12

The EIS nominates the childcare centre (30 metres from the works) as a sensitive receiver with predicted noise levels exceeding the required levels during the daytime period (Noise Management Levels exceedances greater than 20 dB predicted) for the Earthworks, Site Establishment and Excavation phases of the works (EIS - Chapter 10, Noise and Vibration, Construction - Table 10.11 Predicted noise level exceedances at Cherrybrook Station). Although the EIS indicates an acoustic shed will be established as a mitigation measure to reduce airborne noise impacts at sensitive receivers

during the night-time period, it is unclear what measures will be put in place to manage noise in the vicinity of Kindalin Childcare Centre during daytime hours.

Response 12

The exceedances referred to in the submission relate to the Stage 1 Major Civil Construction Works which has been assessed as part of EIS 1 – Major Civil Construction Works. This EIS was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1 identifies mitigation measures to manage potential noise impacts of daytime construction noise. Where receivers were identified to be 'highly noise affected' (greater than 20 dB exceedance), the construction contractor would be required to consider further mitigation measures including alternative construction methods or respite periods.

Issue 13

EIS 2 Chapter 10 summarises the results of the operational and construction noise and vibration assessment undertaken by SLR Consulting Australia Pty Ltd. This section of the EIS indicates that Kindalin will be impacted by noise (< 10dB) primarily during the station platform supporting structure, station building construction (approximately 12 months) and installation of rail systems equipment phases (approximately 12 months). This section states *'Where receivers are "highly noise affected" (i.e. where the predicted noise levels exceed 75 dBA or the NMLs are exceeded by more than 20 dB), the proponent may need to implement respite periods and liaise with the community*'. The issue for Kindalin is that noise modelling has predicted noise impacts on Kindalin will be of 'minor exceedence'. There is no guarantee that even 'minor' exceedences will not have unacceptable impacts on the children attending the child care centre from Kindalin's viewpoint, as children will be sleeping and resting during the day time period.

Response 13

Table 10.48 of EIS 2 identifies mitigation measures to manage potential noise impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Additionally, consultation would continue with Kindalin Childcare Centre.

Issue 14

Consideration of potential impacts on children must also take into account the length of the construction period which cannot be considered 'short term', but rather a prolonged 36 month period, 24 months of which will exceed acceptable noise limits.

Response 14

Table 10.48 of EIS 2 identifies mitigation measures to manage potential noise impacts. These mitigation measures are reproduced in Chapter 9 of this report.

Additionally, consultation would continue with Kindalin Childcare Centre.

Issue 15

Exceedences of up to 5 dB of the Road Noise Policy criteria for new local roads at Cherrybrook Station are predicted during the morning peak period (Technical Paper 3, p.6). Traffic noise levels have been predicted for residential receivers located on the proposed access routes to the Cherrybrook Station site (Technical Paper 3, p.156) but have not been provided for all receivers (including Kindalin).

Response 15

Noise modeling has been undertaken for road traffic noise for all receivers in the vicinity of construction sites and operational station precincts.

In relation to Stage 2 construction, the modeling predicts compliance with the 2 dB allowance (Section 10.11 7 of EIS 2). This is inclusive of Kindalin Childcare Centre.

In relation to the operational phase, Section 10.9.5 provides details of where the noise criteria are exceeded. At Cherrybrook Station, this has been predicted to occur on Robert Road and Franklin Road.

Issue 16

As a Construction Management measure Kindalin Childcare Centre requests construction of a heightened perimeter wall along the Castle Hill Road and Glenhope Road frontage of the Cherrybrook Station site to provide an appropriate acoustic barrier between the site and predicted noise sources. The final height would need to be clarified by the Acoustic Engineer; however it is understood from the submitted Noise and Vibration Report that noise impacts can be reduced through provision of acoustic barriers.

Response 16

The mitigation measures identified in Table 10.48 of EIS 2 includes the provision of a six metre high noise wall around Cherrybrook Station construction site. The provision of a higher noise wall may not be practical, nor would it provide any significant additional attenuation benefit.

Planning – Approval process

Issue 17

Concerns that issues raised in Kindalin's submission to EIS 1 have not been adequately addressed.

Response 17

This matter was addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Submissions to EIS 1 that were beyond the scope of the Major Civil Construction Works were dealt with in Section 5.7.1 of EIS 2.

Issue 18

The following comments were provided by TfNSW in response to the original submission to EIS 1 by Kindalin Childcare Centre (Submissions Report Stage 1 - Major Civil Construction Works, July 2012 Submission No. 159) on matters relating to Noise:

Chapter 4: Construction - Noise and Vibration:
The noise impacts and mitigation measures would be reviewed in the detailed design phase during development of the site-specific Construction Noise and Vibration Impact Statements. TfNSW is committed to implementing all feasible and reasonable mitigation measures to minimise potential impacts (page 4-75).

Chapter 5: 5.5.6 - Noise and Vibration:
h. *Further detailed predictions of noise impacts and mitigation would be provided when the site-specific noise impact assessment (CNVIS) is prepared by the construction contractor(s) during the detailed construction planning phase. The CNVS notes that where sensitive receivers are subjected to lengthy periods of noise or vibration, they may be eligible for a project specific respite offer. Such offers for child care facilities may include respite periods corresponding with rest times, or upgrading the noise mitigation performance of the external building façade to reduce indoor and outdoor noise levels. These would be determined during the detailed construction planning stage, taking into consideration factors such as the predicted noise levels, the time at which the impacts would occur, the overall duration of the works and community views (Page 5-45).*

The comment that measures would be provided by the construction contractor(s) during the 'detailed construction planning phase' are inadequate. Comments such as 'they may be eligible for a project specific respite offer' provides no guarantee that any mitigation measures would be undertaken or implemented at any stage.

Response 18

These matters were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The final details of mitigation measures required in instances where noise criteria are exceeded can only be developed further once the detailed construction methodology has been determined. Where exceedances are predicted to occur, all feasible and reasonable mitigation measures would be required to be implemented.

Issue 19

The following comments (part extract) were provided by TfNSW in response to the original submission to EIS no. 1 by the applicant (Submissions Report Stage 1 - Major Civil Construction Works, July 2012 Submission No. 159) on matters relating to Air Quality:

Chapter 5: Construction – 5.5.1 Air quality:
Air quality impacts from the proposed works are considered temporary in nature and would be confined to the construction period, with no significant long term impacts anticipated. Any potential impacts during construction would be mitigated (refer to Chapter 7), therefore any changes to the ambient air quality would be minor and temporary. In addition to the proposed mitigation measures, an air quality and dust monitoring program would be undertaken to monitor and further mitigate these impacts as required during the construction works (pages 5-27 to 5-28).

As outlined within our original submission, we do not consider the proposed works to be 'temporary' in nature as they extend over a period of 42 months. The Response to Submissions document identified the concern over the temporary nature of works, but did not provide any response other than restating 'the proposed works are considered temporary in nature'.

Response 19

This matter was addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1 identifies mitigation measures to manage potential impacts associated with air quality.

Communication – Consultation

Issue 20

As it has been identified as a sensitive receiver, Kindalin Childcare Centre requests that community liaison with Kindalin be mandatory for the construction contractors prior to (detailed construction planning stage) and during the construction phase of the works.

Kindalin Childcare Centre also requests on-going consultation and review with Centre management during the construction phase to monitor the effectiveness of acoustic barriers and implementation of alternative measures as deemed necessary.

Response 20

TfNSW and the construction contractors would continue to liaise with Kindalin Childcare Centre throughout construction of the NWRL.

Construction – Air quality

Issue 21

Air quality is described within the EIS as a non-key environmental impact (Chapter 19 Assessment of Non-Key Issues). The EIS states '*The sources are considered temporary in nature and would be confined to the construction period*'

(page 19-3). Given the construction period extends over a period of 42 months for Cherrybrook Station, the description of potential air quality impacts as being 'temporary' in nature is questionable.

Response 21

Chapter 19 of EIS 2 provides a thorough assessment of the potential air quality impacts during Stage 2 construction works. Table 19.4 identifies mitigation measures to manage potential air quality impacts.

Issue 22

Kindalin Childcare Centre is identified within the EIS as a 'sensitive receiver' in relation to air quality, with potential air quality impacts originating from establishment of work site, building demolition, earthworks, removal, storage and / or transport of some 60,000 m^3 of spoil from the station cavern excavation and 370,000 m^3 from the tunnelling works, and exhaust emissions from operation of construction vehicles and plant (page 19-7). The nature of a childcare centre means that children undertake a range of activities both indoor and outdoor. Kindalin Childcare Centre offers a range of activities that vary throughout the year, depending on the summer or winter weather. Children are not all outdoors at the same time, therefore the amount of time the children (as a whole) spend outside extends over quite a period of time (summer 8:30am – 11:00am and 3:15pm – 6:00pm and winter approximately 8:30am – 11:30am and 3:15pm – 4:00pm). A number of children within the centre suffer from a range of health issues, including those that suffer from serious asthma (9% of children at time of writing) and an additional number of children who take medication for asthma on a short term basis. A number of children suffer from eczema conditions, which can be exacerbated by extended periods of air conditioning. This condition may be triggered if children are forced by air quality impacts to spend extended periods indoors.

Response 22

Tunnelling and spoil removal works were addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1 and EIS 2 identify mitigation measures to manage dust during the construction period.

Issue 23

EIS 2 recognises that dust generating activities will occur during the construction phase with comments acknowledging the risk of potential impacts at each construction site being dependent on the 'intensity of activities, scale of operations and duration' of the activity (page 19-3). The EIS states that all construction sites will be surrounding by hoardings and mitigation measures implemented as outlined to 'reduce impacts' on nearby receivers. In addition, an air quality and dust monitoring program would be undertaken to monitor and mitigate the impacts 'as required'. Concerns raised by Kindalin in relation to specific health issues in our submission to EIS 1 have not been addressed, our primary concerns being the nature of the mitigation measures that will be employed to minimise the direct impacts on the children and staff of the centre, specifically the nature and type of wind breaks, hoardings, stockpile locations, debris screens etc… While we acknowledge to some extent that the nature of the future construction works are still being determined and remain subject to future management plans, there are no provisions or guarantees provided that any management plan would specifically address the potential air quality impacts on the Kindalin Childcare Centre. We consider the response provided within EIS 2 to issues raised in regard to air quality on Kindalin Childcare, with statements such as 'where feasible and reasonable' and 'temporary in nature' to be unsatisfactory.

Response 23

Concerns regarding dust generation during Stage 1 construction works were addressed as part of the Submissions Report (Preferred Infrastructure Report) for EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

EIS 1 and EIS 2 identify mitigation measures to manage dust during the construction period.

6.4 Property Management Groups

6.4.1 Executive Committee Strata Plan 19086

Environment – Flora and fauna

Issue 1

Concerns that the surrounding parks and gardens, which provide a natural habitat for urban animals and reptiles, will be disrupted by the proposed location of the service facility at Castle Hill.

Response 1

Impacts associated with establishing the Castle Hill Station construction site have been addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Arthur Whitling Park would be reinstated once construction is complete, and the park would be re-modelled.

A detailed Terrestrial Ecology Assessment was undertaken and a number of ecology mitigation measures have been developed to avoid, reduce and manage identified potential impacts which may occur during the operational stage of the project. Specifically mitigation measures OpE2 in Table 15.6 of EIS 2 refers to the control of noxious and environmental weeds and mitigation measure OpE6 requires the reduction in disturbance to bats and nocturnal birds. Additionally a number of mitigation measures detailed in other chapters of EIS 2 are also relevant to ecology habitat, including:

- Mitigation relating to ongoing erosion and sediment control (including operational maintenance and monitoring), and the storage and handling of hazardous substances and dangerous goods are detailed in Chapter 18 (Surface Water and Hydrology).
- Mitigation measures relevant to groundwater monitoring, capture, treatment and reuse / discharge are detailed in Chapter 8 (Soils and Groundwater).
- Mitigation measures relevant to lighting are detailed in Chapter 19 (Non Key Issues).
- Mitigation measures relevant to noise and vibration are detailed in Chapter 10 (Noise and Vibration).

Environment – Visual impact / air quality

Issue 2

Calls for consideration to be given to the lifestyle environment currently provided by the park outlook that owners and occupiers enjoy at Old Castle Hill Road, particularly at 4 and 6-8 Old Castle Hill Road. Any diminution of the aesthetic views, airflow, greenery and natural surroundings will have a harming effect on working and living conditions of all occupants. The proposed location of the service facility will directly affect these considerations.

EIS 2 contemplates who will be affected by the views, however, the locations considered are Old Northern Road and businesses located in and around Castle Towers. Concerns that no consideration has been given to the views from 6-8 Old Castle Hill Road.

Response 2

As described in Chapter 16 of EIS 2, a detailed visual assessment of the Castle Hill Station site has been undertaken and results are presented in Section 16.5.4 of EIS 2. The assessment of visual impact is based on the identification of the level of visual modification created by the NWRL, and the sensitivity of the viewer. Combined, these characteristics of the view are then considered to assign a level of likely visual impact. It is not reasonable (nor required) to discuss visual impacts to every single property visually impacted by the project in the EIS – hence the assessment identifies general impacts at each site. The visual assessment concludes that it is expected that there would be minor to moderate adverse visual impacts to views from the construction and operation of the Castle Hill site (refer to Section 16.5.4 of EIS 2).

Mitigation measures to reduce impacts have been considered and are described in Section 16.8 of EIS 2. The service building would be integrated into the re-modelled Arthur Whitling Park landscape and the park would be redesigned and incorporate interpretation of historic items, in consultation with relevant stakeholders. The re-modelled park would be high quality public open space within Castle Hill Town Centre. The facility would be architecturally designed with the façade of the completed facility designed to blend into the existing aesthetic nature of the site and the re-modelled Arthur Whitling Park.

As shown in Figure 6.15 of EIS 2, the service facilities at Castle Hill Station have been incorporated into the station entry building and at the northern end of the station excavation. Indicatively, this northern building would include facilities such as tunnel ventilation, emergency access /egress and rail systems, which would be largely accommodated below the existing ground level. Fencing and ventilation structures would be visible from adjoining properties. However, as described in Section 6.5.2 of EIS 2, further development of the design would continue over time. Importantly, design principles (Section 6.5.3 of EIS 2) would guide future detailed design, which would also be reviewed by a Design Review Panel.

Emissions from the service facility would not affect local air quality. As described in Section 6.7 of EIS 2:

"A number of service buildings would be required within each station precinct… These facilities would supply fresh air to stations and tunnels and discharge air from the tunnels and station environment. The project would be an electrified passenger only rail line and therefore tunnel emissions would not affect air quality. The ventilation systems would be designed to meet the criteria for normal, congested and emergency operating scenarios. The systems would also provide ventilation in the event of fire to ensure suitable conditions in the tunnel for safe egress of passengers and safe access for the emergency service personnel. In the event of fire, smoke-laden air would be discharged to the atmosphere."

Construction – Business impacts

Issue 3

Concerns that no consideration has been given to noise generation during normal working hours. There is very little adjoining residential accommodation at Castle Hill, however, there is significant business accommodation. The hours of operation have been managed around residential and not business hours.

Response 3

A detailed noise assessment of the potential Stage 2 construction and operational impacts of the Castle Hill Station site has been undertaken, including consideration of noise at commercial receivers (classified as sensitive receivers). Results of the construction noise impact assessment at Castle Hill Station are presented in Chapter 10 of EIS 2. The results indicate that a minor exceedance of up to 10 dB would occur at commercial receivers located to the north of the site (refer to Section 10.11.7 of EIS 2). However compliance with the relevant noise criteria is predicted at the other commercial receivers and all residential areas during construction. The assessment also found that "For Castle Hill Station, the increase in road traffic noise levels on existing access

roads is predicted to be less than 2 dB at all receivers. Mitigation of traffic noise is therefore not required."

Table 10.48 of EIS 2 identifies mitigation measures to manage potential noise impacts to commercial and residential receivers.

Issue 4

Concerns that the disruption from the demolishment of 10 Old Castle Hill Road shall economically impact the viability of owners to lease the property and retain staff. Calls for any losses attributable from the development shall be strongly pursued by the strata owners.

Response 4

Demolition of buildings required to facilitate construction was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Compensation is not available to address commercial decisions.

Property – Property damage

Issue 5

Concerns that vibration from the development works may affect the foundations and or building structures, particularly at 4 and 6-8 Old Castle Hill Road. Calls for a dilapidation report to be carried out before, during and after construction. Further calls that NWRL shall in good faith pay for the engagement of the strata's engineer to undertake the dilapidation report.

Response 5

Significant geotechnical investigations have been undertaken to inform the design of the project and further geotechnical investigations will continue.

The potential vibration impacts associated with construction of the rail tunnels were assessed in EIS 1, including any settlement impacts above the tunnel. The conditions of approval issued for Stage 1 – Major Civil Construction Works provide a number of relevant conditions. Specifically, conditions of approval C17 through C20 establish settlement criteria and conditions of approval E25 through E31 establish a robust construction management framework.

Section 10.11.3 of EIS 2 identifies mitigation measures which will be implemented to ensure that buildings in close proximity to the proposed EIS 2 construction activities are not damaged by the works. If needed TfNSW would engage a qualified and experienced engineer to undertake building condition surveys.

Issue 6

Calls that cleaning costs arising from spoilage and development around the strata (4 and 6-8 Old Castle Hill Road) should be undertaken by NWRL, after a meeting between the strata's executive committee and representatives from NWRL. Suggestion that cleaning costs should not be unreasonably refused by NWRL.

Response 6

It is acknowledged that construction works have the potential to generate dust. Although relatively small quantities of spoil would be stockpiled at the Castle Hill Station construction sites, this still has the potential to create particulate matter which may impact on nearby sensitive receivers. Heavy vehicle movements around construction sites and along haulage routes have the potential to result in wheel generated dust.

Impacts associated with dust generated during construction at the Castle Hill Station site would be temporary and are expected to be minor with the implementation of mitigation measures as outlined in Table 19.4 of EIS 2. Air quality and dust monitoring would be undertaken to manage these impacts as required during the construction works.

Construction – Traffic and transport

Issue 7

Concerns that contractors and associated parties will park within business precincts. Parking needs to be controlled and all parties are to be advised not to park within business precincts. There should be one point of contact within NWRL who may be contacted directly should perpetrators be identified.

Response 7

Construction worker parking and provision for deliveries would be provided within the construction site. Mitigation measure T10 in Table 9.25 of EIS 2 identifies the consideration of the need for, and provision of, remote parking location and shuttle bus transfers for all construction sites where sufficient parking cannot be provided within site boundaries.

During construction, a 24 hour telephone number would be available on which complaints and enquiries may be registered.

Issue 8

Calls for any changes in circumstances in relation to change of traffic flow that may affect the strata (4 and 6-8 Old Castle Hill Road) should not take place until there has been a meeting with the strata's executive committee.

Response 8

Local traffic alterations would be developed in consultation with the relevant road authority and stakeholders and documented in Construction Traffic Management Plans and / or Traffic Control Plans. Members of the community would be advised of any traffic alterations prior to their implementation.

Communication – Consultation

Issue 9

Objection to the short period of time to make a submission on NWRL EIS 2.

Response 9

NWRL EIS 2 was placed on public exhibition from 30 October 2012 and the community was able to lodge submissions until 3 December 2012. The EIS was on public display for more than 30 days, in accordance with the NSW state planning requirements.

6.4.2 The Owners Corporation Northpoint Apartments

Property – Property damage

Issue 1

Concerns regarding potential property damage to the Northpoint Apartments (9 Garthowen Crescent Castle Hill) resulting from the construction of the proposed Crossover Cavern at Castle Hill Station. The south-eastern corner of the Crossover Cavern is located under the north-east corner of Northpoint Building B. The roof of the Cavern structure appears to be less than 20 metres below the basement of the building. Calls for no structural or other damage to the building as a result of construction activities. Preference for regular monitoring to be conducted.

Issue 1

The construction of the crossover cavern near Castle Hill Station was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Significant geotechnical investigations have been undertaken to inform the design of the project and further geotechnical investigations will continue.

The potential vibration impacts associated with construction of the rail tunnels and crossover cavern were assessed in EIS 1, including any settlement impacts above. Conditions of Approval C17 through C20 establish settlement criteria. Conditions of Approval E25 through E31 establish a robust construction management framework.

Section 10.11.3 of EIS 2 details mitigation measures which will be put in place to ensure that buildings in close proximity to the proposed EIS 2 construction activities are not damaged by the works. If needed TfNSW would engage a qualified and experienced engineer to undertake building condition surveys.

Issue 2

It is noted that the Tunnel Boring Machine travels at 20 metres per day, however, as the machine approaches the proposed Crossover Cavern at Castle Hill Station, the process may slow resulting in an extending time period in this vicinity. Calls for a guarantee that there will be no structural or other damage to the Northpoint Apartments (9 Garthowen Crescent Castle Hill) as a result. Preference for regular monitoring to be conducted.

Response 2

The construction of the crossover cavern near Castle Hill Station was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

Significant geotechnical investigations have been undertaken to inform the design of the project and further geotechnical investigations will continue.

The potential vibration impacts associated with construction of the rail tunnels were assessed in EIS 1, including any settlement impacts above the tunnel. Conditions of Approval C17 through C20 establish settlement criteria. Conditions of Approval E25 through E31 establish a robust construction management framework.

Section 10.11.3 of EIS 2 details mitigation measures which will be put in place to ensure that buildings in close proximity to the proposed EIS 2 construction activities are not damaged by the works. If needed TfNSW would engage a qualified and experienced engineer to undertake building condition surveys.

Construction – Noise and vibration

Issue 3

Request for night time construction noise from the proposed Crossover Cavern at Castle Hill Station be limited to 30 dB(A). Suggestion to relocate night time work to locations further removed from the eastern end to prevent noise being experienced in any Northpoint apartments (9 Garthowen Crescent Castle Hill).

Response 3

The excavation and construction of the crossover cavern near Castle Hill Station was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The noise assessment undertaken as part of EIS 1 predicted minor exceedances of the relevant night-time noise management level during excavation of the Castle Hill crossover cavern. Table 10.33 of EIS 1 identifies mitigation measures to manage potential noise impacts.

Issue 4

Concerns that noise levels may reach levels of 40 – 45 dB(A) and this will be experienced in the Northpoint apartments (9 Garthowen Crescent Castle Hill). Calls for this not to occur when the Tunnel Boring Machine is operating under the Northpoint buildings. Preference for short term accommodation to be provided if this occurs.

Response 4

TBM tunnelling was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The noise assessment undertaken as part of EIS 1 predicted minor exceedances of the relevant night-time noise management level at certain receivers during TBM passby. Table 10.33 of EIS 1 identifies mitigation measures to manage potential noise impacts.

Operation – Noise and vibration

Issue 5

Calls for advice that operational sound levels from the Crossover Cavern at the proposed Castle Hill Station will not be of concern to the Northpoint Apartments (9 Garthowen Crescent Castle Hill). Preference for a high standard of sound attenuation to be used to achieve an acceptable noise level in all Northpoint Apartments.

Response 5

As described in Section 10.7.2 of EIS 2, a computer noise model was used to predict ground-borne noise and vibration levels within nearby buildings above or close to the underground NWRL alignment. The assessment identified that noise attenuation mitigation measures proposed (standard, high or very high attenuation along the alignment) are predicted to achieve compliance with the ground-borne noise and vibration objectives at all residential receivers.

6.4.3 Beaumont Strata Management

Construction – Access

Issue 1

Beaumont Strata Management questioned how long access will be denied due to the proposed closure of Brookhollow Avenue (roundabout at Norwest Boulevard / Century Circuit). Can the closure of Brookhollow Avenue be avoided by using alternate access points?

Response 1

A range of options were considered for the management of traffic and access at Norwest during construction:

- The option of retaining left in and left out access at the western intersection of Brookhollow Avenue / Norwest Boulevard was considered. This arrangement may be possible under a cut and cover construction methodology with a staged approach. However, even under a staged approach, it is likely that periods of full closure associated with the introduction of temporary supporting structures and the like would be required.
- An alternative access arrangement may involve the provision of a single lane access road linking Brookhollow Avenue and Norwest Boulevard and providing left out egress onto Norwest Boulevard. This is currently being examined.
- Alternatively, there may be scope for the construction contractor to either a) excavate the southern end of the station box first and then reinstate traffic access at the western Brookhollow Avenue intersection or b) leave the excavation of the southern end of the box till last such that traffic access is retained for as long as possible.

These and other options will continue to be assessed in consultation with the successful construction contractors to determine how best to retain traffic access along Brookhollow Avenue with minimal adverse impacts.

Issue 2

Can excavation under the portion of roadway be deferred for a period to enable access via Brookhollow Avenue for as long as possible?

Response 2

There may be scope for the construction contractor to either a) excavate the southern end of the station box first and then reinstate traffic access at the western Brookhollow Avenue intersection or b) leave the excavation of the southern end of the box till last such that traffic access is retained for as long as possible.

These and other options will continue to be examined to determine how best to retain traffic access along Brookhollow Avenue with minimal adverse impacts.

Issue 3

A number of the occupants in Brookhollow Avenue have regular deliveries by large trucks and have found access to their properties is impossible if this entrance is closed. Is there any provision for access to Brookhollow Avenue during construction, especially for larger trucks that cannot access their destination from other directions and what alternate arrangements will be made for landowners that have limited access to their properties (eg large trucks) during construction? Will compensation be available for those property owners who have limited access?

Response 3

Mitigation measure T5 in Table 9.25 of EIS 2 states that "Access to existing properties and buildings would be maintained". TfNSW and the construction contractor would liaise with landowners regarding access for large trucks on a case by case basis during construction. This mitigation measure is reproduced in Chapter 9 of this report.

Construction – Traffic and transport

Issue 4

The entrance of Brookhollow Avenue (roundabout at Norwest Boulevard / Century Circuit) is the major thoroughfare used by the community to access businesses, serviced accommodation and the post office. The proposed closure will mean that traffic accessing the street from the easterly side will bottleneck.

Response 4

The construction traffic analysis undertaken for EIS 2 and presented in Table 9.17 indicates that the intersection performance would remain satisfactory.

Options will continue to be examined to determine how best to retain traffic access along Brookhollow Avenue with minimal adverse impacts.

Property – Property value

Issue 5

It is highly likely that poor access to properties, resulting from the proposed closure of Brookhollow Avenue, will result in lower sales and leasing rates. What compensation is available for owners of devalued properties as a consequence of construction? Will any compensation be available if tenants seek to break their leases prior to expiration as a consequence of construction disruption?

Response 5

Whilst it is acknowledged that there may be temporary restrictions to access into Brookhollow Avenue during construction, alternative access would be available. Mitigation measure T5 in Table 9.25 of EIS 2 states that "Access to existing properties and buildings would be maintained".

Compensation is not available to address commercial decisions.

Transport – Parking availability

Issue 6

Owners are concerned that private parking will be used by construction workers. There is already insufficient parking on site for owners' staff and in the vicinity of offices. People will be forced to park a long way away or illegally. What parking restrictions will be in place during and after construction?

Response 6

Some construction worker parking would be provided within the construction site. Prior to construction site establishment, Construction Traffic Management and Control Plans will be prepared in consultation with RMS. Construction site parking considerations would form a component of these plans. In addition, mitigation measure T10 in Table 9.25 of EIS2 identifies the consideration of the need for, and provision of, remote parking location and shuttle bus transfers for construction sites where sufficient parking cannot be provided within site boundaries. This is reproduced in Chapter 9 of this report.

Issue 7

During operation what measures will be implemented to prevent commuters from parking near Norwest Station thus restricting access / parking for staff working in the business park?

Response 7

The Norwest Station has been designed as a destination station with no park-and-ride facilities present. Park-and-ride opportunities would be available for commuters at the nearby Bella Vista Station and Showground Station.

Notwithstanding, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station, ie good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Design – Accessibility

Issue 8

Query regarding the width of Brookhollow Avenue following construction. Any reduction in street width will reduce parking opportunities and the width should be wide enough to accommodate access by larger vehicles.

Response 8

Based on the concept design, Brookhollow Avenue would not be narrower than the existing road width post construction.

Environment – Visual impact

Issue 9

Query regarding the size and design of "Service Facilities". Will these be visible from the street (in the vicinity of Brookhollow Avenue) and / or neighbouring properties? What beautification / shielding of these facilities will occur?

Response 9

Mitigation measures to reduce visual impacts have been considered and are described in Section 16.8 of EIS 2. Figure 6.23 of EIS 2 shows the provision of landscaped areas around the proposed service facility at Norwest Station. Exact details of the design, including the size, would be determined during the detailed design phase. These mitigation measures are reproduced in Chapter 9 of this report.

Design principles for station design, including service facilities, are provided in Section 6.5.3 of EIS 2.

Planning – Landuse planning

Issue 10

Confirmation sought regarding how close major development (eg the construction of multi-level office complexes with, for instance, two levels of underground car parking) could be to the underground rail tunnels. Will redevelopment of sites be limited by "setbacks" from the underground rail tunnels?

Response 10

The Norwest Station platform depth is approximately 20 metres below street level. Figure 6.5 of EIS 2 shows the depth of tunnel along the alignment. Restrictions would be in place regarding clearance distances above the tunnel for future developments. The project would not restrict any reasonable future development, including excavation for possible underground parking.

Property – Property condition surveys

Issue 11

Will NWRL prepare dilapidation reports (with condition to be agreed) for all properties along the line? Will NWRL enter deeds with owners to agree mechanisms for resolving disputes?

Response 11

This matter was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

The Conditions of Approval for Stage 1 – Major Civil Construction Works contain conditions relating to dilapidation surveys, and impacts to third party property and structures (conditions E26 to E31).

Property – Property damage

Issue 12

Will NWRL communicate with property owners the timing of tunnel boring machinery under affected properties so damage to such buildings can be monitored?

Response 12

Tunnel boring was addressed as part of the EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012.

TfNSW will provide information to adjacent receivers regarding construction progress and timing prior to and during the construction phase.

Property – Property acquisition

Issue 13

There are several sites, in particular CA DP 270163 (11-25 Brookhollow Avenue) and CA 270106 (34-38 Brookhollow Avenue), where at least nine metres for underground car parking plus a further eight metres for footings would be required as part of a future development. Clearly this would not be possible if such land is compulsorily acquired. Will compensation be available for the loss of development opportunity where subsurface land is acquired?

Response 13

The project would not restrict any reasonable future development, including excavation for possible underground parking.

All property acquisition for the project must be undertaken in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991*.

6.4.4 Executive Committee of the Owners Corporation for 121 Olive Grove and Pichola Place, Castle Hill

Transport – Bus integration

Issue 1

The Executive Committee noted that they are pleased that provision has been made for buses to leave the bus terminal via the northern exit and either turn left into Old Northern Road (which is possible at present) or turn right in Terminus Street (which is not possible at present).

Response 1

The Executive Committee's comment is noted.

Transport – Pedestrian and bicycle access

Issue 1

The Executive Committee noted that they are pleased that two parallel pedestrian crossings with lights have been planned for the intersection of Old Northern Road and Terminus Street.

Response 1

The Executive Committee's comment is noted.

Issue 2

Pedestrians are likely to take the most direct route to get to an entry point to the station, even if this means jaywalking. Given the way pedestrian crossings at lights are arranged at present, many people are tempted to jaywalk across Terminus Street rather than walk to the lights. If they happen to be at a particular part of the corner of Crane Road and Terminus Street, they need to cross in three different directions to get to the current bus terminal. A set of pedestrian lights might be needed in Terminus Street to overcome the problem. If synchronised with other lights, they should not impede the flow of traffic.

Response 2

The proposed signalised intersection of Terminus Street / Old Northern Road would provide pedestrian crossings on all legs, allowing a safe option for pedestrian access to the station precinct and the bus terminal.

Traffic light phasing would be determined in consultation with RMS.

Transport – Kiss-and-ride

Issue 1

The Executive Committee noted that the incorporation of 17 kiss-and-ride spaces on Castle Hill Road is a good idea and suggested that an additional kiss-and-ride provision should be investigated elsewhere in the main precinct adjacent to another major road.

Response 1

Around the station precinct, there needs to be a balance between kiss-and-ride allocation and bus stop allocation. The proposal outlined in EIS 2 allows kiss-and-ride traffic to be substantially separated from bus traffic. Options for additional kiss-and-ride spaces in the vicinity of the station are not present.

Transport – Parking availability

Issue 1

The Executive Committee still have a concern about the impact of the proposed development on street parking and requested that negotiations with the Hills Shire Council consider the likely impact of commuter parking in the area of Crane Road, Mercer Street and Brisbane Road where hundreds of apartments are located.

Response 1

Castle Hill Station does not provide opportunities for park-and-ride. Park-and-ride options for commuters in this vicinity would be provided at the nearby Showground Station.

Notwithstanding the identification and provision of commuter parking at selected stations, there may still be a degree of commuter parking on local streets surrounding the stations. In the first instance this parking demand would be managed by the provision of suitable alternatives to driving to the station, ie good pedestrian and cycling links, adequate bike parking at stations, frequent and direct bus services from the surrounding residential areas. These positive measures would be facilitated as part of the NWRL project. However, as occurs elsewhere in Sydney, local councils may choose to implement measures to limit on-street parking by commuters.

Issue 2

The Executive Committee noted that if the aim is to encourage commuters to use the planned parking stations at Cherrybrook and the Hills Centre, it might be advisable to establish some limited parking zones in the sections of Mercer Street and Brisbane Road closest to the station. This arrangement exists at Pennant Hills where a neighbouring parking station is at Thornleigh.

Response 2

Local councils may choose to implement measures to limit on-street parking by commuters.

Operation – Traffic impacts / volume

Issue 1

Crane Road is very long and carries a large volume of traffic. Access to Crane Road from Mercer Street is becoming increasingly difficult at peak periods. A significant volume of school traffic also makes use of Brisbane Road and Mercer Street.

Response 1

Table 9.5 of EIS 2 provides an assessment of operational traffic intersection performance around Castle Hill Station. This shows that the majority of intersections would continue to operate at a similar level of performance with or without the introduction of the NWRL.

6.4.5 Norwest Association Limited

Construction – Traffic and transport

Issue 1

The assessment does not adequately address a number of site-specific issues, including the closure of Brookhollow Avenue at a key junction with Norwest Boulevard. Such closure for but a very brief period is not acceptable due to the significant disruption to businesses in this locality. Given that the eastern intersection of Brookhollow Avenue with Norwest Boulevard is already at capacity during PM peak, an alternative traffic solution should be considered prior to the removal of the western intersection. This may require:

- The station box being built in stages so as to maintain traffic movement through the NWRL site in and out of Brookhollow Avenue to Norwest Boulevard.
- Advanced removal of the roundabout at the entry to Norwest Marketown shopping centre and replacement with a signalised intersection so as to more readily permit construction of interim bridging across the station box.
- Provision of an alternative temporary link to Norwest Boulevard further along Brookhollow Avenue.

Response 1

A range of options were considered for the management of traffic and access at Norwest during construction:

- The option of retaining left in and left out access at the western intersection of Brookhollow Avenue / Norwest Boulevard was considered. This arrangement may be possible under a cut and cover construction methodology with a staged approach. However, even under a staged approach, it is likely that periods of full closure associated with the introduction of temporary supporting structures and the like would be required.
- An alternative access arrangement may involve the provision of a single lane access road linking Brookhollow Avenue and Norwest Boulevard and providing left out egress onto Norwest Boulevard. This is currently being examined.
- Alternatively, there may be scope for the construction contractor to either a) excavate the southern end of the station box first and then reinstate traffic access at the western Brookhollow Avenue intersection or b) leave the excavation of the southern end of the box till last such that traffic access is retained for as long as possible.

These and other options will continue to be assessed in consultation with the successful construction contractors to determine how best to retain traffic access along Brookhollow Avenue with minimal adverse impacts.

Issue 2

The assessment does not adequately address a number of site-specific issues, including the adequacy of the alignment of Celebration Drive between Old Windsor Road and Brighton Drive. Further traffic assessment is required to ascertain whether there is need for additional turning and passing lanes between Old Windsor Road and the entry to the station precinct along Celebration Drive. The likely impact on the BP Service Station would also need to be considered in this regard.

Response 2

The NWRL proposes to widen the eastbound carriageway of Celebration Drive between Old Windsor Road and Lexington Drive to provide two lanes during the operational phase. No alterations are proposed for the construction period. Traffic modelling of the surrounding intersections has been undertaken based on these arrangements and presented in Chapter 9 of the EIS.

Impacts to the BP service station during both construction and operation have been considered in EIS 2. In relation to traffic access, mitigation measure T5 in Table 9.25 of EIS 2 makes a commitment to maintain access to existing properties and buildings. This is reproduced in Chapter 9 of this report. Consultation with BP is continuing in relation to access arrangements.

Since exhibition of EIS 2, the layout of the Bella Vista Station precinct has been amended. This amended layout improves the access to the BP Service Station. Further details of this change are presented in Chapter 8 of this report.

Construction – Heavy vehicle movements

Issue 3

Concerns regarding the following construction traffic issues at the proposed Norwest Station site which have not been adequately addressed in EIS 2:

- Conflicts between truck movements and parked cars along Brookhollow Avenue.
- The need to take into account the adverse impacts of traffic movements on neighbouring land owners given proposed large truck movements.

Response 3

Figure 9.14 of EIS 2 shows the proposed heavy vehicle routes to and from the Norwest Station construction site.

Section 9.6.7 of EIS 2 identifies the potential requirement to restrict car parking along a section of Brookhollow Avenue (from Norwest Boulevard along the frontage of the construction site) during the construction period.

The impacts from the introduction of heavy vehicles to neighbouring landowners has been assessed in the following locations:

- In terms of increased traffic and intersection performance – in Section 9.6.7 of EIS 2.
- In terms of road traffic noise – in Section 10.11 7 of EIS 2.

Other general business impacts from Stage 2 construction works are assessed in Chapter 13 of EIS 2.

Issue 4

Concerns regarding the following construction traffic issues at the proposed Bella Vista Station site which have not been adequately addressed in EIS 2:

- The adverse impact of truck movements. In this regard, it is imperative that removal of spoil and excavated material be taken away in a northerly direction away from Celebration Drive so as to avoid further congestion of the intersection of Celebration Drive with both Lexington Drive and Old Windsor Road.

Response 4

The majority of spoil removal from Bella Vista Station was addressed as part of EIS 1 – Major Civil Construction Works which was independently assessed by the NSW Department of Planning and Infrastructure as part of its preparation of the Director General's Report. Conditions of Approval for the Major Civil Construction Works were granted by the Minister for Planning and Infrastructure on the 25 September 2012. A thorough construction traffic impact assessment and construction noise assessment was presented in EIS 1 which included spoil removal trucks.

EIS 2 presents a traffic impact assessment and noise impact assessment for the Stage 2 construction works at the Bella Vista Station construction site.

Property – Property damage

Issue 5

The assessment does not adequately address a number of site-specific issues including the need to safeguard small median landscape islands along Brookhollow Avenue, and maintenance and restoration of the brick paver pavements.

Response 5

Figure 6.23 of EIS 2 presents the indicative layout of Norwest Station. The detail of features such as median landscape islands and pedestrian pavements would be developed as part of the detailed design and precinct planning stage.

TfNSW is currently in discussion with The Hills Shire Council, as the relevant road authority.

Planning – Land use planning

Issue 6

The assessment does not adequately address a number of site-specific issues including the need for any development on the proposed Norwest Station and Bella Vista Station sites to comply with the provisions of the Norwest Master Scheme including setback provisions contained in The Hills Shire Council's Development Control Plan.

Response 6

The NWRL project is being assessed as Stage Significant Infrastructure under Part 5.1 of the *Environmental Planning and Assessment Act 1979*.

As well as addressing the demand for better transport access, the NWRL would provide a catalyst for the further development of North West Sydney. It provides the opportunity to implement a fully integrated approach to transport and land use planning that connects people and the communities in which they live, work, learn and play.

Opportunities within the immediate station precinct, such as areas marked "Future Use to be Determined by Master Plan" on the indicative layouts for each station, would be developed over a number of years in response to planning outcomes and strategies developed by local councils and the Department of Planning and Infrastructure, in consultation with the community.

Future development not directly related to the project would require separate planning approvals under relevant local / State planning processes. The NWRL Project would be designed and constructed to accommodate potential future development (by providing a robust street pattern, local access arrangements and an integrated design approach, including structural support, servicing and access).

Construction – Access

Issue 7

The assessment does not adequately address a number of site-specific issues including lack of adequate car parking and access arrangements for the McDonald's Restaurant site which was not acquired for the Bella Vista Station precinct.

Response 7

Impacts to businesses including McDonald's have been identified and assessed in Chapter 13 of EIS 2.

Since exhibition of EIS 2, the layout of the Bella Vista Station precinct has been amended. This amended layout improves the access to and retains the existing parking arrangement at the McDonald's Restaurant. Further details of this change are presented in Chapter 8 of this report.

6.5 Anonymous

6.5.1 Anonymous 1

Operation – Noise and vibration

Issue 1

Concern that any noise or vibration impact from NWRL would have significant detrimental effect on the activities of the facility. Suggestion that the measures utilised to determine acceptable noise and vibration criteria be in line with those used for a commercial TV and / or digital sound recording facility. At a minimum, high attenuation tracks should be utilised in the vicinity of the facility.

Response 1

The operational noise and vibration assessment undertaken for the NWRL identified sensitive receivers, including identified commercial TV and / or digital sound recording facilities. The assessment determined that track attenuation presented in Figure 10.3 of EIS 2 in the vicinity of such facilities would achieve compliance with the relevant noise and vibration guidelines.

Operation – Traffic impacts and volume

Issue 2

Concern that there will be constant disruption to traffic if provision is not made for pedestrian underpass or footbridge over Norwest Boulevard when Norwest Station opens. Also significant pedestrian traffic will be generated from the shopping centre and facilities located across from the proposed Norwest Station. Suggestion that measures beyond a signalled crossing are necessary. As the facility operates on weekends, traffic lights need to be timed appropriately to take into account the large volume of cars and buses that enter and exit the facility.

Response 2

At opening, pedestrian crossings on Norwest Boulevard would be provided at the signalised intersection with Brookhollow Avenue / Century Circuit. Provision would be made to safeguard a future underground link beneath Norwest Boulevard associated with the station entry point.

Traffic light phasing would be determined at a point closer to operation based on expected traffic flow in consultation with RMS.

Transport – Parking availability

Issue 3

Concern that if a car park is not provided for use near the Norwest Station, the surrounding road network will become the default car park of choice. As the facility has car parking in excess of 1200 spaces and these spaces are mostly vacant on weekdays, facility welcomes the opportunity to discuss how a shared car park facility could be utilised for the benefit of all stakeholders.

Response 3

Norwest Station has been identified as a destination station to mainly serve the workforce of Norwest Business Park. Park-and-ride stations are available close to Norwest at Bella Vista Station and Showground Station. The EIS identified the possibility of shared car parking at existing facilities around Norwest Station. TfNSW recognises the facility's potential to be used for shared car parking and would further investigate this option in the future, if required.

6.5.2 Anonymous 2

Design – Station location

Issue 1

The relocation of the Norwest Station to its present site will prove to be a far sighted decision by TfNSW that will assist in minimising potential disruption to the surrounding area and compliment the ongoing operation and development of surrounding activities.

Response 1

Support is noted.

Design – Station design

Issue 2

The design of the Norwest Station is a good outcome that would sit well with the existing Norwest Boulevard streetscape and the built form in the immediate area.

Response 2

Support is noted.

Planning – Approval process

Issue 3

Would any retail operation or service proposed for the Norwest Station be required to go through the normal planning process eg through the local authorities such as Norwest Association and the Hills Shire Council?

Response 3

Approval is bought for the concept design as detailed in Section 6.12 of EIS 2. Future development not directly related to the project would require separate planning approvals under relevant local / State planning processes.

Design – Master Plan

Issue 4

Retail and personal services space would be one of the main features of the Norwest Station, however the area of retail is not clearly identified on the design plan for the site and further clarification is requested. Additional information required on number of premises and the area of each premise; type of businesses proposed to occupy each premise; hours of operation for the proposed businesses; details of proposed car parking for the premises, entry and access points for vehicles servicing these premises for the purpose of waste removal, loading bays etc…; and nature of tenure (whether premises will be offered for sale, leased or licensed and if so by whom?).

Response 4

Section 6.7.1 of EIS 2 provides details on retail space within station precincts. Retail space would be provided to meet customers' needs for example, buying a coffee in the morning, picking up newspapers or dropping off and picking up dry cleaning. These retail spaces mean that customers do not need to make additional trips for shopping for everyday needs (which in turn reduces travel demands on local roads as customers' needs can be met in one place.

Shops and service facilities in or near station and interchanges can also ensure that there is further activity at stations and interchanges which provides passive surveillance of public areas.

Provision for a small amount of retail activity would be provided at Norwest Station (up to approximately 50 square metres). However, the exact retail activities or tenure have not been determined at this stage. As occurs at existing rail stations, any proposed business within the areas provided would be subject to local planning controls.

Issue 5

A large part of the Norwest Station plan reflects an area which is marked as 'Future use to be determined by the Master Plan'. What types of structures, if any, are proposed for this part of the Norwest Station site? Opportunity for this part of the Norwest Station site to be acquired and incorporated into the existing operations.

Response 5

For the areas shown in EIS 2 as Future Use to be Determined by Master Plan (see Figure 6.23 – Norwest Station – Indicative Layout), the type of land use and scale of proposed developed does not form part of the NWRL project presented in EIS 2 for which approval is being sought. Further approvals would be required for the future uses proposed on these sites, under relevant local / State planning processes.

Planning – Land use planning

Issue 6

Zoning of the Norwest Station and Bella Vista Station would comply with the existing LEP and DCP for Norwest Business Park and the Hills Area. Assurance sought from TfNSW that the land at Norwest Station marked as 'future use to be determined by Master Plan' would not become a threat to the current zoning regulations within the area, and that no future change to zoning would become available.

Response 6

For the areas shown in EIS 2 as Future Use to be Determined by Master Plan (see Figure 6.23 – Norwest Station – Indicative Layout), the type of land use and scale of proposed developed does not form part of the NWRL project presented in EIS 2 for which approval is being sought. Further approvals would be required for the future uses proposed on these sites, under relevant local / State planning processes.

Communication – Consultation

Issue 7

A detailed traffic management plan would be developed for each project site in consultation with key stakeholders.

Response 7

NWRL construction contractors would be required to prepare the following traffic management documentation (as detailed in the CEMF – Appendix B of EIS 2):

- A Construction Traffic Management Plan setting out the overall traffic management resources, processes and procedures for the management of traffic and transport during construction of the Project Works and Temporary Works.
- Construction Traffic Control Plans setting out the specific traffic and transport management arrangements to be implemented at specific locations during construction of the Project Works and Temporary Works.

Key stakeholders and surrounding receivers would be consulted during the development of these documents as required.

Construction – Traffic and transport

Issue 8

Concerns regarding details of truck movements and changes in traffic conditions on and along Brookhollow Avenue, Norwest Boulevard and surrounding streets.

Response 8

Truck movements to and from Norwest Station construction site are proposed predominantly along Norwest Boulevard. Limited alternatives are available in the vicinity of this construction site. With the implementation of traffic lights at the Norwest Boulevard / Brookhollow Avenue / Century Circuit intersection, there would not be any significant changes to the intersection performance around Norwest Station construction site from Stage 2 construction activities.

Issue 9

Car parking arrangements during the NWRL construction phase should not impact on car parking facilities, and construction staff parking requirements should be accommodated on the construction site. Request consultation occurs at the start of construction to discuss construction personnel car parking arrangements and their impact.

Response 9

Construction worker parking would be provided within the construction site (as shown on Figure 7.3 of EIS 2).

Mitigation measure T10 in Table 9.25 of EIS 2 identifies the consideration of the need for, and provision of, remote car parking locations and shuttle bus transfers where sufficient parking cannot be provided within site boundaries.

Workers would be discouraged from parking on public roads or within car parks for adjacent facilities.

Construction – Traffic and transport

Issue 10

Note that the Department is seeking to limit access to the Norwest Station site from Norwest Boulevard. We support this mitigation measure and encourage the Department to avoid any access arrangements that may impede traffic flows along Norwest Boulevard.

Response 10

Support is noted.

Operation – Business impacts

Issue 11

Any proposed retail and personal services used for the Norwest Station should be discussed with existing retail operations so that additional retail uses can be best managed. Retail or other commercial services operated at Norwest Station should be complimentary, rather than in competition.

Response 11

Section 6.7.1 of EIS 2 provides details on retail space within station precincts. Retail space would be provided to meet customers' needs for example, buying a coffee in the morning, picking up newspapers or dropping off and picking up dry cleaning. These retail spaces mean that customers do not need to make additional trips for shopping for everyday needs (which in turn reduces travel demands on local roads as customers' needs can be met in one place).

Shops and service facilities in or near station and interchanges can also ensure that there is further activity at stations and interchanges which provides passive surveillance of public areas.

Construction – Business impacts

Issue 12

Any projected disruption and details of detours for foot path areas and vehicle movements is requested for better understanding and further comments.

Response 12

Specific details of any required vehicular or pedestrian detours required during construction would be determined during detailed construction planning and described within the Traffic Control Plans to be developed by the construction contractors. Consultation would occur with surrounding businesses throughout construction where detours may impact on their operations.

Issue 13

It is imperative that works to demolish the existing roundabout at the intersection of Norwest Boulevard and Brookhollow Avenue and install traffic signals are done after business hours.

Response 13

Any construction works located within the operating roadway would be undertaken subject to the conditions of a Road Occupancy Licence issued by the relevant road authority. Where relevant, this would include a restriction on work hours in order to minimise traffic related impacts.

Issue 14

During the Norwest Station construction period and any extension to the time frame until commissioning of the North West Rail Link, businesses will be exposed to a range of adverse business outcomes and may suffer losses and impacts as a direct result of this project.

These potential losses and impacts may include:

- Loss of services.
- Damage to property.
- Failing tenants.
- Rental relief to tenants.
- Vacancies.
- Reduced rent on vacancies.
- Loss of value.
- Exposure to tenant claims.
- Funding difficulties.
- Loss of development opportunities.
- Loss of marketing ability.

Does not believe that it is fair or that it is intended by TfNSW that any stakeholder should suffer losses as a result of this major infrastructure project which will ultimately bring significant savings in journey times and many benefits to the residents of North West Sydney.

Response 14

EIS 1 and EIS 2 identify mitigation measures to manage the potential impacts to nearby receivers including businesses. TfNSW would continue to consult with stakeholders throughout construction in order to understand their specific concerns and develop appropriate mitigation measures.

Issue 15

Norwest Boulevard is a critical zone for services (electricity, sewerage, data telecommunication, gas, water and fire services). Any disruption to these and other services as a result of the NWRL construction would have a severe impact and will need to be closely monitored.

Response 15

EIS 1 identified a preliminary list of known services around each construction site (Section 7.10.2), including the critical zone along Norwest Boulevard. Where adjustment, relocation or protection of services is required to facilitate construction, this would occur in consultation with the relevant utility provider and with the aim to minimise disruption of the services to surrounding users.

These works are proposed to be undertaken prior to the commencement of substantial construction in order to reduce the risk of accidental damage and disruption to services during the construction period.

Operation – Traffic impacts / volume

Issue 16

The EIS 2 statement states that four bus stands will be located on both sides of Norwest Boulevard. Support for the bus stand proposed for the north western side, is qualified until further details on how the current slip lane along Norwest Boulevard works. According to the plan layout, the slip lane is totally removed and replaced with the bus stand. Concern that this aspect of the proposal, as it presently stands, may cause traffic congestion.

Response 16

Specific details of traffic arrangement around the proposed bus stops on Norwest Boulevard would be determined during the detailed design phase. Appropriate access would be retained to the businesses serviced by the current slip lane in a manner which does not result in unacceptable traffic congestion.

Issue 17

It is noted that the roundabout at the intersection of Norwest Boulevard and Brookhollow Avenue is to be replaced by a signalised intersection. This intersection should be designed to allow ease of access from all directions including a dedicated right hand turning lane for vehicles travelling south-west along Norwest Boulevard.

Response 17

The proposed signalised intersection at Norwest Boulevard / Brookhollow Avenue / Century Circuit would include a dedicated right hand turn lane from Norwest Boulevard to Century Circuit for vehicles travelling westbound on Norwest Boulevard.

Design – Station precincts

Issue 18

The bus stand located on the station side is fully supported.

Response 18

Support is noted.

Issue 19

Full support of the proposed locations for the taxi zones.

Response 19

Support is noted.

Issue 20

Full support of the proposed locations for the kiss-and-ride zones.

Response 20

Support is noted.

Transport – Pedestrian and bicycle access

Issue 21

Clarification requested on the provision of an underground connection to the north western side, with below ground access constructed. Support this provision, subject to further detail being provided on the proposed access in this area.

Response 21

The provision of an underground connection to the north-eastern side of Norwest Boulevard would be safeguarded as part of the NWRL project. Details of any future entry in this location would be subject to future design work.

Operation – Public safety

Issue 22

Supports the removal of the roundabout at Norwest Boulevard and Brookhollow Avenue to make way for the installation of four traffic signals to improve pedestrian and road safety.

Response 22

Support is noted.