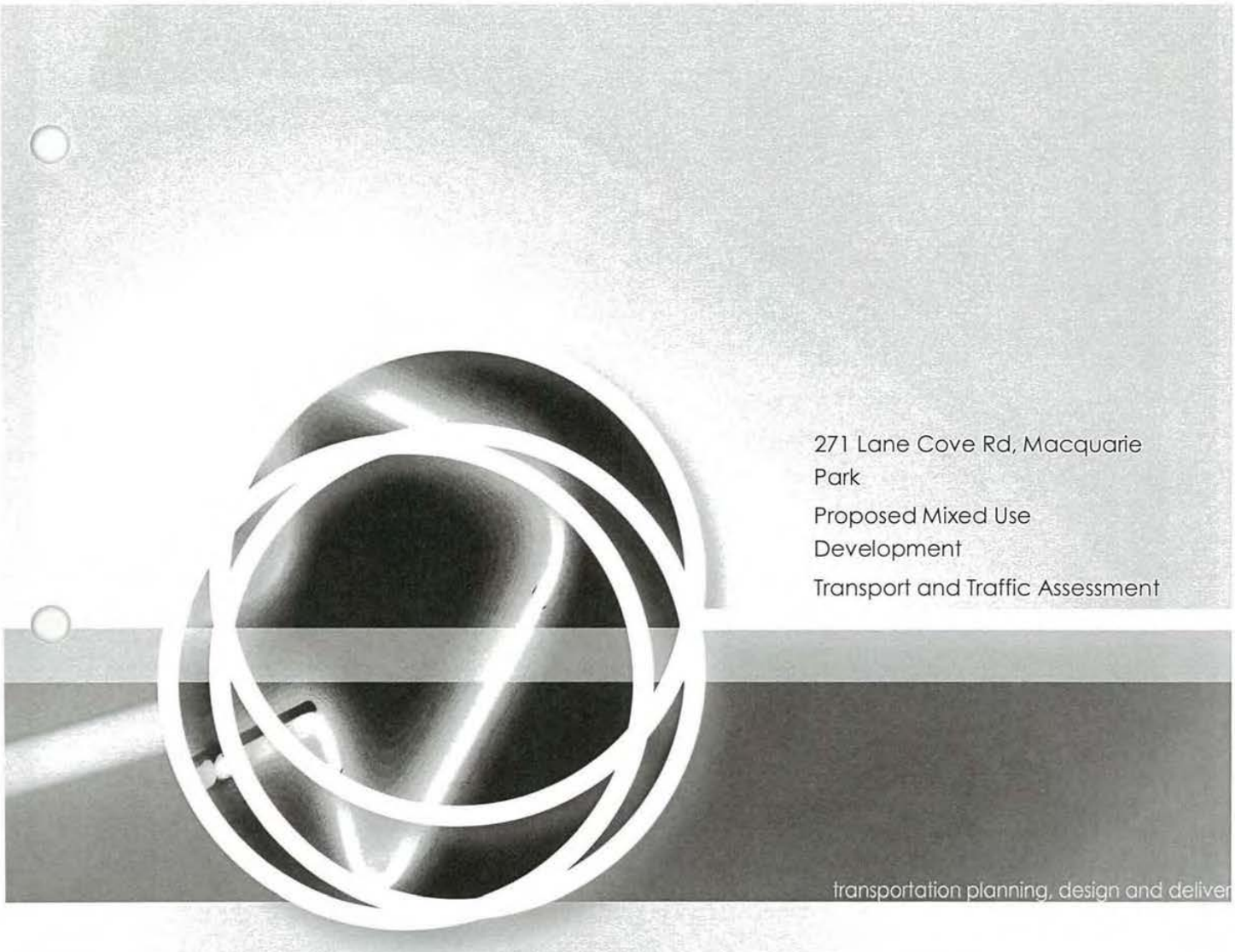
Traffic Impact Assessment

GTA Consultants

Appendix E

JBA 12769



271 Lane Cove Rd, Macquarie Park

Proposed Mixed Use Development

Transport and Traffic Assessment

transportation planning, design and deliver

GTAconsultants

271 Lane Cove Rd, Macquarie Park

Proposed Mixed Use Development

Transport and Traffic Assessment

Issue: B 18/11/13

Client: Mirvac
Reference: 13S1319000
GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A-Dr	30/10/13	Draft	Michael Lee	Ken Hollyoak	Ken Hollyoak	Ken Hollyoak
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Table of Contents

Figures

Tables

1. Introduction

This transport and traffic assessment report relates to a proposed mixed development at 271 Lane Cove Road, Macquarie Park. The proposal involves the demolition of existing builds on the site and the construction of five buildings of various heights to accommodate a mixed used development comprising some 670 high density residential apartments with some 5,350m² of non-residential uses (including commercial, local shops and restaurants uses).

This transport and traffic assessment report is to accompany a planning proposal to Ryde City Council to rezone the size to allow it to be developed as a mixed use development to include both residential and non-residential uses. The planning proposal would specifically seek approval for the site to be rezoned to allow high density residential development on the site.

The proposed development would be developed as a transit oriented development (TOD). With it close proximity to existing public transport services and being located within an employment zone (being Macquarie Park Corridor), the site offers a unique opportunity for it to be developed as a TOD development.

The remainder of the report is set out as follows:

- Chapter 2 discusses the existing road network conditions surrounding the site
- Chapter 3 describes the proposed development including a discussion on TOD development
- Chapter 4 assesses the transport implications of the proposed development
- Chapter 5 examines the traffic impacts arising from the proposed development
- Chapter 6 assesses the parking demand, and
- Chapter 7 presents the conclusions of the investigation.

2. Existing Conditions

2.1 Site Description

The subject site is located 271 Lane Cove Road, Macquarie Park and is located at the corner with Waterloo Road. It is within the local government area of Ryde City Council. The subject site is part of the Macquarie Park Corridor.

Figure 2.1 shows the location of the subject site.

Figure 2.1: Location Plan

The site is currently occupied by two existing commercial buildings with a total floor area of some 12,100m².

The site can be accessed from either Waterloo Road or Lane Cove Road (but the Lane Cove Road access is currently blocked off).

2.2 Road Network

The key roads in the vicinity of the site include the M2 Motorway, Epping Road, Lane Cove Road, Waterloo Road, Wicks Road and Talavera Road. A description of the local road network is provided below.

The M2 Motorway is a state road that runs in the east-direction connecting to Sydney CBD (via the Lane Cove Tunnel) in the east and the Hills District in the west. It is generally configured as a

high speed tolled motorway with three traffic lanes in each direction. In the vicinity of the site, east facing (on/off) ramps are provided at Lane Cove Road and westbound on and off ramps to and from Herring Road with east bound on ramp from Christie Road. It is signposted with a 100km/hr speed limit.

Epping Road is a state arterial road running east-west direction. It is generally configured as a six-lane divided road in the vicinity of the site. It has a 70km/hr speed limit. Intersections along Epping Road are generally controlled by traffic signals. Its intersection with Lane Cove Road is graded separated with Epping Road having the right of way.

Lane Cove Road is a north-south arterial road with three traffic lanes in each direction. Together with Homebush Bay Drive and King Georges Road in the south and Ryde Road/Mona Vale Road in the north, it provides a road corridor stretching from Hurstville to Mona Vale. Lane Cove Road generally has a sign posted speed limit of 70km/hr.

Waterloo Road is a local road under the jurisdiction of Council. It is configured as a four-lane two-way divided road north of Lane Cove Road. On the other side of Lane Cove Road it is configured as a two-lane two-way road. It is a posted sign limit of 60km/hr.

Wicks Road and Talavera Road are also local roads. These are also configured as a four lane road with a posted speed limit of 60km/hr.

2.3 Existing Intersection Turning Movement Counts

Peak hour intersection turning movement flows were conducted at a number of nearby intersections:

- Lane Cove Road-Waterloo Road
- Waterloo Road-Eden Park Drive
- Epping Road-Wicks Road
- Epping Road-Lane Cove Road
- Waterloo Road-Khartoum Road
- Talavera Road-Khartoum Road
- Lane Cove Road-Talavera Road, and
- M2 Motorway-Lane Cove Road East Facing (Exit) Ramp.

These intersections are within 800m of the subject site.

The surveys were conducted on Thursday 17 October 2013 during morning (7:00am to 9:00am) and evening (4:00pm to 6:00pm) peak periods. The Thursday peak periods were chosen for the conduct of the surveys as the site is located in close proximity to Macquarie Shopping Centre where the development traffic would coincide with other commuter background traffic and the development traffic arising from the proposed development.

The morning and evening peak hour intersection turning movement flows are presented in Figure 2.2 and Figure 2.3 respectively.

Figure 2.2: Existing Morning Peak Hour Intersection Turning Movement Flows

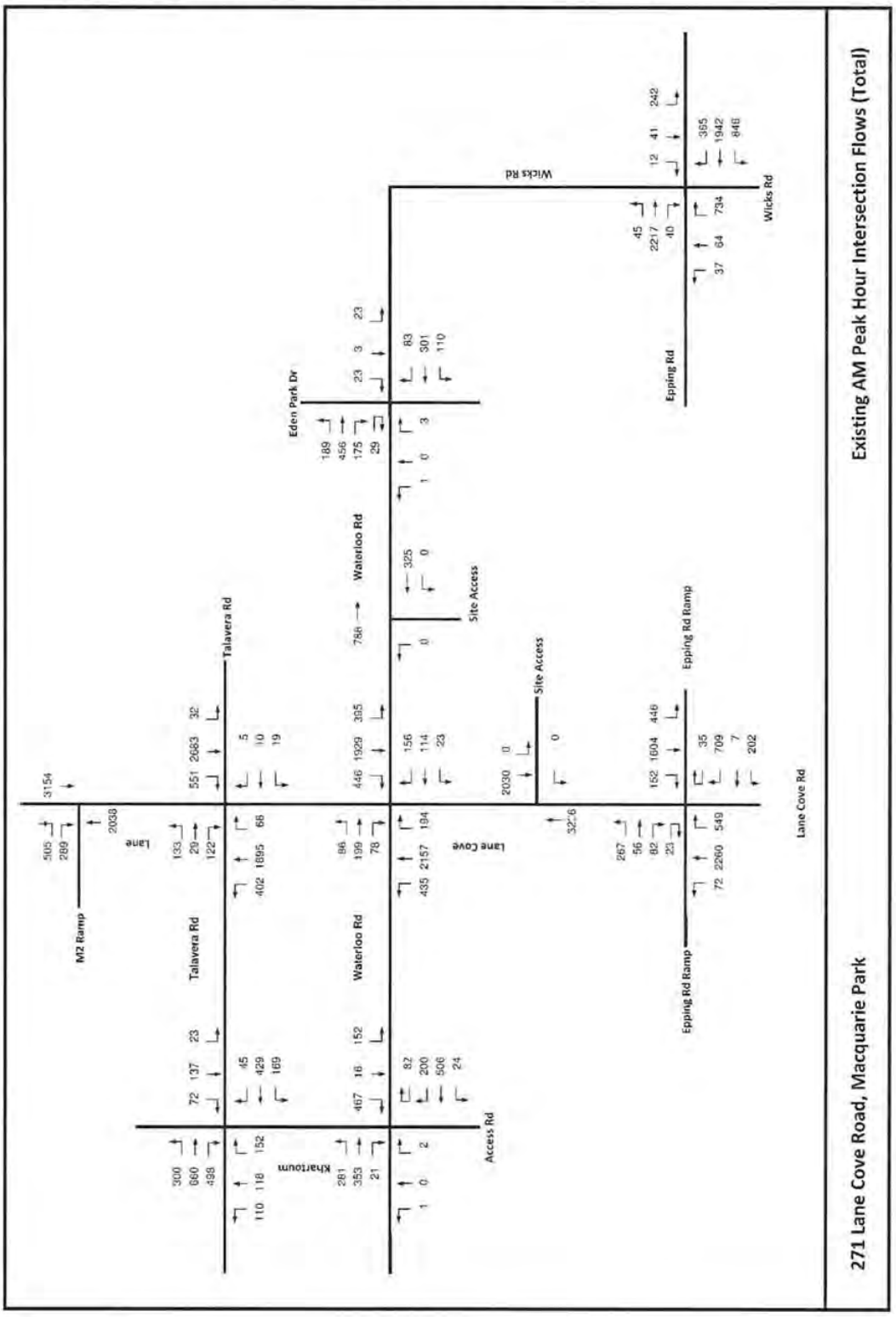
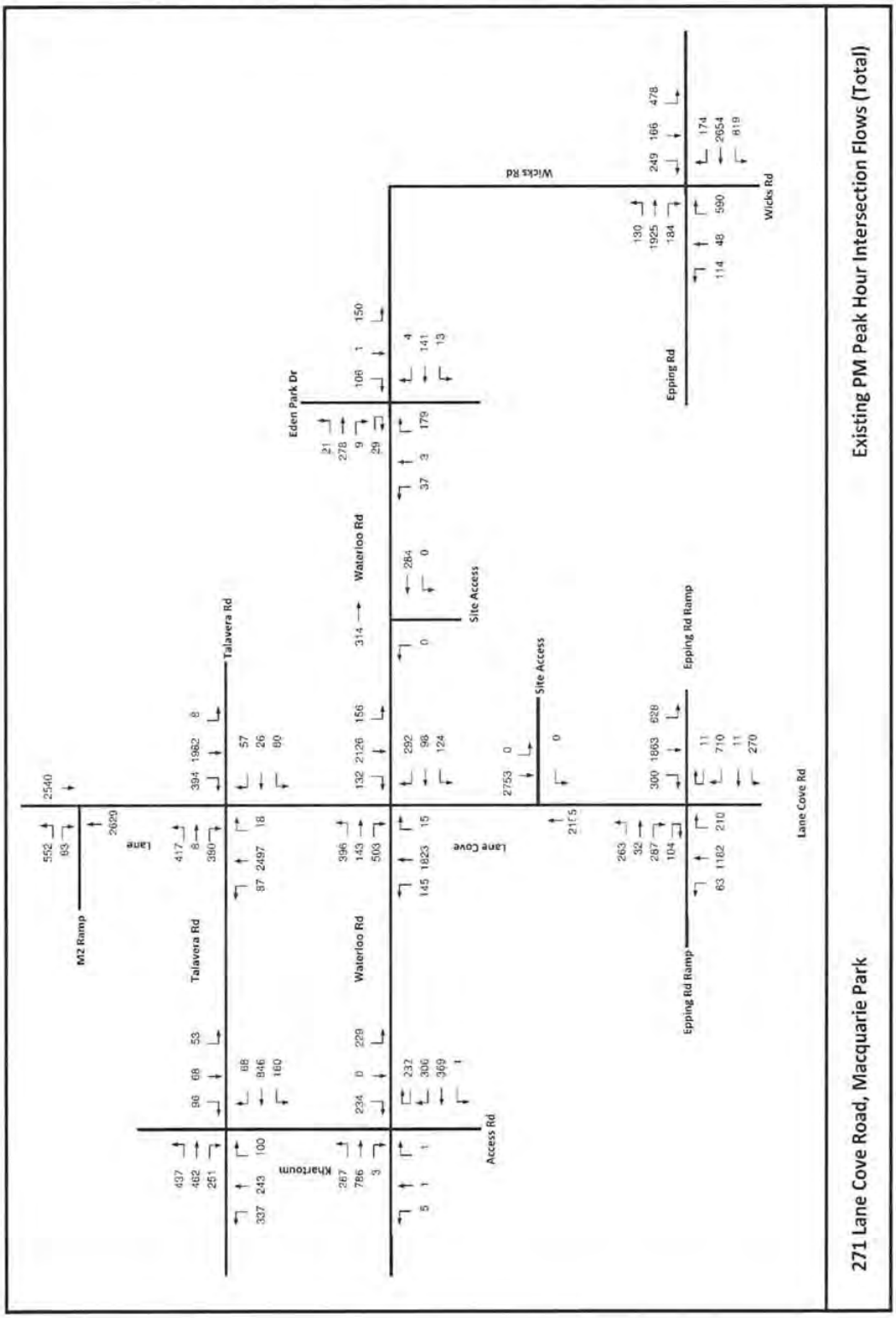


Figure 2.3: Existing Evening Peak Hour Intersection Turning Movement Flows



The midblock two-way peak hour flows derived from the intersection turning movement flows are summarised in Table 2.1.

Table 2.1: Existing Two-way Peak Mid-Block Traffic Flows

Road Section	AM Peak Hour			PM Peak Hour		
	NB/EB	SB/WB	2-Way	NB/EB	SB/WB	2-Way
Lane Cove Road, south of Epping Road	2,881	1,888	4,769	1,455	2,420	3,875
Lane Cove Road, north of Waterloo Road	2,399	2,770	5,169	2,511	2,414	4,925
Lane Cove Road, north of M2	2,543	3,154	5,697	3,181	2,540	5,721
Waterloo Road, west of Khartoum Road	655	974	1,629	1,056	608	1,664
Waterloo Road, west of Lane Cove Road	363	995	1,358	1,042	375	1,417
Waterloo Road, east of Eden Park Drive	482	494	976	607	158	765
Talavera Road, west of Khartoum Road	1,458	611	2,069	1,150	1,279	2,429
Talavera Road, west of Lane Cove Road	284	963	1,247	805	507	1,312
Wicks Road, south of Epping Road	835	927	1,762	752	1,169	1,921
Wicks Road, north of Epping Road	474	295	769	352	893	1,245
Epping Road, west of Wicks Road	2,302	1,991	4,293	2,239	3,017	5,256
Eden Park Drive, north of Waterloo Road	272	49	321	28	257	285

RMS guidelines indicates that arterial roads generally have daily flows greater than 20,000 vehicles per day (vpd) and sub-arterial roads have daily flows between 5,000 vpd to 20,000 vpd. Other roads have daily flows of 10,000 vpd or less. Typically, peak hour flows are approximately 8 to 10 per cent of the daily flows. The surveyed flows on the nearby surrounding roads are generally within these limits.

2.4 Public Transport

The site is conveniently located in close proximity to existing public transport services. The Macquarie Park Railway Station is located to the immediate north of the site adjacent to Waterloo Street. Train services on this line have a frequency of 15 minutes through the day. Bus stops are located on both Lane Cove Road and Waterloo Road at the frontages of the site. Bus services at the Lane Cove Road and Waterloo Street stops include the Metrobus services (M41 and M54 respectively). Metrobus bus services have a frequency of 10 minutes during peak periods. Further details are provided below.

2.4.1 Trains

The subject site is favourably located adjacent to Macquarie Park Railway Station. Macquarie Park Station positioned along the North Shore & Northern Line on the Transport Sydney Trains network. A summary of the morning and evening three-hour peaks is presented in Table 2.2.

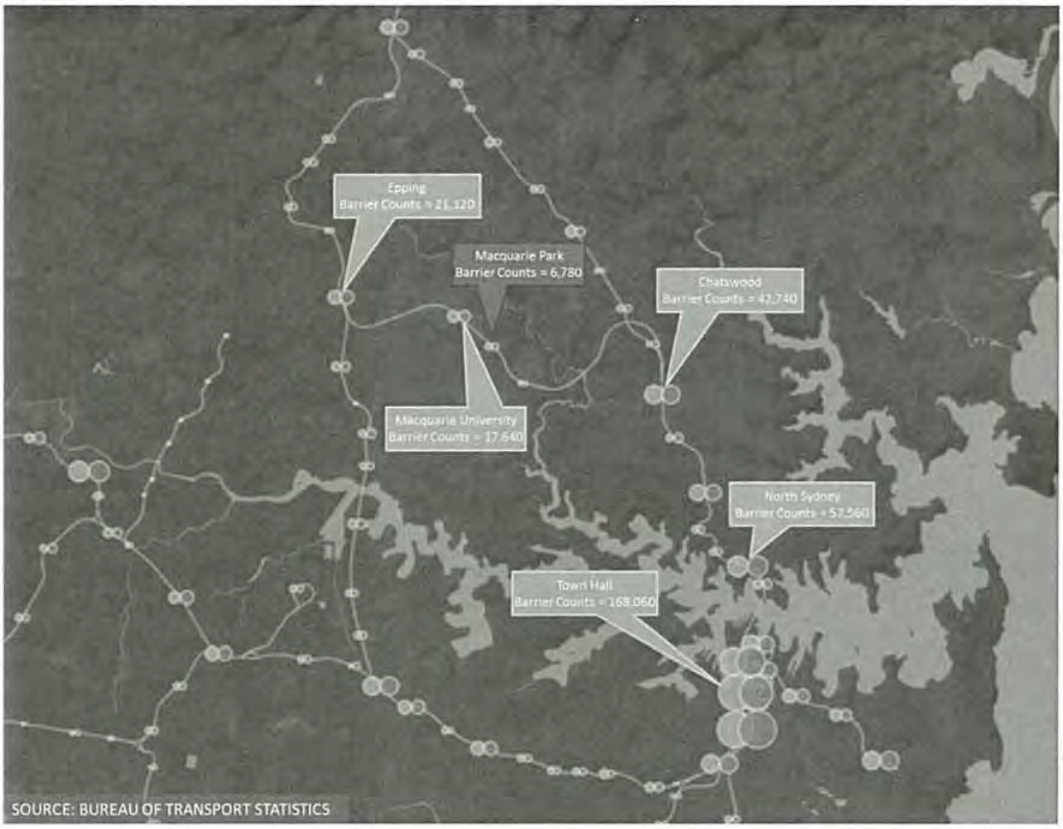
Table 2.2: Macquarie Park Train Services

Time Period	Inbound Services	Outbound Services
Morning Peak 6:00am – 9:00am	12	3 to Epping + 12 to Hornsby
Evening Peak 4:00pm-7:00pm	19	12 (To Hornsby)

On a typical, there are approximately 6,800 passengers travelling in and out of Macquarie Park Railway Station, while in the three hour morning it is approximately 2,600 passengers.

Figure 2.4 presents a map of the rail network of the northern metropolitan of Sydney with 24-hour barriers count data at select railway stations. Macquarie Park Railway Station has one of the least numbers of passengers using it.

Figure 2.4: 2012 Barriers Counts Data at Select Railway Stations



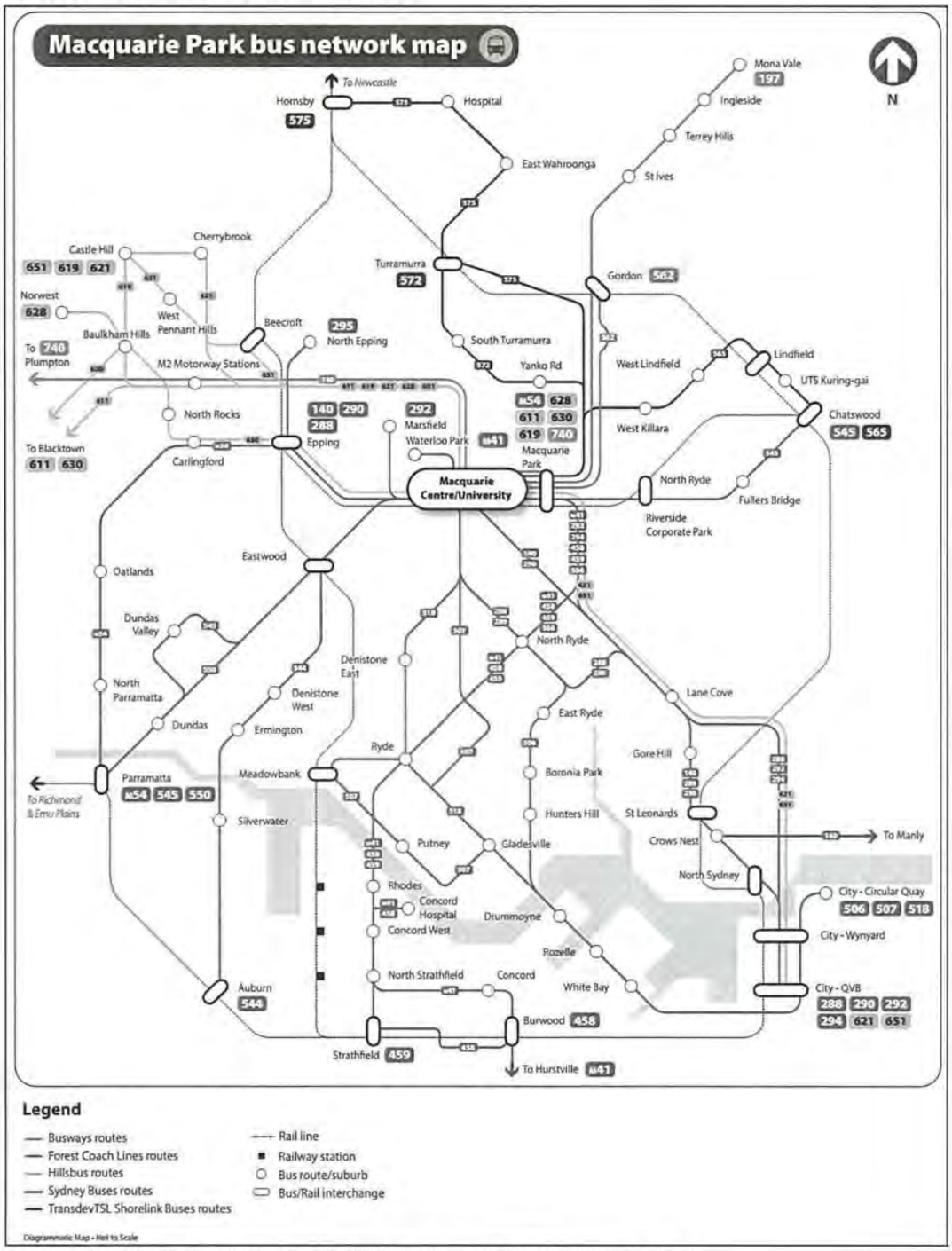
2.4.2 Buses

Macquarie Park is well serviced by an extensive bus network with several bus operators providing services for Transport for NSW. The bus network from Macquarie Park Station is shown in Figure 2.5 with a summary of bus services outlined in Table 2.3.

Bus services connect the site directly to other localities such as Blacktown, Burwood, Castle Hill, Chatswood, City, Epping, Parramatta, Rhodes and Ryde.

As can be seen from Table 2.3, the subject site is well serviced by buses.

Figure 2.5: Macquarie Park Bus Network Map



Reproduce from: http://www.sydneytrains.info/stations/maps/Macquarie_Park-LocalAreaGuide.pdf

Table 2.3: Nearby Bus Service Summary

Route No.	Route Description	No. of Daily Services Weekday/Saturday	Service Operating Period Weekday/Saturday
Bus Stop: Lane Cove Road, adjacent to site			
292	Marsfield to City	34/19	6:20am – 11:13pm/ 7:05am – 11:13pm
294	Epping to City	5/0	7:01am – 5:14pm
458	Ryde to Burwood via Rhodes S.C.	2/0	6:17am – 6:57am
459	Macquarie Uni to Strathfield Railway Station	17/0	7:24am – 6:24pm
506	Macquarie Uni to City	24/20	7:19am – 6:47pm/8:37am – 6:06pm
545	Parramatta to Chatswood	65/36	5:35am – 11:50pm/7:20am – 8:51pm
621	Castle Hill to City	8/13	9:44am – 3:34pm/ 9:02am – 8:56pm
651	Castle Hill to City	6/11	9:39am – 2:02pm/8:14am – 6:12pm
M41	Macquarie Park to Hurstville	67/38	6:25am – 8:45pm/7:38am – 8:01pm
Bus Stop: Lane Cove Road, opposite to site			
292	City to Marsfield	39/19	6:39am – 11:23pm/7:55am – 11:23pm
294	City to Epping	3/0	7:02am – 8:58am
458	Burwood to Ryde via Rhodes S.C.	1/0	8:04am
459	Strathfield Railway Station to Macquarie Uni	15/0	7:43am – 5:52pm
506	City to Macquarie Uni	24/20	6:50am – 6:22pm/8:14am – 6:29pm
545	Chatswood to Parramatta	68/37	5:00am – 1:38pm/7:01am – 9:37pm
550	Chatswood to Parramatta	4/0	2:52pm – 3:40pm
621	City to Castle Hill	16/12	8:35am – 10:25pm/9:59am – 8:59pm
651	City to Castle Hill	6/11	11:25am – 3:54pm/9:17am – 7:17pm
M41	Hurstville to Macquarie Park	74/39	6:00am – 8:04pm/7:11am – 7:36pm
Bus Stop: Waterloo Road, adjacent to site and Macquarie Park Railway Station			
611	Macquarie Park to Blacktown Interchange	41/0	6:35am – 9:10pm
619	Macquarie Park to Rouse Hill Town Centre	30/9	7:15am – 9:45pm/10:10am – 6:08pm
628	Macquarie Park to Norwest via M2	9/0	7:00am – 9:40pm
630	Macquarie Park to Blacktown	17/0	6:51am – 5:51pm
740	Macquarie Park to Plumpton via M2	7/0	7:19am – 6:40pm
M54	Macquarie Park to Parramatta	70/40	6:00am – 8:56pm/6:22am – 7:33pm
Bus Stop: Waterloo Road, opposite to site and Macquarie Park Railway Station			
611	Blacktown Interchange to Macquarie Park	39/0	6:20am – 8:03pm
619	Rouse Hill Town Centre to Macquarie Park	29/11	6:53am – 8:29pm/8:01am – 6:02pm
628	Norwest to Macquarie Park via M2	7/0	3:48pm – 6:46pm
630	Blacktown to Macquarie Park	16/0	6:23am – 6:06pm
740	Plumpton to Macquarie Park via M2	7/0	7:07am – 6:32pm
M54	Parramatta to Macquarie Park	70/41	6:08am – 10:02pm/6:45am – 8:31pm

2.5 Pedestrian Infrastructure

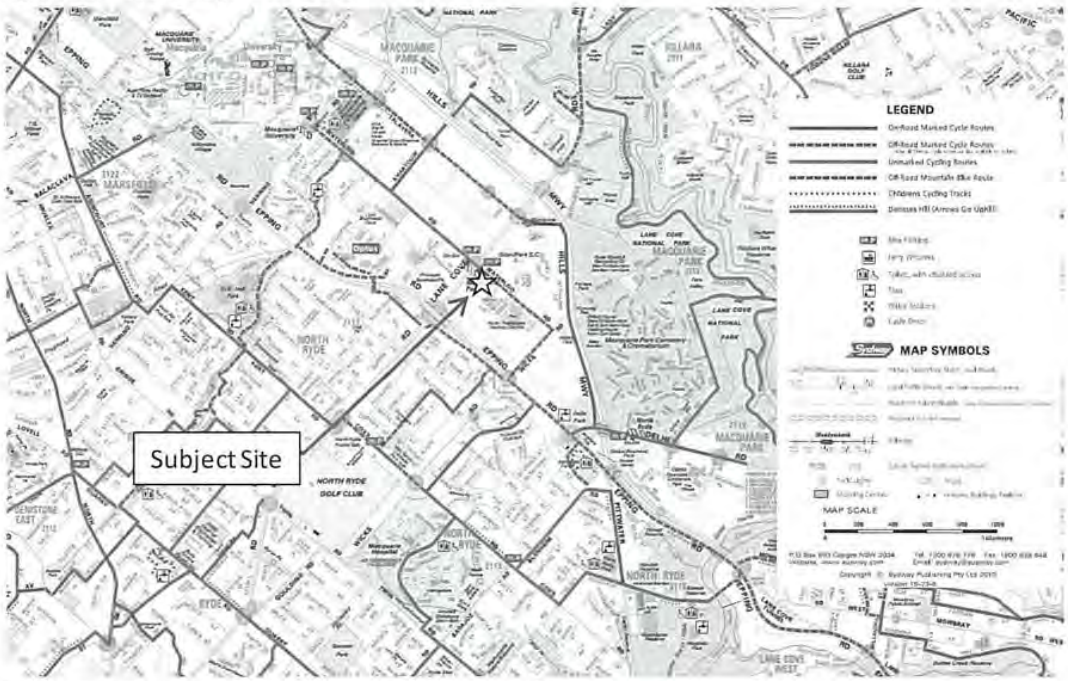
Fully formed pedestrian paths are located on both sides of Lane Cove Road and Waterloo Road in the vicinity of the site.

Signalised crossing facilities are available at the intersection of Lane Cove Road with Waterloo Road.

2.6 Cycle Infrastructure

The site is adjacent to the local formalised bicycle network and provides direct access to Macquarie University. The site is also accessible to the Epping Road off-road cycleway which provides access to the Sydney CBD.

Figure 2.6: Local Bicycle Network



Reproduced from: http://www.ryde.nsw.gov.au/_Documents/Maps/Bike_Map_Aug09.pdf

2.7 Previous Approval Development

Previously, the site was granted a development approval for the site to be redeveloped into a 37,799m² GFA commercial/office development with four buildings. The approval was granted in March 2009 from Ryde City Council.

The traffic assessment report that accompanied the development application estimated a total of 450 vehicles per hour (vph) would be generated by the proposed development.

The proposed development was approved with access to/from both Lane Cove Road and Waterloo Road.

3. Development Description

3.1 Proposed Development

Mirvac is lodging a planning proposal to seeking approval from Ryde City Council to enable the site to be developed with high density residential use.

The proposed development would include some 670 residential apartments and some 5,350m² of non-residential uses (predominately commercial use with some retail uses such as local shops, restaurants, cafes etc.).

For traffic analytical purposes, the following apartment mix has been assumed:

- studio units – 34 units
- 1-bedroom units – 335 units
- 2-bedroom units – 268 units, and
- 3-bedroom units – 33 units.

It is noted that some of the "non-residential" use floor area may be converted to provide student accommodation. Student accommodation would be less traffic intensive than other "non-residential" uses such as commercial development. Student accommodation developments do not generally provide on-site parking for this type of tenant (i.e. students). Car ownership amongst students is generally very low, and they would be living within walking distances to the educational campuses (e.g. Macquarie University) or they would use public transport.

The proposed development is expected to be delivered over two stages. The first stage comprises two buildings, while the second stage would have three buildings. In each of the stages, a central plaza would be provided. The proposed buildings would surround their respective central plaza.

A separate public plaza and domain area would be created around the Macquarie Park Railway Station. The proposed building adjacent to Macquarie Park Railway Station would have an active frontage. Non-residential uses are proposed at the ground floor level to activate this area.

Separate basement car parking areas would be provided to the two stages of the proposed development.

It is proposed to provide vehicle accesses to this site from Lane Cove Road and Waterloo Road. The Lane Cove Road access would be configured to permit only left-in/left-out traffic movements. The Macquarie Park development control plan intimates that Waterloo Road would be provided with a central median. As such, the Waterloo Road access would also be configured to also only permit left-in and left-out traffic movements.

An internal road consistent with the current development control plan (and draft development control plan) would segregate Stages 1 and 2 developments. Pedestrian connectivity would be provided across this internal road to link the two central plaza areas, and provide permeability throughout the site including Macquarie Park Railway Station.

In addition, the current and draft development control plans also depict a separate internal road along eastern edge of the site.

Fully formed pedestrian footpaths would be provided on at least one side of these internal roads to enhance the permeability of the site.

Raised threshold treatments would be provided where the internal road roads connect to the external roads (namely Lane Cove Road and Waterloo Road). The raised threshold treatment would alert road users to an altered road environments or the presence of other traffic control measures requiring additional caution. The threshold treatments signal to drivers and other road users a change in the road function from that of "movement" to that of "access" as well as lowering of the speed limit. The raised threshold treatment would be provided such that it continues the footpaths along Lane Cove Road and Waterloo Road across these access roads. The proposed treatment would enhance pedestrian safety and amenity, as well as discourage rat running through the site to avoid the traffic lights on Lane Cove Road.

3.2 Transit Oriented Development

As indicated previously, it is proposed to develop a TOD development on the site. The subject site, with good quality existing public transport at its door step and within walking catchment of the Macquarie Park Corridor, offers a unique opportunity for it to be developed as a TOD.

The guideline *Transit Oriented Development: Guide for Practitioners in Queensland* prepared by the Queensland Government indicates that TOD development is characterised by:

- *a rapid and frequent transit service*
- *high accessibility to the transit station*
- *a mix of residential, retail, commercial and community uses*
- *high quality public spaces and streets, which are pedestrian and cyclist friendly*
- *medium- to high-density development within 800 metres of the transit station (i.e. the TOD precinct), and*
- *reduced rates of private car parking.*

The proposed development has characteristics consistent with the above.

4. Transport Assessment

Trip generation has been estimated for the proposed development based on the following development yield:

- 670 residential apartments, and
- 5,350m² of commercial floor area.

4.1 Residential Trips

RMS (Roads and Maritime Services, formerly RTA) has recently released a Technical Direction (TDT2013/04) providing a summary of trip generation rates for various land uses to replace the suggested trip rates in their *Guide to Traffic Generating Developments.*

The Technical Direction indicates that for two sites in Chatswood and St Leonards, the average person trip rate in the morning peak period was 0.64 person trips per hour per unit. Therefore, the residential component of the development would generate approximately 430 person trips per peak hour.

The Bureau of Transport Statistics indicates that based on 2011 Journey to Work (JTW) data the mode shares for employed residents living in Chatswood and St Leonards are as follows:

- Vehicle driver/passenger – 45%
- Train – 33%
- Bus – 7%
- Walk – 13%
- Other – 2%.

Therefore, from the above the residential use would generate some 140 train trips per hour and 30 bus trips per hour.

It is noted that the above mode shares for public transport are generally consistent with the modal split aspirations contained in the Macquarie Park Traffic Study (conducted by Bitzios Consulting).

4.2 Commercial Trips

The Technical Direction indicates the average person trip rate in the morning peak period for commercial use was 2.1 person trips per hour per 100m² GFA. Therefore, the commercial component of the development would generate approximately 112 person trips per peak hour.

The Bureau of Transport Statistics indicates that based on 2011 JTW data the mode shares for people employed in Chatswood and St Leonards are as follows:

- Vehicle driver/passenger – 52%
- Train – 31%
- Bus – 8%
- Walk – 5%
- Other – 3%.

Therefore, the proposed commercial use would generate some 35 train trips per hour and nine bus trips per hour.

In summary, the proposed development would generate a total of 175 train trips per peak hour and approximately 40 bus trips per peak hour. It is noted these are two way trips.

In the light of the above, it is not expected the proposed development would generate any noticeable negative impacts on the public transport system.

Separately, the consultant AECOM was commissioned to conduct a detailed assessment of future patronage at the Macquarie Park Railway Station due to the proposed development.

Taking in future increase in the service frequency from the opening of the North-West Railway Line, the proposed development is expected to generate some 2,500 passengers per day.

As indicated previously, the proposed development is expected to generate 140 and 35 train trips per peak hour for the residential and commercial uses respectively. Assuming that the peak hour trip is approximately 35 per cent of the total trips in the morning peak period (6:00am to 9:30am), the expected train trips for the morning peak period are therefore approximately 400 and 100 trips per morning peak period (6:00am to 9:30am) for the residential and commercial uses respectively.

Using AECOM growth factors (to account for the increased in future patronage) of 80 and 36 per cent for residential and commercial uses respectively, the future patronage would be 720 and 135 trips per morning peak period (6:00am to 9:30am) for the residential and commercial uses respectively.

Furthermore, using AECOM morning peak period to daily expansion factor of 2.8 the future daily train patronage would be 2,400 passengers. This is consistent with the AECOM assessment.

5. Traffic Assessment

5.1 Traffic Generation

The traffic generation potential of the proposed development has been assessed against traffic generation guidelines provided by RMS. As indicated previously, RMS has recently released a Technical Direction TDT2013/04 containing a summary of updated traffic generation rates for various land uses. The updated traffic generation rates were based on more recent traffic generation surveys conducted as part of RMS work to update their *Guide to Traffic Generating Developments*.

The updated traffic generation rates contained in the Technical Direction for the relevant land uses are as follows:

- high density residential developments – 0.19 and 0.15 trips per peak hour per apartment during the morning and evening peak periods respectively, and
- commercial office developments – 1.6 and 1.2 trips per peak hour per 100m² of GFA.

The estimation of development traffic is presented in Table 5.1 below.

Table 5.1: Estimated Development Traffic

Proposed Uses	Units/Floor Space Areas	Trip Rates	Development Traffic
Morning Peak Period			
- Residential	670	0.19 per unit	127
- Commercial	5,350m²	1.6 per 100m²	86
- Morning Peak Hour Total	-	-	213
Evening Peak Period			
- Residential	670	0.15 per unit	101
- Commercial	5,350m²	1.2 per 100m²	64
- Evening Peak Hour Total	-	-	165

From Table 5.1, it can be seen that the proposed development would generate a total of 213 vph during the busiest period.

The estimated development traffic for the proposed development is approximately half of that arising from the previous approved scheme (213 vph under the current proposal c.f. 450 vph under the approved development).

5.2 Traffic Distribution

The directional distribution for residential traffic was assumed to be 20 per cent inbound and 80 per cent outbound during the morning peak period. Similarly for traffic arising from the commercial use, 80 per cent of the development traffic was assumed to inbound while the remaining 20 per cent would be outbound. In the evening peak period, the reverse would be true.

The development traffic was distributed based on the local road network based on 2011 journey to work data as follows:

- residential trips – journey to work data based on the North Ryde residential area, and
- commercial trips – journey to work data in the Macquarie Park Corridor area.

The distribution factors are presented in Table 5.2.

Table 5.2: Development Traffic Distribution Factors

To/From Directions	Residential	Commercial
Lane Cove Road-South/Epping Road-West	36%	11%
Epping Road-East	30%	17%
M2-East	17%	36%
Lane Cove Road-North	5%	12%
Lane Cove Road-South	8%	11%
M2-West	4%	13%
Total	100%	100%

The resultant traffic distribution at the access points are presented in Table 5.3.

Table 5.3: Traffic Flows at Access Points

Site Access	AM Peak Hour			PM Peak Hour		
	NB/EB	SB/WB	2-Way	NB/EB	SB/WB	2-Way
Lane Cove Road Access	36	82	118	22	35	57
Waterloo Road Access	57	37	94	71	36	107
Total	93	119	212	93	71	164

5.3 Future Traffic Flows

The resultant future intersection turning movement flows for the morning and evening peak periods are presented in Figure 5.1 and Figure 5.2 respectively.

Figure 5.1: Future Morning Peak Hour Intersection Turning Movement Flows

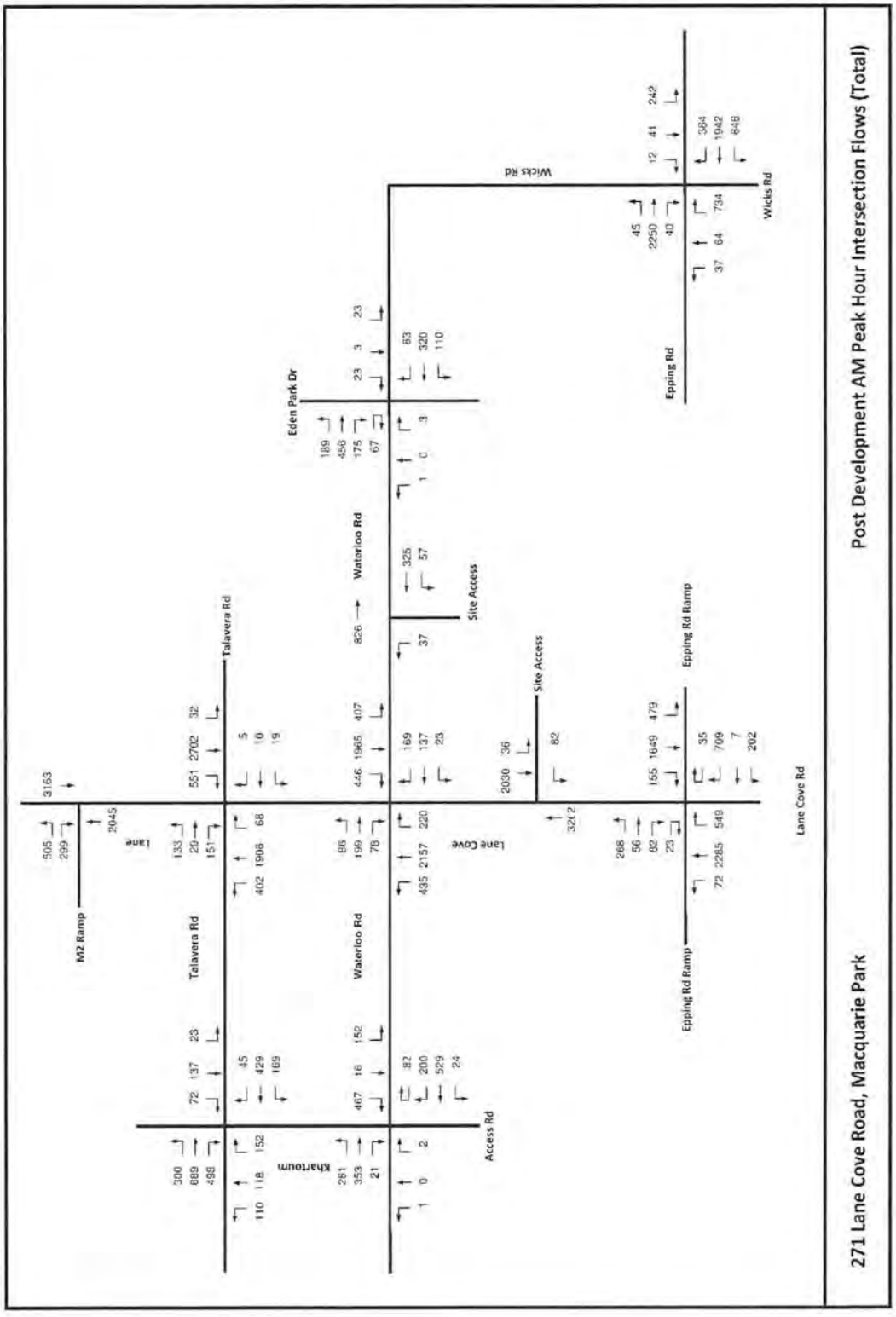
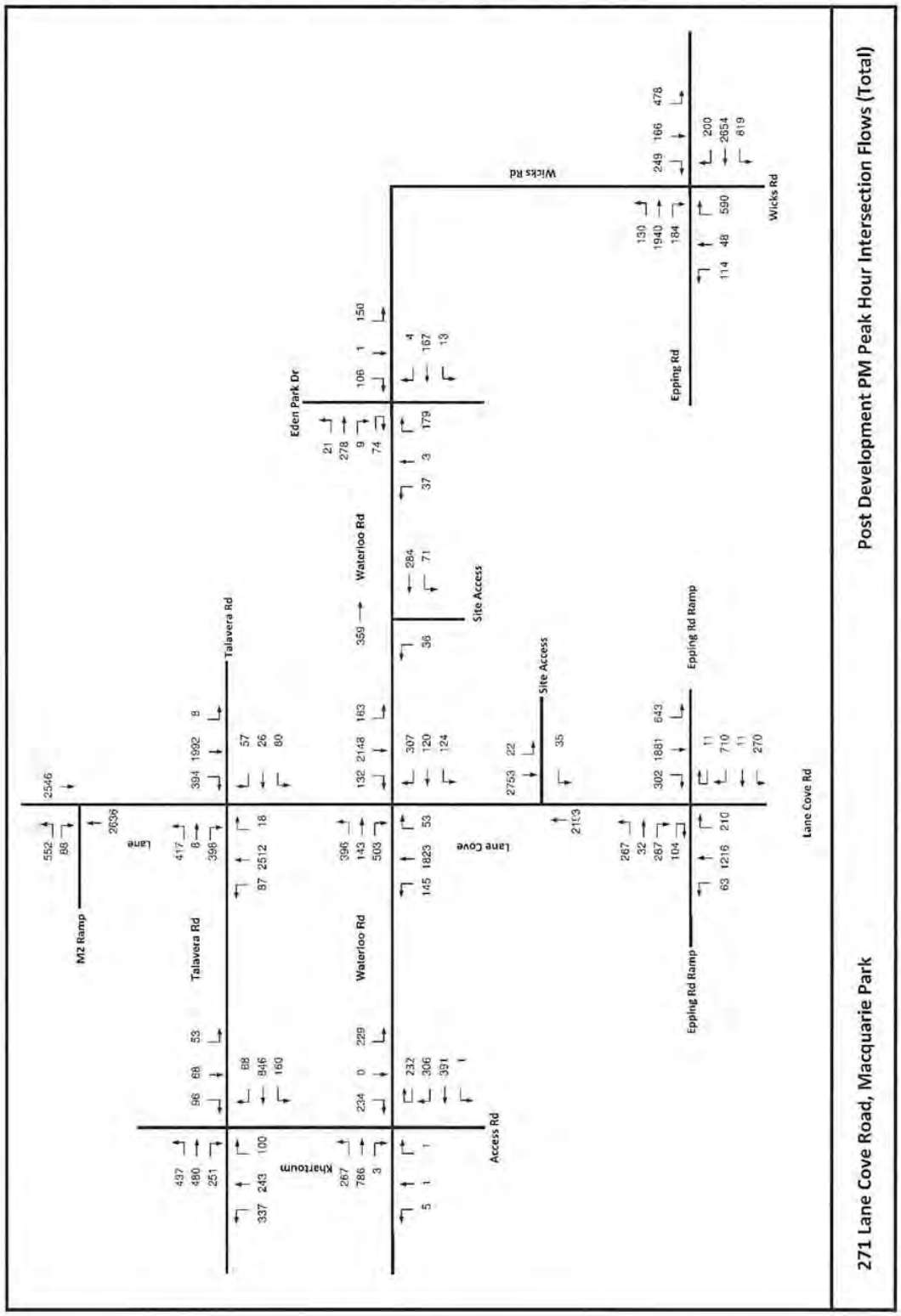


Figure 5.2: Future Evening Peak Hour Intersection Turning Movement Flows



The forecast future peak hour mid-block traffic flows are shown in Table 5.4.

Table 5.4: Future Two-way Peak Mid-Block Traffic Flows

Road Section	AM Peak Hour			PM Peak Hour		
	NB/EB	SB/WB	2-Way	NB/EB	SB/WB	2-Way
Lane Cove Road, south of Epping Road	2,906	1,933	4,839	1,489	2,438	3,927
Lane Cove Road, north of Waterloo Road	2,412	2,818	5,230	2,526	2,443	4,968
Lane Cove Road, north of M2	2,550	3,163	5,714	3,188	2,546	5,734
Waterloo Road, west of Khartoum Road	655	997	1,652	1,056	630	1,686
Waterloo Road, west of Lane Cove Road	363	1,018	1,381	1,042	397	1,439
Waterloo Road, east of Eden Park Drive	482	513	995	607	184	791
Talavera Road, west of Khartoum Road	1,487	611	2,098	1,168	1,279	2,447
Talavera Road, west of Lane Cove Road	313	963	1,276	823	507	1,330
Wicks Road, south of Epping Road	835	927	1,762	752	1,169	1,921
Wicks Road, north of Epping Road	493	295	788	378	893	1,271
Epping Road, west of Wicks Road	2,335	1,991	4,326	2,254	3,017	5,271
Eden Park Drive, north of Waterloo Road	272	49	321	28	257	285

It is expected the nearby adjacent roads would not receive additional traffic in excess of 70 vph. The greatest increase in volumes would occur on Lane Cove Road.

These changes would be in keeping with midblock road capacities. The main traffic operational capacity effects would occur at intersections as discussed below.

5.4 Intersection Analysis

Intersection analysis was undertaken using the SIDRA intersection analysis program. SIDRA determines the average delay that vehicles encounter and the level of service (LoS). SIDRA provides analysis of the operating conditions which can be compared to the performance criteria set out in Table 5.5.

Table 5.5: Level of Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

Source: RMS' Guide to Traffic Generating Development, 2002

RMS uses level of service as a measure to determine how efficient a given intersection is operating at. The level of service ranges from A to F. Levels of service between A and D indicate the intersection is operating within capacity with LoS A providing exceptionally good performance to LoS D indicating satisfactory performance. LoS E and F indicate the intersection is operating at or near capacity and would require intersection improvement works to maintain reasonable performance.

The level of service is directly related to the average delay experience by vehicles travelling through the intersection as presented Table 5.5. At signalised intersections, the average delay is the volume weighted average of all movements. For give way and stop sign controlled intersections, the average delay relates to the worst movement.

The analysis at signalised intersections was conducted using traffic signal cycle and phase times obtained from RMS' Intersection Diagnostic Monitoring (IDM) data. The IDM data relates to the same day the traffic surveys were conducted (i.e. Thursday 17 October 2013). These have been input into the SIDRA models for both existing and future traffic conditions, that is the analysis has not been optimised, but instead reflect the actual operating conditions.

In addition, queue lengths at intersections were observed at the same time the traffic surveys were conducted. The existing models have been calibrated to match the observed queue lengths. The parameters adjusted in the SIDRA models to reflect observed queue lengths were carried forward into future case models.

5.4.1 Existing Conditions

Intersection analysis for the existing traffic conditions was undertaken using surveyed intersection flows presented in Figure 2.2 and Figure 2.3. The results of the analysis are presented in Table 5.6. These have been calibrated to match conditions observed on site.

Table 5.6: Existing Intersection Operating Conditions

Intersections	Intersection Control	Morning Peak Hour		Evening Peak Hour	
		Average Delay (s)	Level of Service	Average Delay (s)	Level of Service
Epping Rd Ramp-Lane Cove Rd	Signals	59	E	70	E
Waterloo Rd-Lane Cove Rd	Signals	39	C	41	C
Talavera Rd-Lane Cove Rd	Signals	20	B	58	E
M2 Exit Ramp-Lane Cove Rd	Signals	19	B	9	A
Waterloo Rd-Khartoum Rd	Roundabout	17	B	30	C
Talavera Rd-Khartoum Rd	Signals	39	C	81	F
Waterloo Rd-Eden Park Dr	Roundabout	15	B	70	E
Epping Rd-Wicks Rd	Signals	52	D	63	E

The analysis indicates that at present the majority of intersections operate with satisfactory level of service. The exceptions are at intersections along the major roads such as Epping Road. It is common for some major intersections around Sydney to operate at levels of service E and F.

Furthermore, the relatively poor performance of the intersections on the arterial roads is a result of the additional traffic demand in the background traffic which would be beyond the scope of this transport and traffic assessment for a local development.

It is expected that the relevant road authority would undertake roads to improve the situation as contribution fund for road improvements are collected as part of the redevelopment of the wider Macquarie Park Corridor.

5.4.2 Future Conditions

The analysis results for future conditions are presented in Table 5.7. It is noted that the intersections have not optimised in SIDRA in the analysis of the future conditions. The signal timing for the existing case and any adjustment factors to reflect queues observed on site have been retained.

Table 5.7: Future Intersection Operating Conditions

Intersections	Intersection Control	Morning Peak Hour		Evening Peak Hour	
		Average Delay (s)	Level of Service	Average Delay (s)	Level of Service
Epping Rd Ramp-Lane Cove Rd	Signals	64	E	72	F
Waterloo Rd-Lane Cove Rd	Signals	50	D	52	D
Talavera Rd-Lane Cove Rd	Signals	20	B	60	E
M2 Exit Ramp-Lane Cove Rd	Signals	19	B	9	A
Waterloo Rd-Khartoum Rd	Roundabout	17	B	30	C
Talavera Rd-Khartoum Rd	Signals	38	C	81	F
Waterloo Rd-Eden Park Dr	Roundabout	16	B	158	F
Epping Rd-Wicks Rd	Signals	56	D	63	E
Lane Cove Rd-Site Access	Priority	19	B	33	C
Waterloo Rd-Site Access	Priority	8	A	8	A

The analysis results indicate that future intersection performance would be consistent with existing conditions with the exception being at the intersection of Waterloo Road and Eden Park Drive.

In the future, the intersection of Waterloo Road and Eden Park Drive would have its longest delay increased from 70 seconds under existing conditions to 158 seconds in the future. This is due to queues form up stream of the intersection on either side of the intersection. However, from our observations, it appears the queues are unstable and relatively short lived. However, SIDRA is not able to model the dynamic effects due to queues upstream of the intersection. To address this, a conservative approach was adopted in that the existing case model at this intersection was calibrated to match the observed queues assuming that it occurs constantly. As such, it is considered the intersection is unlikely to operate worse than existing situation especially given that this intersection is expected to receive an additional 70 vph. This constitutes only a very small proportion of overall intersection traffic at more than 1,000 vph.

In summary, it is concluded the intersections in the vicinity of the site would continue to operate with similar performance found under existing conditions.

6. Parking Requirement

Parking requirements for the proposed development have been assessed against Council's requirements set out in Local Environmental Plan 2010. For commercial uses, the LEP stipulates a parking rate of one space per 80m² GFA. However, it does not specify parking rates for residential uses proposed on the subject site. Council's Development Control Plan 2010 provides parking rates for high density residential uses as follows:

- 0.6 to 1 space per one bedroom dwelling
- 0.9 to 1.2 spaces per two bedroom dwelling
- 1.4 to 1.6 spaces per three bedroom dwelling, and
- 1 visitor space per 5 dwellings.

However, the DCP specifically states that parking rates contained within the DCP do not apply to land within the Macquarie Park Corridor.

It is noted that the guideline *Transit Oriented Development: Guide for Practitioners in Queensland* suggests the following maximum parking provision rates for TOD developments. These are presented in Table 6.1.

Table 6.1: Suggested Parking Rates for TOD

Precinct Type	Residential		Retail and Office	
	Base Maximum	Preferred Maximum	Base Maximum	Preferred Maximum
Urban – Inner urban areas supported by frequent transit services and well connected to employment hubs and key destinations	1 space per unit	0.75 spaces per unit	1.0 space per 200m²	1 space per 300m²
Suburban – Suburban precincts can generally support a significant residential population and a mix of other uses. Suburban precincts may act as a hub for surrounding suburbs and should provide a range of shops, employment opportunities and community services and facilities	1.25 spaces per unit	1 space per unit	1.0 space per 75m²	1 space per 100m²

It is suggested parking for the proposed development be provided in consideration to the parking rates presented in Table 6.1. In relation to parking for residential visitors, it is suggested that this be provided a rate of one visitor space per 10 units.

The above parking provisions are generally consistent with other centres around Sydney with similar characters as the proposed developments (e.g. North Sydney and Green Square). The above parking provisions are also generally consistent with those proposed for the North Ryde Station Urban Activation Precinct.

Applying the above parking rates, the proposed development would require to provide some 585 to 975 parking spaces in total.

However, the quantum of car parking provision will need to be considered carefully to ensure the proposed development is commercially viable, while not to the detriment of encouraging and increasing the viability of other transport modes.

Furthermore, a car share scheme operated by a commercial operator is to be included in the development to allow tenants (who have not been allocated a car space) to have access to a vehicle when it is the only feasible transport mode.

Finally, a Green Travel Plan should be implemented to encourage tenants living and working on the site to use public transport. The Green Travel Plan would need to be pro-active in encouraging habitual travel changes from day one of occupation and be inclusive of all tenants in order to ensure its success.

In this regard, a number of measures are available to optimise the opportunity provided by the site's close proximity to good quality and high frequency public transport.

Whilst adequate parking is provided to accommodate the demands of the residents, it is likely that residents will choose to use active transport or public transport for the majority of their trips.

It is therefore the intention to provide a Green Travel Plan prior to the occupation of the proposed development. The Travel Plan would promote the use of transport, other than the private car, for choice for travel to and from the site, which is more sustainable and environmentally friendly. The Travel plan would take advantage of the high level of public transport accessibility available from the site at present.

Ultimately, the objectives of the Travel Plan would be:

- to encourage walking
- to encourage cycling
- to encourage the use of public transport
- to reduce the use of the car, in particular single car occupancy, and
- where it is necessary to use the car, encourage more efficient use.

The Travel Plan would be in a form of easy to understand travel information included in the residents' information pack.

In addition, the Green Travel Plan could include measures such as:

- public transport notice boards to make residents and visitors more aware of the alternative transport options available to them
- provision of bus passes for the initial occupation of the units so that residents would be encouraged to make public transport their modal choice from the day they moved into the unit
- provision of secure bicycle parking spaces both for residents and for visitors to the site, and
- provision of car share spaces within the basement to be operated by a commercial car share operator.

The introduction of a Travel Plan will:

- offer wider travel choices to residents
- help residents to be healthier, fitter and more productive, and
- provide equal opportunities by supporting those residents without access to a car.

It is important that such a plan, and all of the measures incorporated within it, should be available to residents upon moving in to the proposed units. This will allow the plan to influence the occupants travel behaviour from the first day of occupation. The provision of a Travel Plan will accord with the aims of the government led TravelSmart campaign which aims to promote sustainable travel alternatives and reduce reliance on cars.

7. Summary and Conclusion

This transport and traffic report assesses a proposed transit oriented development at 271 Lane Cove Road, Macquarie Park. The proposed development involves the demolition of the existing buildings on the site and construction in their place five new buildings to accommodate a mixed use development with approximately 670 high density residential apartments and 5,350m² of non-residential uses (including office, retail, restaurants and cafes). Some of the non-residential uses floor area may be re-configured and proposed as student housing accommodation. Student housing would be less traffic intensive than commercial or retail uses.

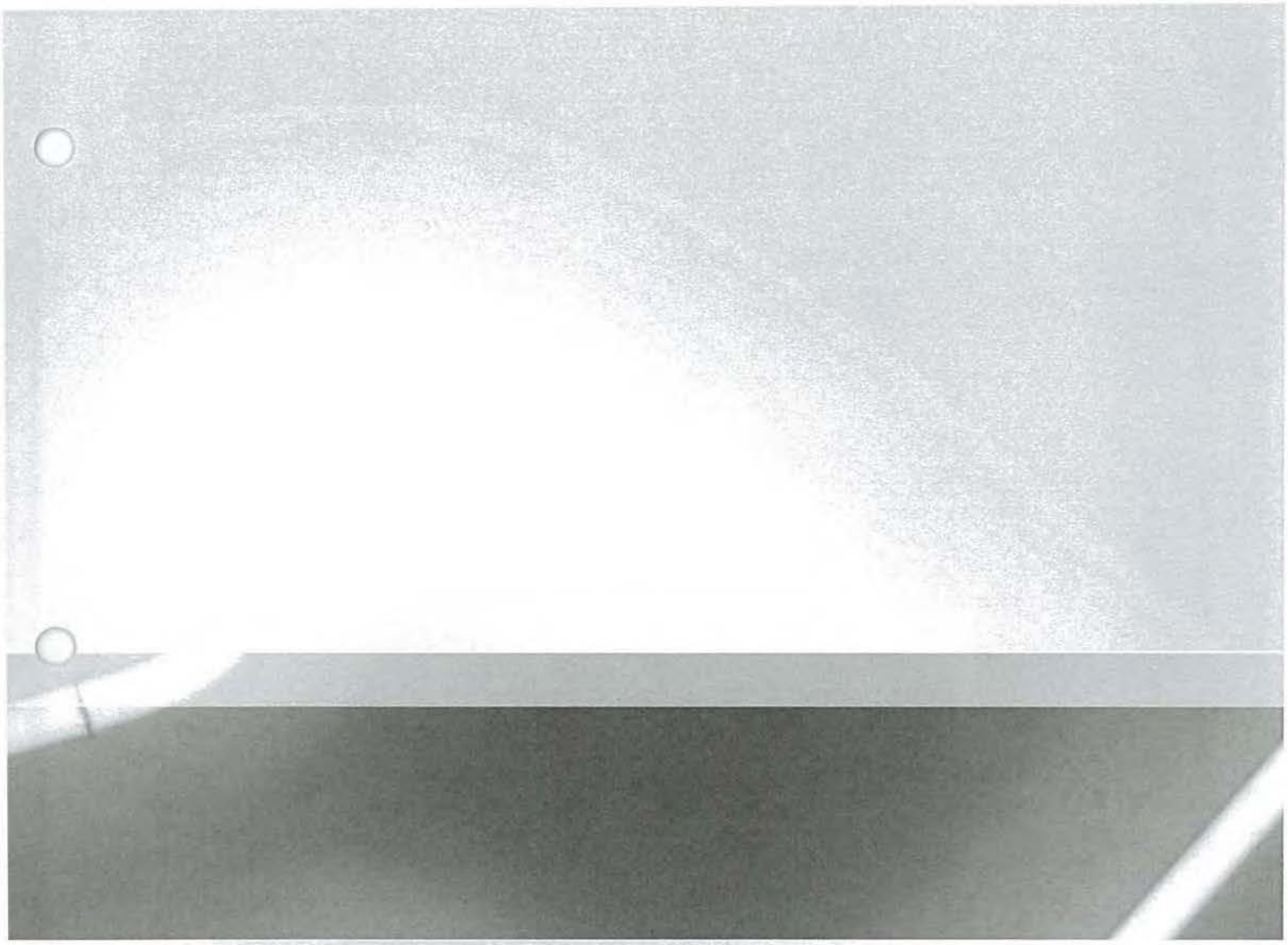
It is noted that the site has an existing approval granted by Ryde City Council for a 51,230m² commercial development. The approved development was expected to generate some 450 vph. It is further noted that the proposed development would generate some 213 vph approximately half the level of the development traffic for the approved development. The site is zoned as commercial core allowing it to be developed into commercial development. As such, the proposed development is likely to generate traffic significantly less than any complying development (i.e. commercial development) that would be developed on the site.

Some intersections, in particular those along the arterial roads, have been found to operate at or near capacity under existing traffic conditions. The relatively poor performance of the intersections on the arterial roads is a result of the additional traffic demand in the background traffic. Over time as the Macquarie Park Corridor is redeveloped, intersection improvements envisaged in the previous transport and traffic planning studies would be undertaken and the aspirational modal shift away from private cars anticipated in these studies are realised, traffic conditions would improve over time.

In the future with the additional development traffic from the subject site, the majority of nearby intersections are expected to continue to operate with similar performance as per existing conditions. The exception is at the intersection of Waterloo Road and Eden Park Drive which is expected to operate with longer delay. However, for reasons stated in the report it is expected this intersection would continue to operate satisfactorily.

In relation to other non-car mode trips, the proposed development is expected to generate approximately 175 train trips per peak hour and 40 bus trips per peak hour. The total daily patronage is expected to be approximately 2,400 passengers. The existing public transport infrastructures would be able to easily cope with this demand.

Finally, in relation to car parking provision this will need to be considered carefully to ensure the proposed development on the subject site is commercially viable, while not to the detriment of encouraging and increasing the viability of other transport modes.



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Contamination Assessment

Coffey

Appendix F

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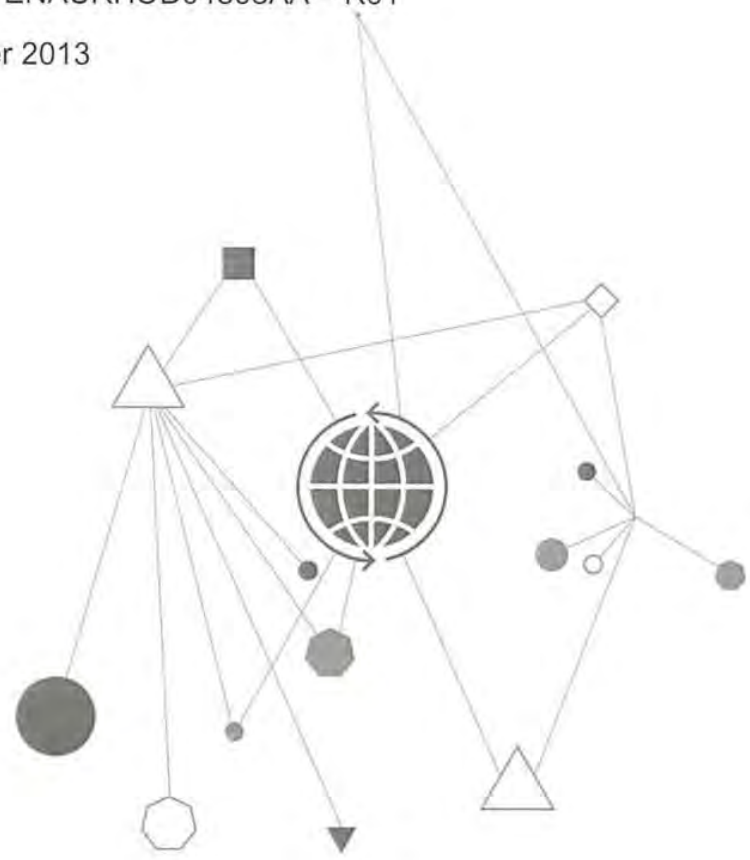
coffey

Mirvac Projects Pty Ltd

Environmental Site Suitability Report
271 Lane Cove Road, Macquarie Park NSW

Reference: ENAURHOD04568AA – R01

8 November 2013



When you think with a global mind problems get smaller

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271 Lane Cove Road,
Macquarie Park NSW
Report Date: 8 November 2013

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ENAURHOD04568AA-R01

CONTENTS

CONTENTS

LIST OF ATTACHMENTS

Figures

Appendices

ABBREVIATIONS

AEC	Area of Environmental Concern
AST	Above ground Storage Tank
bgs	below ground surface
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
COPC	Chemicals of Potential Concern
EPA	Environmental Protection Authority of NSW
ESA	Environmental Site Assessment
GPR	Ground Penetrating Radar
HIL	Health Investigation Level
LEP	Local Environmental Plan
LOR	Limit of Reporting
mbgs	Metres below ground surface
mg/kg	milligrams per kilogram
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
OCP	Organochlorine Pesticides
PCB	Polychlorinated Biphenyls
PESA	Preliminary Environmental Site Assessment
PAH	Polycyclic Aromatic Hydrocarbons
RL	Reduced Level
TP	Test Pit
TPH	Total Petroleum Hydrocarbons
UST	Underground Storage Tank

EXECUTIVE SUMMARY

Coffey Environments Australia Pty Ltd (Coffey) was engaged by Mirvac Projects Pty Ltd (Mirvac) to report on the suitability of land with reference to contamination for rezoning of a Mirvac property located at 271 Lane Cove Road, Macquarie Park NSW (the site). Coffey assessed the environmental site suitability in general accordance with the proposal dated 12 August 2013.

Mirvac is proposing to redevelop a site known as 271 Lane Cove Road, Macquarie Park. Two buildings currently occupy the majority of the site. In 2006 and 2008, Coffey completed Preliminary and Detailed contamination assessments, respectively, on the northern half of the site. The site is identified as Lot 3 in DP 1129811 and occupies approximately 2.25 hectares. The current land zoning is B3, Commercial Core, under the City of Ryde LEP 2010. Coffey understands that Mirvac is seeking rezoning to allow redevelopment for a mixture of commercial and high-rise residential uses. Draft design drawings of the proposed development are included in Appendix A.

The proposed redevelopment would be undertaken in two stages with each stage providing for two or three level basement car park beneath multi-storey buildings for commercial and residential uses. The car park footprints would occupy approximately 70% of the total land area. There are two access roads, one that runs perpendicular from Lane Cove Road in an east – west direction and one that runs north – south from Waterloo Road, along the eastern site boundary. There is some green open space along the frontage of Lane Cove Road and Waterloo Road.

The objectives of the site suitability assessment were to:

- Assess the current site conditions and determine if they have changed since 2008;
- Assess past and present site activities and/or infrastructure which have potentially contributed to site contamination;
- Provide recommendations on the need for further contamination assessment (if required); and
- Assess the suitability of the site for use under the proposed mixed commercial and residential land uses.

Coffey considers that the site was generally in the same condition as it was reported in the PESA (Coffey, 2006) and Stage 2 ESA (Coffey, 2008). However, Coffey's investigations were in the northern half of the site only.

Coffey recommends that during redevelopment of the site, the fill material to the south west of the building (on the northern half of site), where asbestos fibres were detected in shallow fill material in boreholes BH104 (0.2-0.3m) and BH105 (0.5-0.6m), should be excavated and stockpiled separately, and re-assessed for the presence of asbestos.

Coffey also recommends that further investigation be completed in the vicinity of the USTs located south west of the Foxtel building prior to redevelopment to assess the subsurface conditions associated with the USTs. In accordance with the Occupational Health and Safety (Dangerous Goods) Regulation 2001, a tank must be abandoned (after removing the fuel) where two years have elapsed since fuel was put in or taken from the tank.

Based on the above findings and recommendations, Coffey concludes that:

- The current site conditions are generally the same as those identified during the previous investigations;
- No widespread or gross contamination was identified as a result of past and present site activities and/or infrastructure;

EXECUTIVE SUMMARY

- The identified USTs should be removed (in accordance with industry best practice) during redevelopment of the site and a validation report should be prepared by a suitably qualified environmental consultant; and
- The site can be made suitable, during construction activity related to redevelopment, for the proposed mixed commercial and residential land use subject to rezoning approval.

1 INTRODUCTION

1.1 General

Coffey Environments Australia Pty Ltd (Coffey) was engaged by Mirvac Projects Pty Ltd (Mirvac) to assess the suitability of land with reference to contamination for rezoning of a Mirvac property located at 271 Lane Cove Road, Macquarie Park NSW (the site). Coffey undertook the environmental site assessment in general accordance with the proposal dated 12 August 2013 (ref: ENAURHOD04568AA-P01).

1.2 Project Background

Mirvac is proposing to redevelop a site known as 271 Lane Cove Road, Macquarie Park. Two buildings currently occupy the majority of the site. In 2006 and 2008, Coffey completed Preliminary and Detailed contamination assessments, respectively, on the northern half of the site. The site is identified as Lot 3 in DP 1129811 and occupies approximately 2.25 hectares. The current land zoning is B3, Commercial Core, under the City of Ryde LEP 2010. Coffey understands that Mirvac is seeking rezoning to allow redevelopment for a mixture of commercial and high-rise residential uses. Draft design drawings of the proposed development are included in Appendix A.

The proposed redevelopment would be undertaken in two stages with each stage providing for two or three level basement car park beneath multi-storey buildings for commercial and residential uses. The car park footprints would occupy approximately 70% of the total land area. There are two access roads, one that runs perpendicular from Lane Cove Road in an east – west direction and one that runs north – south from Waterloo Road, along the eastern site boundary. There is some green open space along the frontage of Lane Cove Road and Waterloo Road.

1.3 Objectives

The objectives of the site suitability assessment were to:

- Assess the current site conditions and determine if they have changed since 2008;
- Assess past and present site activities and/or infrastructure which have potentially contributed to site contamination;
- Provide recommendations on the need for further contamination assessment (if required); and
- Assess the suitability of the site for use under the proposed mixed commercial and residential land uses.

1.4 Scope of Work

To meet the above objectives, Coffey reviewed Coffey's previous investigation reports and conducted a site walkover, and preparing this report.

1.5 Regulatory Guidelines

Environmental guidelines and standards relevant to this assessment include:

- NSW Department of Urban Affairs and Planning 1998 *Managing Land Contamination: Planning Guidelines: SEPP 55 Remediation of Land* August (1998);
- NSW Environment Protection Authority (EPA) *Guidelines for Consultants Reporting on Contaminated Sites* (2011); and
- NSW Environment Protection Authority (EPA) *Guidelines for the NSW Site Auditor Scheme (2nd edition)* (2006);
- National Environment Protection Council (NEPC) (1999) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) Amendment (2013);
- National Environment Protection Council (NEPC) (1999) Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) Amendment (2013)

2 SITE IDENTIFICATION & DESCRIPTION

2.1 General Site Description

A site locality map is presented in Figure 1 and a site layout is presented in Figure 2. General information pertaining to the site is summarised in Table 2.1

Table 2.1: Site Identification

Site Address:	271 Lane Cove Road, Macquarie Park NSW
Site Identification:	Lot 3 in DP 1129811
Site Area:	Approximately 2.25 hectares
Zoning:	Zoned B3 - Commercial Core, pursuant to the City of Ryde Local Environmental Plan 2010.
Current Land use:	Two separate commercial buildings with offices and warehouse facilities, multiple car parks, tennis court, grassed/landscaped areas and access roads.
Adjoining Site Uses:	North: Macquarie Park Train Station (underground) and Waterloo Road (northeast) with commercial properties beyond East: Commercial properties South: Commercial properties West: Lane Cove Road (northwest) with commercial properties beyond

2.2 Site Observations during Walkover

A site walkover was undertaken by Preston Alma, a Coffey environmental consultant, on 26th September 2013.

The main features observed during the site walkover include:

- Access to the site is via Waterloo Road to the north east of the site and an access road runs along the eastern site boundary.
- Approximately 85% of the site is paved with bitumen and the site slopes down to the north east from about RL74m to RL62m (obtained from Google Earth Pro 6.6.2.6613) adjacent to Waterloo Road.
- An entrance to the underground Macquarie Park Railway Station is located adjacent to the northern property boundary, on the corner of Lane Cove Road and Waterloo Road.
- An existing brick and steel frame building comprising commercial offices and warehouse facility is located on the northern half of the property. The building was constructed circa 1980, which is indicated by the date printed on the fire extinguisher reels on-site. The ground floor and warehouse is occupied currently by a commercial furniture company, Workarena, which is used as a showroom

and storage of furniture. The upper floor of the building is currently vacant. Landscaped garden beds are present around the brick building.

- A bitumen paved car park is located on the north eastern site boundary (north west of the brick building) and raised garden beds are present in the car park.
- A grassed fill mound is present along the Lane Cove Road frontage on the north west site boundary.
- A dip/fill point indicating the likely presence of an underground storage tank (UST) is located near the north eastern corner of the brick building. No surface staining on the surrounding concrete and asphalt pavements was observed. However, the asphalt pavement in this area has generally subsided and cracked more than the surrounding areas. A fuel bowser labelled "Ampol Super" that was present during the PESA (Coffey, 2006) and Stage 2 ESA (Coffey, 2008) has since been removed.
- A former tennis court is located on the western site boundary and recently constructed concrete footings are present in the middle of the tennis court.
- A two level car park is located in the middle of the site.
- An existing concrete building is located on the southern half of the property and is occupied currently by Foxtel. A sky bridge joins the eastern corner of this building to the main Foxtel facility located on the adjacent property to the south east. A number of satellite dishes are located to the west of the concrete building as well as on the roof at the southern corner of the building. The building was constructed circa 1973 and anecdotally it was a former warehouse. This information was provided by Mr Simon Stebbins, Property and Facilities Manager at Foxtel.
- Three diesel generators for emergency use are housed in bunded containers adjacent to the south west of the Foxtel building.
- An active diesel UST which is used to fuel the generators is located south of the generators and a vent pipe is located to the south west of the UST. The size and age of the UST are unknown.
- Two fill/dip points indicate the likely presence of another underground storage tank (UST) to the south east of the active diesel UST. No surface staining on the surrounding asphalt pavement was observed, however the approximate outline of the tanks had been marked out, possibly by a service locator.
- An aboveground storage tank (AST) and standby (back-up) generator is located to the east of the Foxtel building.
- No evidence indicating chemical contamination such as odours, plant stress or surface staining was observed at the site during the site walkover.
- The Lane Cove Road and Waterloo Road frontage of the site is not fenced, however the south western and south eastern sides of the site are fenced.

Site photographs showing the features listed above are included in Appendix B.

2.3 Local Geology and Hydrogeology

The Sydney 1:100,000 Geology Sheet indicates that the Site locality is underlain by Ashfield Shale over Hawkesbury Sandstone. Hawkesbury Sandstone is evident in road cuttings at lower elevation to the

east and north. Based on these observations, the site is expected to be close to the lower boundary of the Ashfield Shale and the Mittagong Formation, a discontinuous unit that often separates the Ashfield Shale and Hawkesbury Sandstone. The Mittagong Formation is often water-charged.

Based on Coffey's experience in the general site area, groundwater is anticipated to be relatively deep (within sandstone bedrock) and is likely to be travelling towards Porters Creek, a tributary of the Lane Cove River located approximately 500m east of the site. However, there is potential for perched groundwater or seepage water to be present within the overlying shallow residual clay and shale/sandstone bedrock interface. As reported in the Coffey Preliminary Site Assessment Report (2006), the groundwater in Mittagong Formation and some of the groundwater in the underlying Hawkesbury Sandstone Formation, was drained by the tunnel excavation during construction of the underground Epping – Chatswood Railway Line. Currently the groundwater is expected to be below the railway line level, approximately 15 to 20m below ground level (mbgl) at the site.

2.4 EPA Public Registers

Coffey conducted a search of the NSW Environmental Protection Authority (EPA) online contaminated land public register on 10 October 2013. The search did not identify records for the site or for land immediately adjacent to the site.

Coffey conducted a search of the NSW EPA Protection of the Environment Operations (POEO) Act online public register on 10 October 2013. The search did not identify records for the site or for land immediately adjacent to the site.

3 PREVIOUS INVESTIGATIONS

The following provides a summary of environmental investigations previously carried out at the site. Coffey understands that to date, investigations have only been completed on the northern half of the site.

3.1 Coffey (2006) *Preliminary Environmental Site Assessment*, 271 Lane Cove Road, North Ryde NSW

Coffey completed a Preliminary Environmental Site Assessment (PESA) on the northern portion of the site in September 2006, which included a desktop review of available information and limited soil investigation.

The objectives of the PESA were to:

- Investigate the site history to identify potentially contaminating activities that may have been performed on the site or adjacent to the site in the past or during the current land use for commercial purposes;
- Make a preliminary assessment of potential contamination issues identified during the site history review by undertaking limited sampling and testing; and
- Assess the suitability of the site for the proposed commercial development and recommend further investigation/remediation requirements (if any) for the site to be suitable for continuing commercial/industrial land use.

Environmental sampling was undertaken based on the identified Areas of Environmental Concern (AECs) during the site history review. AECs included primarily filling across the entire site and fill mound identified at the north-western portion of the site as well as the UST area located at the northeast corner of the brick building on the site. However, a search of the Chemical Information database (SCID) by WorkCover did not locate records indicating that dangerous (ie. underground storage tank) had been or were currently stored on the site.

The soil investigation comprised of drilling four boreholes (identified as BH5 to BH8) with the aid of a XP60 rig rill mounted on a 4WD utility vehicle and a further four shallow holes drilled with the aid of a hand auger (identified as BH1 to BH4).

The field investigations revealed the presence of a layer of fill material ranging in depth from approximately 0.5m to 1.5m across the investigation area. The extent of fill present in the earth mound identified at the western end of the site was not identified as the base of fill material was not encountered due to hand auger refusal within the fill material. However, it was anticipated that the height of the fill mound is approximately 4m based on the relative height difference with the surrounding ground surface. The fill material was observed to be underlain typically by residual clays and underlying weathered shale and sandstone bedrock.

Twelve primary samples were analysed for polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylene (BTEX), heavy metals and asbestos. Four selected samples were also analysed for organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs).

The results of the investigation were as follows:

- Visual or olfactory evidence of contamination such as oil staining and odorous material indicative of petroleum hydrocarbon contamination was not observed in the sub-surface material from the sample locations.
- Heavy metal concentrations were below the human health based investigation levels (HILs) for commercial/industrial land use in the samples analysed and generally at concentrations consistent with typical background metal concentrations in urban areas.
- TPH C10-C36 was detected in two fill samples at concentrations below the investigation level for sensitive sites of 1000mg/kg. TPH C10-C36 was not detected in any of the other samples analysed.
- Total PAHs was detected in three fill samples at concentrations below the HIL for commercial/industrial use of 100mg/kg. The PAH compound benzo(a)pyrene was detected in one fill sample at a concentration of 1.8mg/kg which is below the HIL for commercial/industrial use of 5mg/kg.
- TPH C6-C9, BTEX, OCPs and PCBs were not detected above the laboratory limit of reporting in the samples analysed.
- Asbestos was not detected in any of the soil samples analysed.

The field observations and laboratory analytical results indicated that the fill material (ranging in depth from approximately 0.5m to 1.5m across the site and approximately 4m depth within the fill mound) was unlikely to contain widespread contamination exceeding the adopted criteria for commercial/industrial use. Coffey concluded that the fill material within the investigation area was considered suitable for the proposed commercial development. However, due to the large volume of fill material and limited sampling conducted within the investigation area, there is the possibility for buried contaminated material to be present that was not detected during the investigation.

Coffey recommended that further investigation be undertaken in the vicinity of the identified UST(s) to assess the potential for soil and/or groundwater contamination to be present due to the tank(s) leaking. Coffey also recommended that contingency plans be prepared for any site earthworks to manage any suspicious materials identified during the earthworks, which were not identified during the investigation.

3.2 Coffey (2008) Stage 2 Environmental Site Assessment, 271 Lane Cove Road, North Ryde NSW

Coffey completed a stage 2 environmental site assessment on the northern portion of the site in January 2008.

The investigation was planned in two phases (pre- and post-demolition) due to the existing building structures restricting access to parts of the site. The report presented the results of the pre-demolition phase of the ESA. Redevelopment was deferred indefinitely, and the second part of this assessment was not undertaken.

The objectives of the Stage 2 ESA were to assess the potential soil contamination within the site and to assess the waste classification of the soils/rock to be excavated and disposed off-site during the proposed construction works.

Field investigations for the pre-demolition ESA comprised drilling of nine boreholes (identified as BH101 to BH109) around the building with the aid of a drill rig rill mounted on a 4WD utility vehicle, and the

excavation of four test pits within a fill mound located on the north west portion of the site with the aid of a 12 tonne excavator (identified as TP101 to TP104).

Twenty-seven primary soil samples were analysed for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylene (BTEX), and heavy metals, with twenty four samples also analysed for polycyclic aromatic hydrocarbons (PAH), and eighteen samples for asbestos.

The results of the ESA indicated that:

- Concentrations of heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb and Zn) were less than the adopted assessment criteria for commercial/industrial land use.
- TPH C6-C9 and BTEX were not detected and TPH C10-C36 fractions were detected in two soil samples, at concentrations below the adopted assessment criteria for commercial/industrial land use;
- Benzo(a)pyrene was detected in 5 soil samples only, and concentrations were below the adopted assessment criteria of 5 mg/kg for commercial/industrial land use. Total PAHs concentrations in those 5 samples were also below adopted assessment criteria for commercial/industrial land use (100 mg/kg).
- Chrysotile asbestos was detected in the form of 1 to 3mm fibre bundles in two soil samples (BH105/0.2-0.3 and BH105/0.5-0.6) collected from the south western side of the building, north east of the two level car park. Asbestos was not detected in other samples.

Coffey concluded that the ESA field observations and laboratory analytical results indicated that the soils in areas around the building (including fill materials and residual soils) were unlikely to contain widespread contamination.

3.3 Areas of Environmental Concern and Contaminants of Potential Concern

Review of previous investigations undertaken at the site and observations made during the site walkover indicate a number of areas of environmental concern (AECs) and contaminants of potential concern (COPCs), specific to the context and objective of this assessment. These AECs and COPCs are presented in Table 3.1.

Table 3.1: AECs and COPCs

Potential AECs	Description of potentially contaminating activity	COPCs	Likelihood of Contamination (Based on Site History Study Only)*	Comments
Underground Storage Tank (UST) area west of Workarena building on northern half of site	UST(s) and/or associated pipe work and former bowser in the identified UST area may have leaked, potentially causing contamination of soil and/or groundwater beneath the site. Petroleum hydrocarbon contamination, if present, could also potentially have migrated offsite.	TPH, BTEX, Lead, PAHs	Moderate	The bowser labelled "Ampol Super" has been removed since the Coffey (2006) investigation but a dip/fill point indicating the likely presence of an underground storage tank (UST), potentially decommissioned in-situ, is located near the eastern corner of the brick building on site. No surface staining on the surrounding concrete and asphalt pavements was observed. The number, location, size and age of the UST(s) is not known, as there was no record of the tanks held by WorkCover.
Underground Storage Tanks (USTs) located south west of Foxtel building on southern half of site	UST(s) and/or associated pipe work in the identified UST area may have leaked, potentially causing contamination of soil and/or groundwater beneath the site. Petroleum hydrocarbon contamination, if present, could also potentially have migrated offsite.	TPH, BTEX, PAHs	Moderate	An active (diesel) UST is present south west of the Foxtel building located on the southern half of the site, evident by a fill/dip point and vent pipe, is used to fuel the generators. Two dip/fill points indicating the likely presence of UST(s) were located to the east of the active UST. No surface staining on the surrounding concrete and asphalt pavements was observed. The exact number, location, size and age of the UST(s) is not known.

Potential AECs	Description of potentially contaminating activity	COPCs	Likelihood of Contamination (Based on Site History Study Only)*	Comments
Aboveground Storage Tank (AST) (Diesel Generator)	AST and/or associated pipe work may have leaked, potentially causing contamination of soil and/or groundwater beneath the building. Petroleum hydrocarbon contamination, if present, could also potentially have migrated offsite.	TPH, PAHs	Low	An emergency/backup diesel generator was identified on the eastern side of the building. The generator and AST appeared to be relatively new. No signs of contamination (visual or olfactory) were observed around the generator. The generator was situated on bitumen pavement that appeared to be in good condition with no signs of staining.
Northern Half of site (potentially entire Site)	Fill material of unknown origin on the site.	Metals TPH PAH OCP PCB Asbestos	Moderate to High	There is evidence of filling on the northern half of site. The fill material is of unknown origin and quality. The grassed mound present at the western end of the site (adjacent to Lane Cove Road) also appears to be imported fill material. In many cases such fill contains a range of contaminants. Filling on southern half of site is unknown (if any).
Northern Portion of Site	Potential onsite migration of contamination from either of two service stations located approximately 70m to the north of the site on Lane Cove Road	TPH, BTEX, Lead, PAHs	Negligible	The contamination status of the service stations to the north of the site is unknown although this is considered likely to be hydraulically cross-gradient of the site. However, it is considered that there is a negligible likelihood of migration of contamination in groundwater from the adjacent service stations, as the migration pathway is intersected by the railway station entrance.

** It is important to note that this is not an assessment of the financial risk associated with the AEC in the event contamination is detected, but a qualitative assessment of the probability of contamination being detected at the potential AEC based on the site history study.*

4 CONCEPTUAL SITE MODEL

4.1 Subsurface conditions

The PESA (Coffey, 2006) and Stage 2 ESA (Coffey, 2008) indicated that the site includes fill materials. The source of the fill material is unknown, but may be surplus excavated material arising from construction of the buildings currently on the site. The fill material was observed to typically comprise silty clay, clay, clayey gravel, gravely sand, sand and clayey sand with traces of timber, plastic, asphalt gravel fragments and grass rootlets. The fill material was underlain by clay, shale and sandstone at varying depths.

Table 4.2 summarises the general subsurface conditions encountered during the PESA (Coffey, 2006) and Stage 2 ESA (Coffey, 2008), extracted from the bore logs (excluding the UST area and fill mound).

Table 4.2: Summary of Typical Subsurface Conditions

Unit	Depth to Top of Unit (mbgs)	Approx. Unit Thickness	Material Description
Fill	0m	0.1m	Concrete/bitumen hardstand.
Fill	0.1m	0.3m	Sandy gravel: dark grey/brown and moist.
Fill	0.3m	1.0m	Gravelly clay: medium plasticity, brown/grey mottling and moist
Natural	1.0m	2.0m	CLAY: medium plasticity, brown/red and orange mottling and moist.
Natural	2.0m	4.5m	SHALE: weathered, grey, with bands of ironstone
Natural	4.5m	5.0m	SANDSTONE: brown, fine, hard

4.2 Regional Topography

The site slopes down to the north east from about RL74m on the south west property boundary to RL62m adjacent to Waterloo Road (obtained from Google Earth Pro 6.6.2.6613). The NSW Department of Lands Spatial Imagery Exchange (http://maps.six.nsw.gov.au) indicates that the site lies at an elevation of approximately 60m Australian Height Datum (AHD).

4.3 Groundwater

Based on Coffey experience in the general site area, groundwater is anticipated to be relatively deep (within sandstone bedrock) and is likely to be travelling towards Porters Creek, a tributary of the Lane

Cove River located approximately 500m east of the site. However, there is potential for perched groundwater or seepage water to be present within the overlying residual clay and shale/sandstone bedrock interface. As reported in the previous PESA report (Coffey, 2006), the groundwater in Mittagong Formation and some of the groundwater in the underlying Hawkesbury Sandstone Formation, was drained by the tunnel excavation. Currently the groundwater is expected to be below the railway line level, approximately 15 to 20m below ground level (mbgl).

5 DISCUSSION

5.1 Potential for Contamination

Coffey identified potential for contamination of soil in the vicinity of above-ground and underground fuel storage tanks. Evidence on the surface surrounding such tanks, and emergency generators using fuel, did not indicate poor fuel management practices nor historical spills. The natural clays and shale in which underground tanks would be placed are known to substantially retard migration of hydrocarbons released to the subsurface. Impact to groundwater is considered to be very unlikely due to substantial depth to local groundwater resulting from drainage into tunnels for the underground railway in the vicinity. Thus, the potential for contamination of the site from hydrocarbons, related to petroleum fuels, is considered to be moderate, but would be localised to the immediate vicinity of the release point, if present.

Coffey also identified fill material of unknown origin across the site. Inclusions of foreign materials were noted in two of four test pits excavated in the fill mound adjacent to Lane Cove Road. Investigation in other areas of the site used boring rather than excavation, and the opportunity for observation of foreign materials is lower using this method. However, given the generally shallow thickness of fill material (less than 1m) in areas other than the fill mound, Coffey considers that the potential for inclusion of foreign materials in fill is low.

Asbestos fibres in sandy fill material were identified in samples from two adjacent locations in an area which is currently asphalt sealed. This fill material is placed in a layer approximately 0.5m thick over natural clay soil near the southwest side of the building currently occupied by Workarena.

5.2 Proposed Future Use of the Site

As indicated in the draft design drawings provided by Mirvac, the proposed development is consistent with commercial use for consideration of potential impacts of contamination because commercial and residential facilities will be built above a two or three level basement car park. The car park footprints would occupy approximately 70% of the total land area. There are two access roads, one that runs perpendicular from Lane Cove Road in an east – west direction and one that runs north – south from Waterloo Road, along the eastern site boundary. There is some green open space along the frontage of Lane Cove Road and Waterloo Road.

5.3 Assessment of Site Suitability

Overall, the site appears to be in generally the same condition as observed by Coffey in 2006 and 2008, however, Coffey's investigations were in the northern half of the site only.

Based on the findings of environmental investigations completed by Coffey in 2006 and 2008 and confirmation that those results are reasonably expected to represent conditions across the site, Coffey considers that the site can be made suitable, during construction activity related to redevelopment, for the proposed mixed commercial and residential land use.

5.4 Obligation to Notify Contamination

NSW EPA Guidelines on the Duty to Report Contamination under the *Contaminated Land Management Act 1997* (DECC 2009) defines notification triggers which oblige a site owner or person causing the contamination to notify NSW EPA in compliance with Section 60 of the Act. This section provides

Coffey's consideration of the defined notification triggers with reference to the current site setting/condition and identified contamination.

Onsite soil contamination

While contaminants in soil samples analysed were detected below relevant health-based guideline values for commercial land use, with the possible exception of asbestos.

Asbestos fibres were identified in two soil samples, and although there is a low risk to human health for the current site condition, there is a potential exposure risk through inhalation when the hardstand is removed and this soil is exposed.

Offsite soil contamination

This investigation provided no information on this aspect.

Foreseeable contamination of neighbouring land

Contamination by asbestos is essentially immobile when undisturbed. Thus, the identified contamination will not foreseeably move from the identified locations. This factor means that the notification for potential migration of contamination is not exceeded.

Groundwater, and Surface Water or Groundwater discharging to Surface Water

This investigation provided no information on this aspect. Coffey notes that for the reasons described above related to potential migration of contamination, impact to groundwater on the site from identified contamination appears extremely unlikely.

Conclusion

Coffey considers that, based on information described above, notification triggers under the Duty to Report guidelines have not been exceeded and consequently an obligation for Mirvac to report the identified contamination under Section 60 of the NSW *Contaminated Land Management Act 1997* has not arisen.

6 CONCLUSIONS AND RECOMMENDATIONS

Coffey considers that the site was generally in the same condition as it was reported in the PESA (Coffey, 2006) and Stage 2 ESA (Coffey, 2008). However, Coffey's investigations were in the northern half of the site only.

Coffey recommends that during redevelopment of the site, the fill material to the south west of the building (on the northern half of site), where asbestos fibres were detected in shallow fill material in boreholes BH104 (0.2-0.3m) and BH105 (0.5-0.6m), should be excavated and stockpiled separately, and re-assessed for the presence of asbestos.

Coffey also recommends that further investigation be completed in the vicinity of the USTs located south west of the Foxtel building prior to redevelopment to assess the subsurface conditions associated with the USTs. In accordance with the Occupational Health and Safety (Dangerous Goods) Regulation 2001, a tank must be abandoned (after removing the fuel) where two years have elapsed since fuel was put in or taken from the tank.

Based on the above findings and recommendations, Coffey concludes that:

- The current site conditions are generally the same as those identified during the previous investigations;
- No widespread or gross contamination was identified as a result of past and present site activities and/or infrastructure;
- The identified USTs should be removed (in accordance with industry best practice) during redevelopment of the site and a validation report should be prepared by a suitably qualified environmental consultant; and
- The site can be made suitable, during construction activity related to redevelopment, for the proposed mixed commercial and residential land use subject to rezoning approval.

This report should be read in conjunction with the attached ***Important Information About Your Coffey Environmental Report***.

7 REFERENCES

Coffey Environments (2006) *Preliminary Environmental Site Assessment Report – 271 Lane Cove Road, North Ryde (GEOTLCOV23067AC)*

Coffey Environments (2008) *Environmental Site Assessment Report – 271 Lane Cove Road, North Ryde*

National Environment Protection Council (NEPC) (1999) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) Amendment (2013)

National Environment Protection Council (NEPC) (1999) Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) Amendment (2013)

NSW Department of Urban Affairs and Planning 1998 Managing Land Contamination: Planning Guidelines: SEPP 55 Remediation of Land August (1998);

NSW Environment Protection Authority (EPA) Guidelines for Consultants Reporting on Contaminated Sites (2011)

NSW Environment Protection Authority (EPA) Guidelines for the NSW Site Auditor Scheme (2nd edition) (2006)

http://maps.six.nsw.gov.au

http://www.google.com/earthpro.html

coffey

Important information about your **Coffey** Environmental Report

Introduction

This report has been prepared by Coffey for you, as Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice,

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Coffey should be kept appraised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statues and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but

steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Coffey prepared the report and has familiarity with the site, Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

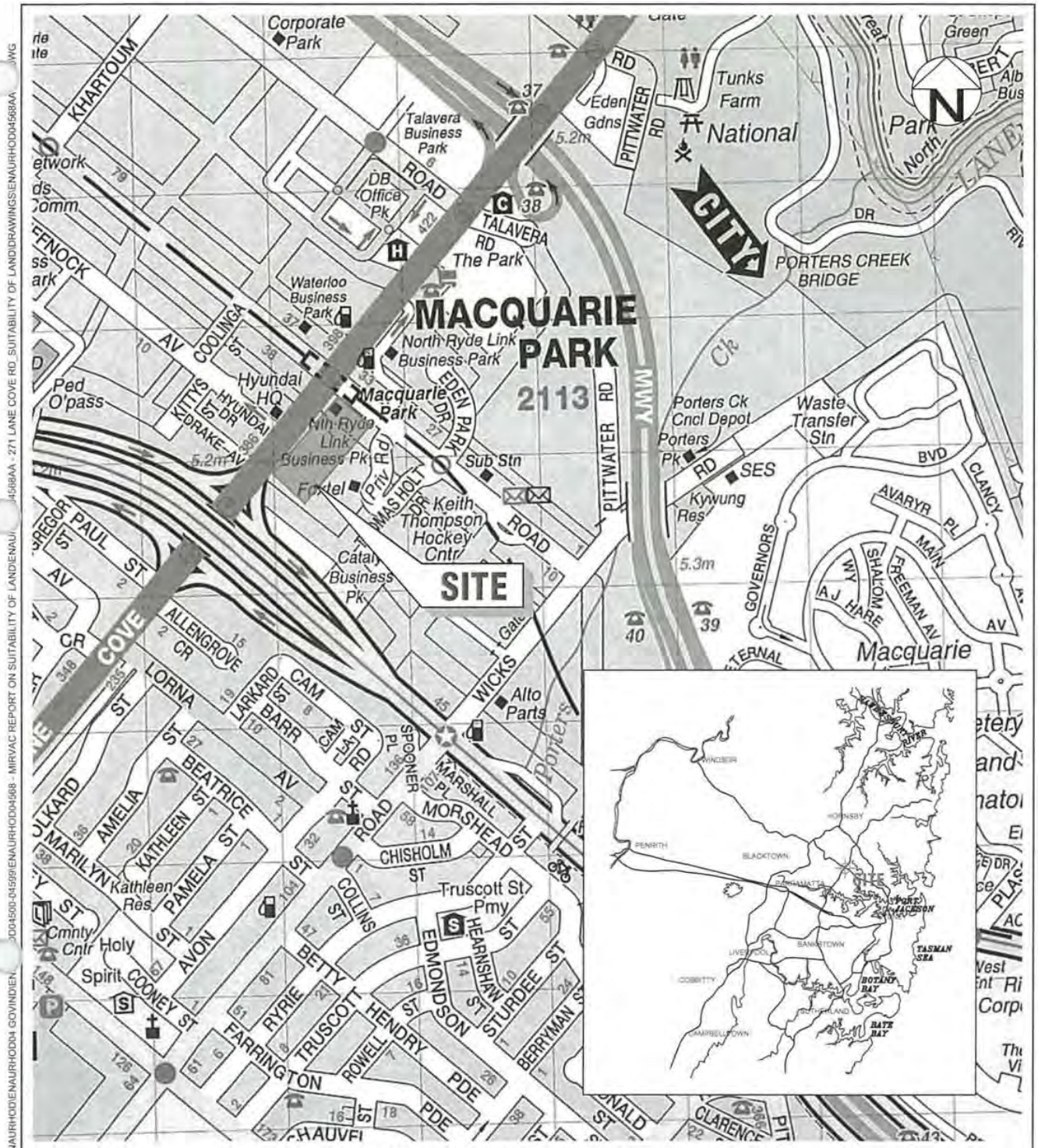
This report should be reproduced in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

Figures

Environmental Site Suitability Report
271 Lane Cove Road, Macquarie Park NSW



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approved	MD		project: SUITABILITY REPORT 271 LANE COVE ROAD, MACQUARIE PARK, NSW	
date	10/10/13		title: SITE LOCATION PLAN	
scale	AS SHOWN		project no: ENAURHOD04568AA	figure no: FIGURE 1
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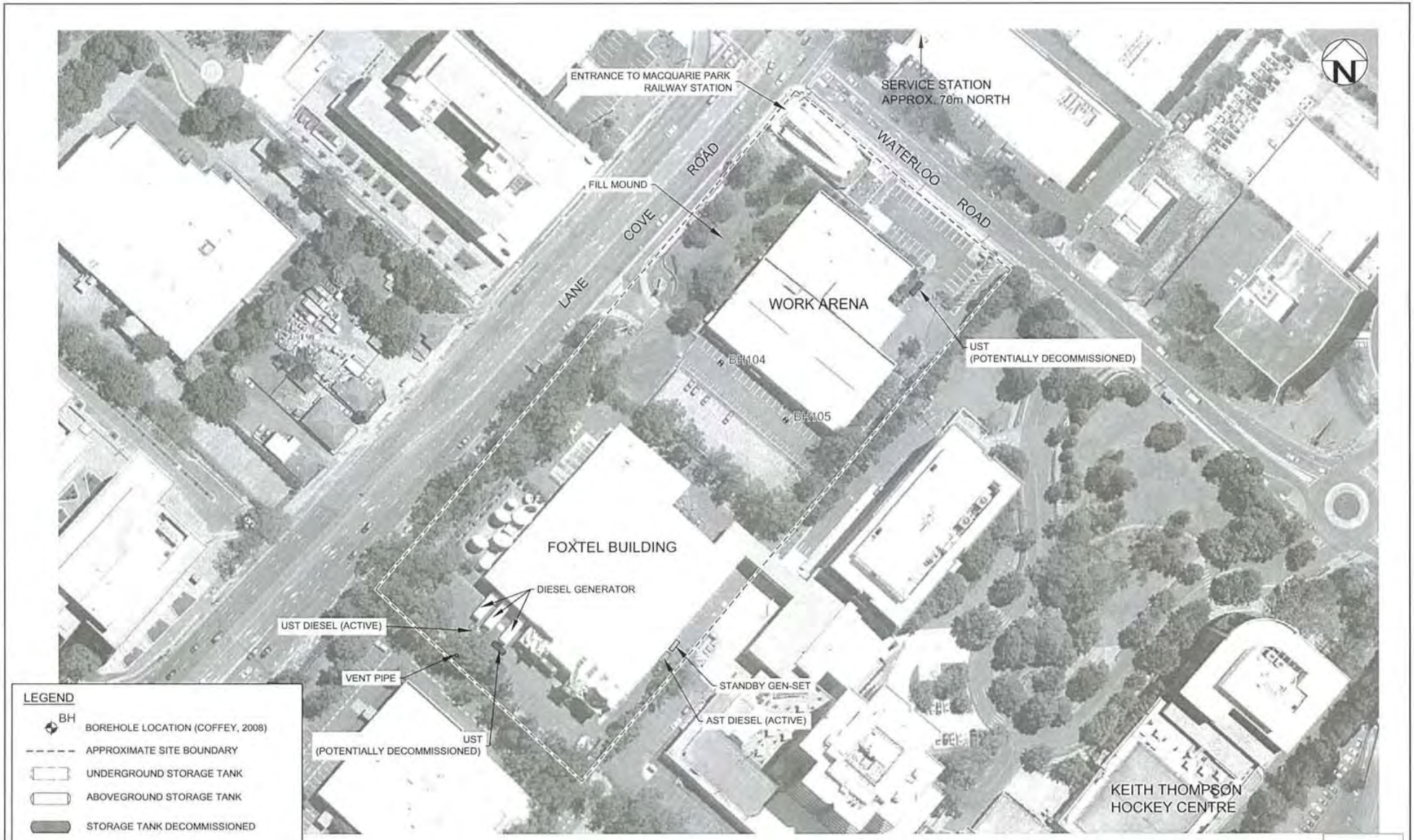

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coffey

client: MIRVAC

project: SUITABILITY REPORT
271 LANE COVE ROAD, MACQUARIE PARK, NSW

title: SITE LAYOUT PLAN

project no: ENAURHOD04568AA figure: FIGURE 2

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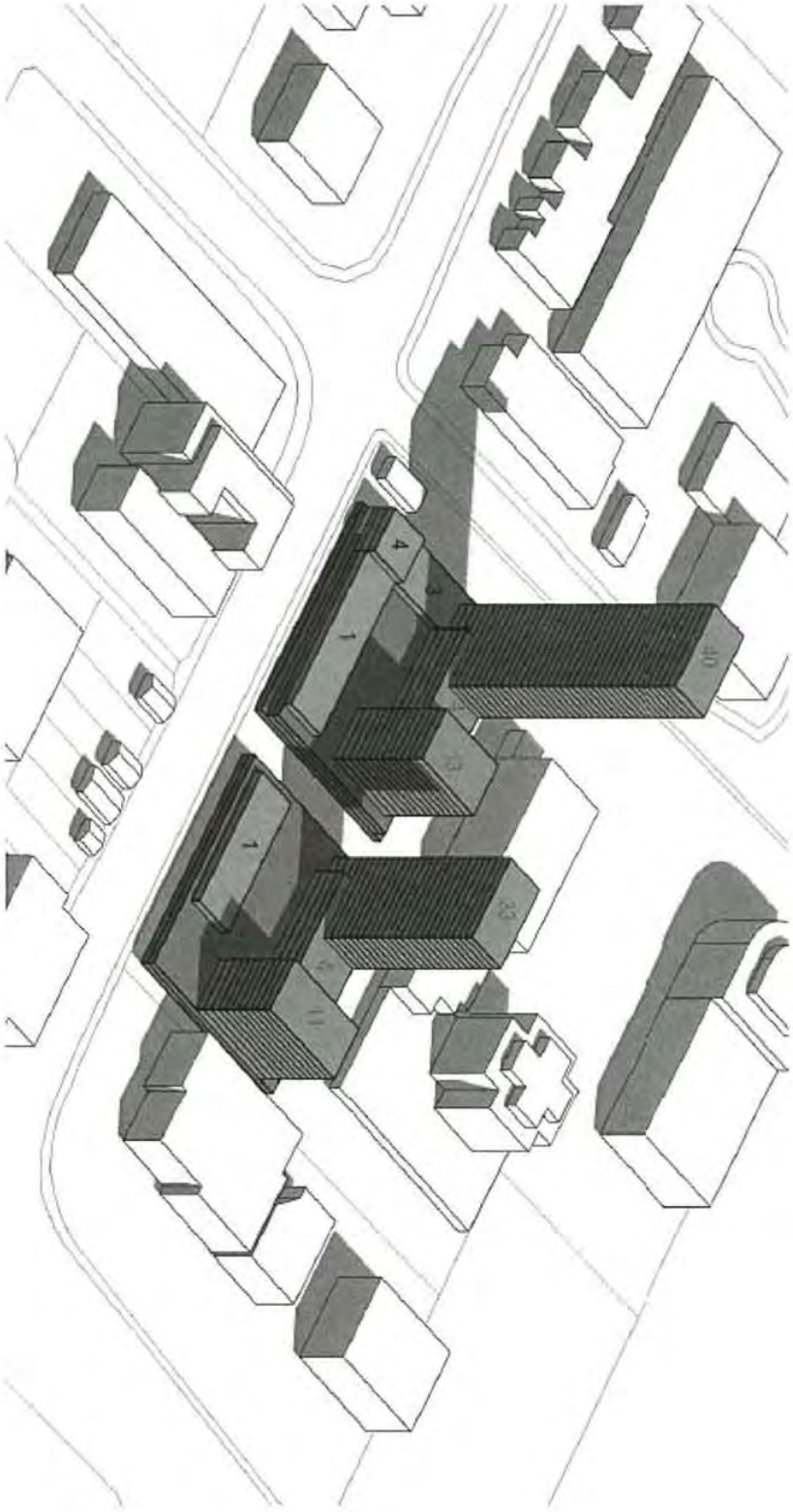
Appendix A
Draft Design Drawings (Mirvac)

Environmental Site Suitability Report
271 Lane Cove Road, Macquarie Park NSW



PROJECT
271 LANE COVE ROAD

TITLE
SIMPLE 3D MASS ANALYSIS

PLANNING PROPOSAL SCHEME

DOCUMENT NUMBER
SK10 PLANNING PROPOSAL SCHEME
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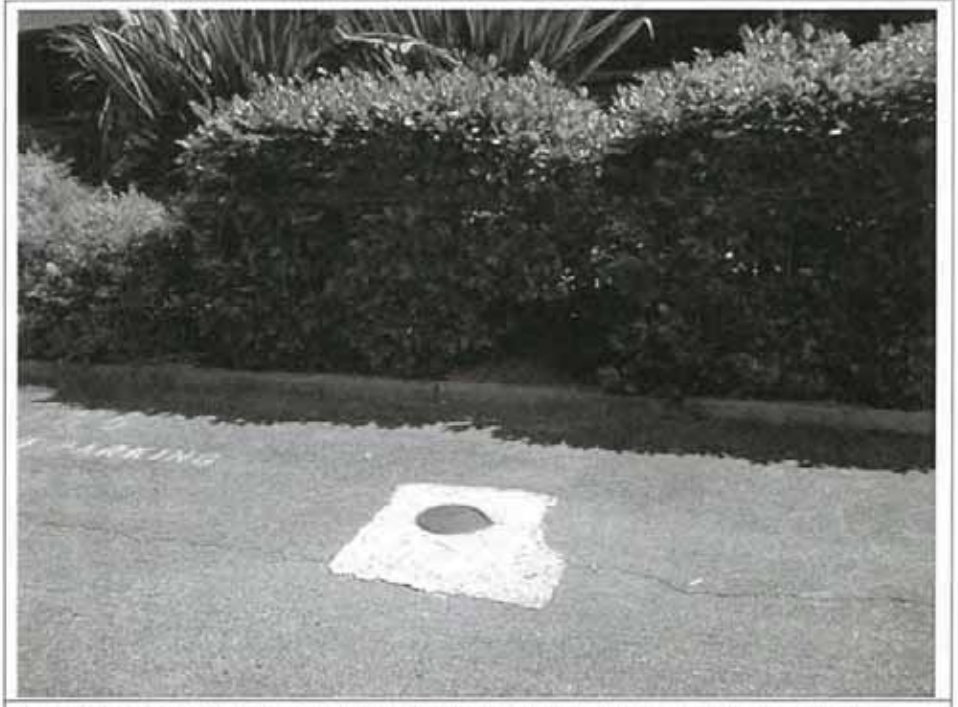
Appendix B
Site Photographs

Environmental Site Suitability Report
271 Lane Cove Road, Macquarie Park NSW

Photograph 1: Eastern site boundary, site access road and building located on northern half of site, looking south west

Photograph 2: Northern car park, landscaping and Macquarie Park Railway Station in background

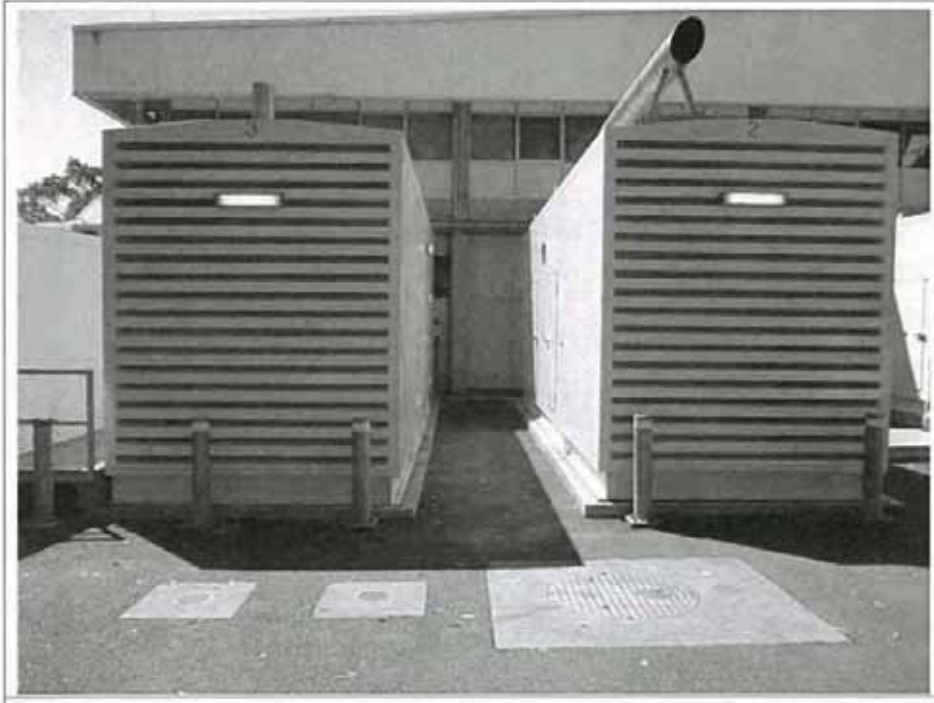
Photograph 3: Grassed fill mound on western side of site, looking south



Photograph 4: UST and location of former "Ampol Super" bowser located north east of building on northern half of site

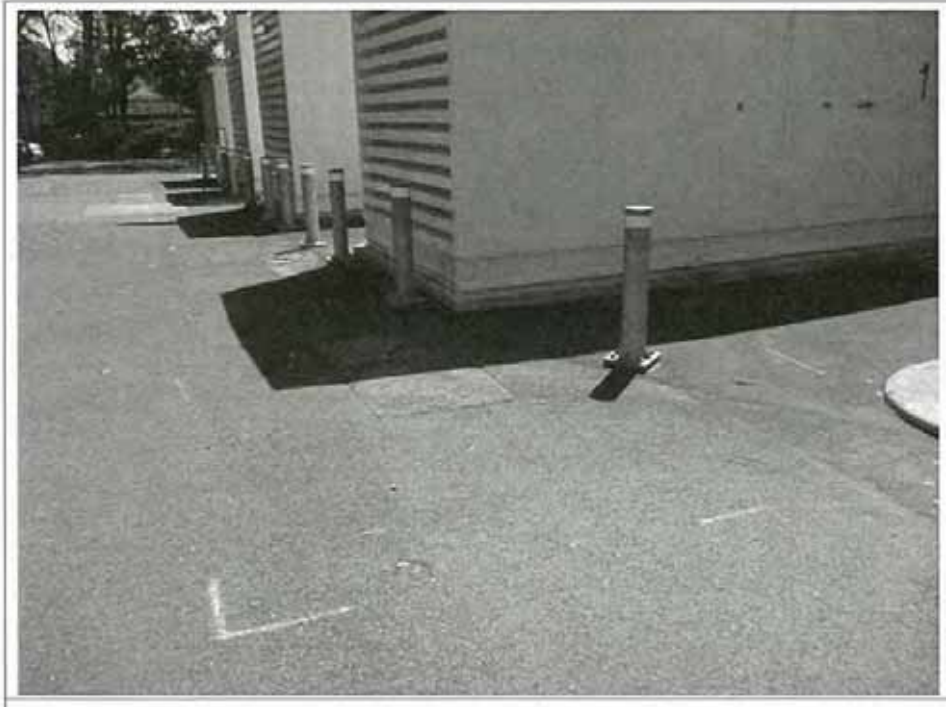
Photograph 5: Tennis court and construction of concrete footings, looking north west

Photograph 6: Car park located near the middle of the site and location of BH104 and BH105, looking west



Photograph 7: Diesel UST and generators located south west of Foxtel building, looking north east

Photograph 8: Vent pipe and bulk tank (diesel) fuel panel, looking south west

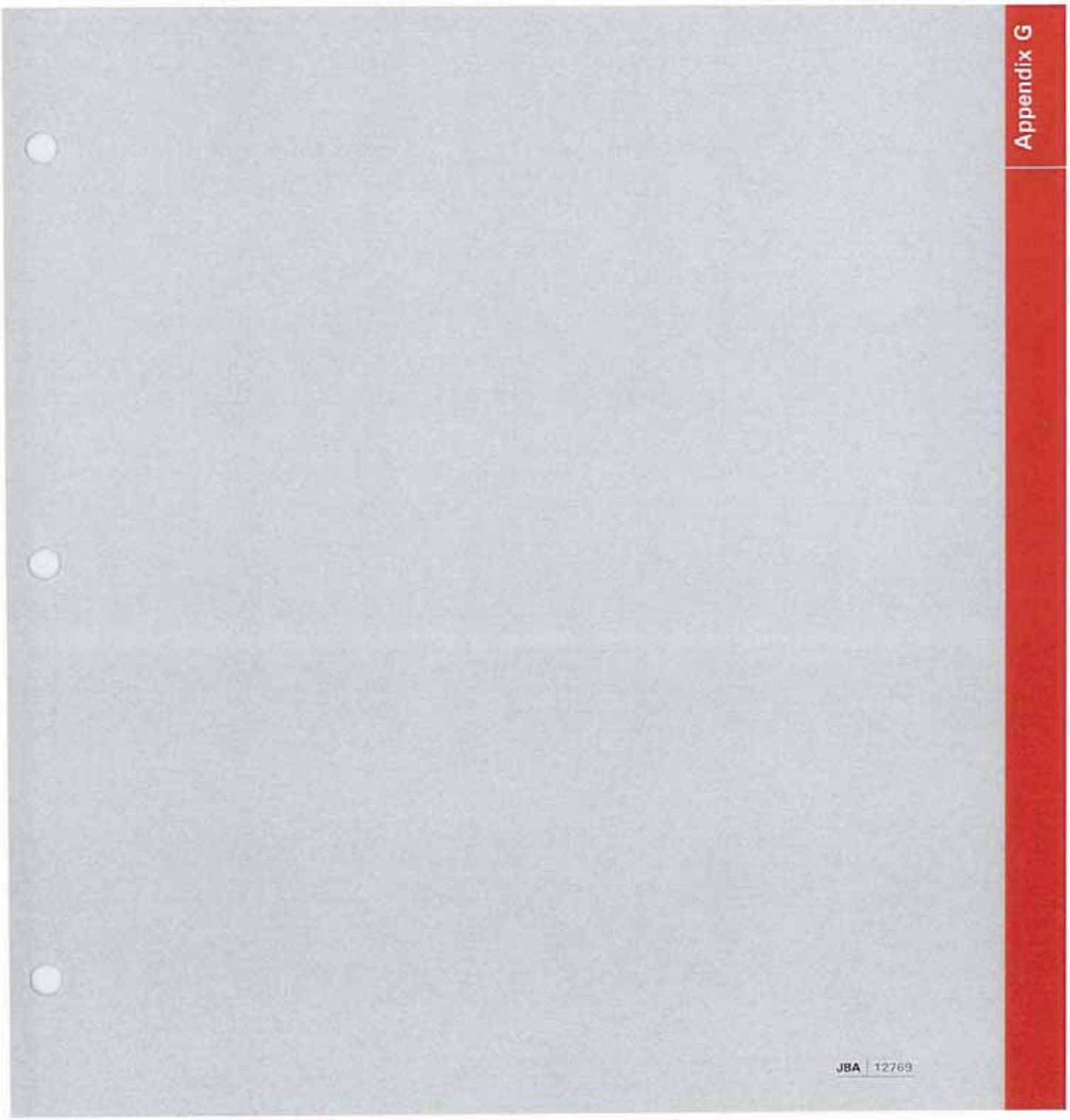


Photograph 9: Two dip/fill points of inactive UST(s) (foreground) and active diesel UST (background), looking north west

Photograph 10: Diesel AST and back-up generator, looking north

Legislative Assembly of NSW Committee on Transport and Infrastructure

Report on the Utilisation of Rail Corridors



LEGISLATIVE ASSEMBLY OF NEW SOUTH WALES

Committee on Transport and Infrastructure

REPORT 1/55 – NOVEMBER 2012

UTILISATION OF RAIL CORRIDORS

Lane Cove Road 269, Macquarie Park. Planning proposal for LEP, mixed use development - Appendix E-H. JBA Planning

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The motto of the coat of arms for the state of New South Wales is "Orta recens quam pura nites". It is written in Latin and means "newly risen, how brightly you shine".

Contents

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Terms of Reference

That the Legislative Assembly Committee on Transport and Infrastructure inquire into and report on the utilisation of air space above, and the land adjacent to, the rail corridor in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra.

Matters may include, but are not limited to, how rail corridors might contribute to:

- providing opportunities for mixed use property development
- generating income for funding future infrastructure projects;
- facilitating sustainable urban renewal and development;
- facilitation of transit oriented development schemes around railway stations;
- connectivity of communities either side of railway lines.

Other areas of inquiry will include:

- the current planning and policy framework;
- regulatory and policy barriers to implementing rail corridor projects;
- issues relating to the financing and funding of such projects;
- methods of assessing the compatibility of projects with the local community;
- examples of best practice from other jurisdictions.

Chair's Foreword

There is growing demand in our major New South Wales cities for housing which is close to shops, schools, public transport and workplaces. One way to meet that demand is transit oriented development (TOD) and our rail corridors offer ideal locations. Well-designed, mixed use, development over or adjacent to the rail corridor, at or within walking distance of a railway station, has the capacity to increase public transport usage, provide accessible locations for businesses and community facilities and create vibrant, friendly neighbourhoods.

Current NSW Government initiatives and reforms—the Long Term Transport Master Plan, the Planning System Green Paper, Infrastructure NSW's 20 Year State Infrastructure Strategy—provide an ideal opportunity to plan for transit oriented developments at strategic locations across the Greater Sydney Metropolitan Area.

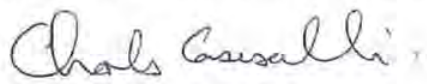
The recommendations which the Committee on Transport and Infrastructure has made in this report will facilitate the identification and marketing of TOD opportunities, remove current planning and approval barriers, and effect practical governance arrangements. The Committee is supporting the establishment of a specialised unit within UrbanGrowth NSW to champion transit oriented development above and along the rail corridor: guiding, promoting and coordinating the process. The Committee envisages that the unit will work closely with local and state government, local landowners, the community and the development industry.

While acknowledging the complexities of building over or along the rail corridor the Committee also notes that engineering challenges have substantially diminished over time. The lack of TOD relative to the number of potential TOD opportunities suggests that the substantive issues are about risk, delays in planning and approvals and a lack of flexibility by Government agencies.

The Committee considers that transit oriented mixed use development should be an essential component in both urban growth and urban renewal because of the social, economic and environmental benefits it provides. Medium to high density housing with easy access to frequent public transport services can reduce car dependency and encourage active forms of transport such as walking and cycling, resulting in less congestion on our roads, less pollution and better health outcomes. Mixed use development provides locations for shops, businesses and recreational pursuits, further reducing the need for private transport, as well as growing local economies.

We have an opportunity to create liveable, walkable neighbourhoods which meet the needs of 21st century city dwellers. In addition, the Committee believes that transit oriented development of appropriate sites along and above the rail corridor has the potential to generate income for funding infrastructure projects and to maximise the return from lazy government assets.

I wish to thank all who participated in the inquiry, members of the Committee for their contributions and Committee staff for their support.



Charles Casuscelli RFD MP
Chair

Executive Summary

Key issues

The key issues examined by the Committee are the benefits and challenges associated with utilising land adjacent to and air space above the rail corridor, and possible reforms to overcome these challenges.

Inquiry participants discussed the potential social, economic and environmental benefits of transit oriented developments. This type of development, which has been successfully undertaken in countries around the world, would capitalise on available land in close proximity to the rail network by creating high-density mixed-use development (referred to as transit oriented development) that is situated close to public transport. Such developments are seen as improving community health, connectivity and access to public transport by providing well-designed developments that contain community facilities, such as child care centres and schools, housing and retail, with active and walkable spaces. The Committee also heard that transit oriented development could generate income to fund future infrastructure projects and encourage sustainable urban renewal.

Difficulties and challenges with development above and adjacent to the rail corridor include a lack of co-ordination and strategy in terms of government plans and policies, a complex approvals process, and complex and lengthy construction for projects due to their potential impact on the rail network. The Committee looked at the current legislative and policy framework applying to development affecting the rail corridor, and heard evidence of proposed reforms to improve current processes.

Inquiry outcomes

Reforms to planning system

Inquiry participants suggested reforms to the planning framework to expedite development of key rail corridor sites and provide greater flexibility in terms of local environmental planning instruments. The need for a standard, clear approvals process that accelerates development of key sites, and which also enables early community consultation to determine the needs of the local community, was highlighted.

In light of the potential benefits of well-designed development above and adjacent to the rail corridor, the Committee concluded that reforms to the planning system are critical to overcome barriers that prevent effective utilisation of the rail corridor.

The Government's review of the NSW planning system was underway during the inquiry. Several of the main impediments to utilisation of the rail corridor raised during the inquiry were dealt with by proposals contained in a Green Paper released as part of the review. The Government is proposing changes that would involve: a strategic, evidence based focus for planning; community engagement in decision making; a streamlined, performance based approval system with quick and transparent decisions; and infrastructure that integrates with strategic land use planning.

The Committee would like to see a new planning system that addresses barriers to developments along the rail corridor. The Committee has therefore recommended that the

NSW Government shorten approval timeframes, including through early community consultation, as well as develop a standard, comprehensive state planning instrument, through the current review of the NSW planning system.

Co-ordinating agency

The Committee heard that a single agency with appropriate functions and powers could assist with overcoming challenges associated with rail corridor development. A single agency would be able to take a strategic approach to developments that utilise the rail corridor. The agency could oversee developments, working with relevant agencies, local government authorities and developers, to progress projects from design and planning to approval and construction. In the Committee's view, giving a single agency responsibility for the entire development process would streamline a process which is currently fragmented and lengthy.

The Committee has concluded that UrbanGrowth NSW is the appropriate agency to undertake this co-ordinating role. UrbanGrowth NSW was recently created from Landcom and the Sydney Metropolitan Development Authority and therefore has the required expertise. The Committee envisages that a specialised unit within UrbanGrowth NSW be created whose role would be: identifying and promoting opportunities for development of land along the rail corridor; creating standard design principles for transit oriented developments; assisting with planning and approval; co-ordinating with local councils and government agencies; and working with developers to achieve a balance between commercial opportunities and community benefits.

Identifying sites

A key step in facilitating utilisation of the rail corridor is identifying appropriate sites. In the Committee's view, an audit of land along the rail corridor is required to identify sites that are appropriate for transit oriented development.

The Committee envisages that this investigation of appropriate sites would focus on principal transport corridors expected to experience urban growth and which are targeted for urban renewal. The Committee has recommended that Transport for NSW and the Department of Planning and Infrastructure identify and prioritise rail transport nodes suitable for transit oriented development, based on compatibility with relevant government plans, such as the Metropolitan Plan and the finalised Long Term Transport Master Plan. This would mean that the assessment of potential sites would give regard to the long term housing, transport and land use needs of the state.

Inquiry participants expressed the view that precinct planning would help to assess land availability and the scope of potential development, and development objectives, including how it would enhance the community and integrate transport and land use. This type of planning would also enable the operational needs of the rail network, and walking, cycling and parking facilities to be assessed. The Committee has recommended that Transport for NSW and the Department of Planning and Infrastructure require precinct plans to be developed for each identified transit oriented development site.

Developing design principles

In order to ensure that rail corridor projects implement the features of best practice transit oriented development – which include mixed use development integrated with transport infrastructure, with a pedestrian friendly, liveable design – design principles should be

developed. The Committee has recommended that, as part of its co-ordinating role, UrbanGrowth NSW develop and promote best practice transit oriented development design principles. It is the Committee's view that these principles can be applied to all transport corridors, not just rail.

Value capture mechanisms

The Committee heard that value capture taxation mechanisms could enable developments along the rail corridor to generate funding for the state, which could in turn be invested in future infrastructure projects. The long-term value that accrues to private property owners from publicly funded infrastructure projects could be captured and used to fund future infrastructure. The State Infrastructure Strategy noted that targeted value capture is one of the funding strategies that could contribute to sustainable funding of key infrastructure projects, while the Draft Long Term Transport Master Plan indicated that Transport for NSW has reviewed value capture measures.

The Committee encourages the Government to further explore these options, and has recommended that NSW Treasury investigate value capture mechanisms for transit oriented development precincts with the aim of generating funding for future infrastructure projects.

Report structure

Chapter One explains the background to the establishment of the inquiry, its terms of reference and how it was conducted .

Chapter Two outlines the current planning and policy framework in New South Wales.

Chapter Three details the views of inquiry participants on the benefits of utilising land adjacent to and air space above the rail corridor.

Chapter Four explores the viewpoints of contributors to the inquiry about barriers and challenges affecting rail corridor projects.

Chapter Five examines proposals for reform to facilitate projects that utilise the rail corridor.

List of Findings and Recommendations

The Committee finds that transit oriented development of appropriate sites along and above the rail corridor could benefit the community by generating income for funding future infrastructure projects, facilitating sustainable urban renewal and development, encouraging the use of public transport and reducing car usage and improving the connectivity of local communities.

That a specialised unit within UrbanGrowth NSW be given the role of promoting and co-ordinating development in the air space above, and on land adjacent to, the rail corridor in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra.

That UrbanGrowth NSW's functions with regard to land adjacent to and air space above the rail corridor include:

- Identifying and promoting specific opportunities for development and use of land along the rail corridor and at rail transport nodes.
- Creating standard guidelines or principles for transit oriented development precincts.
- Assisting with planning and approvals processes, including local planning instruments to facilitate developments that benefit the local community.
- Consulting and co-ordinating with local councils and state government agencies.
- Working with developers and investors to achieve a balance between commercial opportunities and community benefits.

That, as part of the current review of the NSW planning system, the NSW Government consider ways to shorten approval timeframes, consistent with statutory requirements, and provide for early community consultation for identified priority developments along the rail corridor.

That, as part of the current review of the NSW planning system, the NSW Government develop a standard, comprehensive state planning instrument for major transport corridors.

That Transport for NSW and the Department of Planning and Infrastructure identify and prioritise rail transport nodes in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra, that are appropriate for transit oriented development.

In conducting the assessment of sites, the agencies should have regard to relevant strategies and plans including the finalised Long Term Transport Master Plan, the Metropolitan Plan and the 20 year State Infrastructure Strategy.

Chapter One – Introduction

1.1 The Committee on Transport and Infrastructure was appointed on 22 June 2011 to inquire into matters relevant to its portfolio responsibilities, which are: Regional Infrastructure and Services, Special Minister of State, Transport, Roads, Ports, Tourism, Major Events, Hospitality, Racing, the Arts, the Central Coast and the Legislature.[1]

CONDUCT OF THE INQUIRY

Terms of reference

1.2 On 23 November 2011, the Committee resolved to inquire into and report on the utilisation of air space above, and the land adjacent to, the rail corridor in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra. The terms of reference required the Committee to examine matters including how rail corridors may:

- provide opportunities for mixed use property development
- generate income for funding future infrastructure projects
- facilitate sustainable urban renewal and development
- facilitate transit oriented development schemes around railway stations
- connect communities either side of railway lines.

1.3 In conducting its inquiry, the Committee also considered factors including: the current planning and policy framework; barriers to implementing rail corridor projects; the financing and funding of such projects; methods of assessing the compatibility of projects with the local community; and best practice from other jurisdictions.

Submissions

1.4 The inquiry was announced on the Committee website on 24 November 2011. The Committee made a public call for submissions by advertising in the *Sydney Morning Herald* on 7 December 2011, with a closing date of 29 February 2012. A media release announcing the inquiry and calling for submissions was distributed to media organisations within New South Wales. The Chair of the Committee wrote to key stakeholders inviting them to make a submission to the inquiry.

1.5 The Committee received 64 submissions and two supplementary submissions from a broad cross-section of the community including councils, business chambers, government departments and agencies, unions, regional residents' associations and individual transport users. A complete list of submission makers may be found in Appendix 1.

[1] Legislative Assembly, *Votes and Proceedings*, No 23, Wednesday 22 June 2011, Item 16, p 207

Public hearings

1.6 Two public hearings were held at Parliament House on 26 March and 28 May 2012. Evidence was taken from 27 witnesses in total. A list of the witnesses who appeared before the Committee may be found in Appendix 2.

1.7 The transcripts of evidence from the hearing may be found on the Committee's website: www.parliament.nsw.gov.au/transportandinfrastructure.

Visit of inspection

1.8 A delegation of the Committee undertook a visit of inspection to Melbourne on 2 July 2012. A report of the visit may be found in Appendix 3.

1.9 The Committee thanks the organisations and individuals who participated in the inquiry.

Chapter Two – NSW planning framework

2.1 The legislative and policy framework applying to developments adjacent to and above the rail corridor is complex. Some aspects of the framework are under review, and the Government has indicated that significant reforms will be made to the NSW planning system.

2.2 This chapter provides an overview of the current legislative framework in NSW regarding the utilisation of air space above and the land adjacent to rail corridors in the Greater Metropolitan Area of Sydney and the Hunter and Illawarra regions. The chapter also outlines key policies and plans that affect planning for development above and adjacent to rail corridors in NSW.

2.3 In addition, the chapter discusses the roles and responsibilities of NSW Government agencies which are involved in development planning in relation to rail corridors in the Greater Metropolitan Area of Sydney and the Hunter and Illawarra regions of NSW.

LEGISLATIVE AND POLICY FRAMEWORK

2.4 The *Environmental Planning and Assessment Act 1979*, together with State environmental planning policies and local environmental plans, comprise the current legislative framework regarding development in NSW.

Environmental Planning and Assessment Act 1979

2.5 The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the primary environment and planning legislation that applies to development in NSW. The objects of the EP&A Act are to encourage:

a) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

b) the promotion and co-ordination of the orderly and economic use and development of land,

c) the protection, provision and co-ordination of communication and utility services,

d) the provision of land for public purposes,

e) the provision and co-ordination of community services and facilities,

f) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats,

g) ecologically sustainable development,

h) the provision and maintenance of affordable housing,

i) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

j) to provide increased opportunity for public involvement and participation in environmental planning and assessment.[2]

2.6 In respect to the utilisation of air space above and the land adjacent to rail corridors, among its other functions the EP&A Act allows for environmental planning instruments (EPIs) to be established with provisions for controlling development in NSW.

2.7 The EP&A Act sets out how EPIs can be made. EPIs are used to guide development through mandatory legal requirements on a wide range of issues.[3] EPIs include development standards, which are provisions by or under which requirements are specified or standards are fixed in respect of any aspect of a proposed development.[4]

2.8 The EP&A Act currently provides for two types of EPIs: Local environmental plans (LEPs); and State Environmental Planning Policies (SEPPs). Both types of EPI can affect the utilisation of air space above, and the land adjacent to, rail corridors.

2.9 LEPs are used to impose standards to control development and guide planning decisions in a particular area, generally the whole or part of a local government area.[5] Through zoning and development controls within LEPs, councils are able to supervise the ways in which land within their local government areas is developed. Rail corridor areas may be currently zoned according to the relevant LEP for the local government area in which they are located.

2.10 SEPPs are created by the NSW Government in order to respond to environmental planning issues that may have state significance. SEPPs can differ significantly in their purpose, and are prepared by the Department of Planning and Infrastructure.

2.11 Transport for NSW advised the Committee in their submission to the inquiry that, as it stands, the majority of the land held by RailCorp is zoned either Special Uses Railway (under the previous LEP zone classification system) or SP2 Infrastructure (under the current standard LEP template zone classification system). Transport for NSW stated that, while there are currently only a small number of stations with zoning that would permit airspace development, the ISEPP would prevail 'to the extent of any inconsistency over any other environmental planning instrument and so provides an alternative pathway to developing at rail stations.'[6]

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[2] *Environmental Planning and Assessment Act 1979*, s 5

[3] Department of Planning and Infrastructure, *Varying development standards: A Guide*, August 2011, p 3, http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=QkzGYbnz1y8%3D&tabid=515&language=en-US

[4] *Environmental Planning and Assessment Act 1979*, s 4

[5] Department of Planning, *A guide to preparing local environmental plans*, July 2009, p 1 http://www.planning.nsw.gov.au/lep/pdf/guide_preparing_local_environmental_plans.pdf

[6] Submission 58, Transport for NSW, p 12

State Environmental Planning Policy (Infrastructure) 2007

2.12 The State Environmental Planning Policy (Infrastructure) (referred to as the ISEPP) was introduced by the NSW Government to simplify the previous planning process for providing essential infrastructure. The ISEPP is aimed at facilitating the effective delivery of infrastructure across NSW, by:

a) improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services,

b) providing greater flexibility in the location of infrastructure and service facilities,

c) allowing for the efficient development, redevelopment or disposal of surplus government owned land,

d) identifying the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development),

e) identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and

f) providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing.[7]

2.13 The ISEPP regulates the planning process for development on land within and adjacent to rail corridors in NSW.[8] The ISEPP defines a 'rail corridor' as land:

a) that is owned, leased, managed or controlled by a public authority for the purpose of a railway or rail infrastructure facilities, or

b) that is zoned under an environmental planning instrument predominantly or solely for development for the purpose of a railway or rail infrastructure facilities, or

c) in respect of which the Minister has granted approval under Part 3A or Part 5.1 or (before its repeal) Division 4 of Part 5 of the Act, or consent under Part 4 of the Act, for the carrying out of development (or for a concept plan for a project comprising or including development) for the purpose of a railway or rail infrastructure facilities.[9]

2.14 The ISEPP provides for a range of permissible development in rail corridors, specifically:

- Residential, retail or business premises in a rail corridor (if the development is wholly or partly above a railway station) as development permissible with consent and may be carried out by any person; and
- Retail or business premises in a railway station complex, including areas in the complex that commuters use to gain access to station platforms as development

[7] ISEPP, clause 2
[8] ISEPP, Part 3, Division 15, Subdivision 2
[9] ISEPP, clause 78

> permissible with consent and may be carried out by any person, in a prescribed zone.[10]

2.15 As a result of the introduction of the ISEPP, RailCorp is now a concurrence authority for major developments involving excavation in, above or adjacent to rail corridors. The Committee heard that this enables RailCorp to advise councils and developers of the requirements for protecting rail infrastructure and train services, and ensures that requested conditions of consent are imposed by councils.[11]

State Environmental Planning Policy (State and Regional Development) 2011

2.16 The State Environmental Planning Policy (State and Regional Development) 2011 (the S&RD SEPP) aims to identify State significant development, State significant infrastructure and critical State significant infrastructure, and to confer functions on joint regional planning panels to determine development applications.[12]

2.17 With regard to the utilisation of land within rail corridors, the S&RD SEPP provides that development is declared to be State significant development if it is:

> Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than $30 million for any of the following purposes:
>
> a) commercial premises or residential accommodation,
>
> b) container packing, storage or examination facilities,
>
> c) public transport interchanges.[13]

2.18 If a development is declared State significant under the S&RD SEPP, the Minister for Planning becomes the consent authority for the development application.

2.19 The Committee was advised by the Department of Planning and Infrastructure that the provisions of the S&RD SEPP are likely to capture many types of development in rail corridors due to the increased complexity and cost of such development.[14] The Department also noted that the S&RD SEPP 'enables the state to become involved in precinct planning in accessible strategic locations to facilitate transport oriented urban renewal development.'[15]

State Environmental Planning Policy (Urban Renewal) 2010

2.20 The State Environmental Planning Policy (Urban Renewal) 2010 was introduced in order to outline the criteria and steps for identifying an existing urban precinct as a possible candidate for renewal. The aims of the SEPP are as follows:

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[10] Submission 58, Transport for NSW, p 12
[11] Submission 58, Transport for NSW, pp 13-14
[12] S&RD SEPP, clause 3
[13] S&RD SEPP, Schedule 1, 19(2)
[14] Department of Planning and Infrastructure, Answer to follow up question 9, correspondence to the Chair dated 17 May 2012
[15] Submission 61, Department of Planning and Infrastructure, p 2

a) to establish the process for assessing and identifying sites as urban renewal precincts,

b) to facilitate the orderly and economic development and redevelopment of sites in and around urban renewal precincts,

c) to facilitate delivery of the objectives of any applicable government State, regional or metropolitan strategies connected with the renewal of urban areas that are accessible by public transport.[16]

2.21 The Urban Renewal SEPP specifically identifies three potential urban renewal precincts: Redfern-Waterloo, Granville and Newcastle. The Urban Renewal SEPP provides a mechanism for studies to be conducted at potential precincts to consider the suitability of the land for appropriate land use and development. It also provides a mechanism specifically for transit oriented development at designated locations (identified urban renewal precincts).[17]

Growth Centres (Development Corporations) Act 1974

2.22 The *Growth Centres (Development Corporations) Act 1974* provides for development corporations to be constituted by the NSW Government with functions that include the planning of development and use of identified land.

2.23 Development corporations have wide powers, including the ability to acquire land and to subdivide or consolidate land vested in the corporation.[18] The Sydney Metropolitan Development Authority was constituted under the Growth Centres (Development Corporations) Act in 2010.

2.24 With specific regard to transit oriented development, development corporations constituted under the Growth Centres (Development Corporations) Act can provide proposals to the Minister for Planning for the development and use of land in conjunction with the provision of utility services and public transport facilities for or in connection with the growth centre.[19]

PROPOSALS FOR REFORM

2.25 In July 2011 the NSW Government initiated a review of the NSW planning system to be conducted by an Independent Review Panel, chaired by the Hon Tim Moore, former Minister for the Environment, and the Hon Ron Dyer, former Minister for Public Works.[20]

2.26 The review process included consultation with key interest groups and stakeholders throughout NSW. The Review Panel sought the community's views

[16] State Environmental Planning Policy (Urban Renewal) 2010, clause 3
[17] Submission 58, Transport for NSW, p 13
[18] *Growth Centres (Development Corporations) Act 1974*, s 9
[19] *Growth Centres (Development Corporations) Act 1974*, s 7.2 (a)
[20] Submission 61, Department of Planning and Infrastructure, p 3

on what should be the broad underpinning principles for new legislation to replace the *Environmental Planning and Assessment Act 1979*.[21]

2.27 On 14 July 2012 the Minister for Planning and Infrastructure, the Hon Brad Hazzard MP, released the Independent Panel's Review Report, *The Way Ahead for Planning in NSW Volume 1 (Major Issues)* and *Volume 2 (Other Issues)*, along with the NSW Government's initial response to the Review, *A New Planning System for NSW - Green Paper*.

2.28 The Independent Review Panel identified three key reasons for reform of the NSW planning system as being:

- the drag that the present system puts on the economic performance of the State and on affordability
- broad public distrust in the present planning system
- the complexity of the system itself (which acts as a major contributor to the first two reasons).[22]

2.29 The Independent Review Panel recommended that:

> The present principal planning legislation, the Environmental Planning and Assessment Act 1979, should be repealed and that three new, separate pieces of legislation should be passed. These are the:
>
> - Sustainable Planning Act – to establish the framework for a reformed planning system
> - Planning Commission Act – to establish the composition, powers and functions of an independent Planning Commission
> - Spatial Information Act – to facilitate a whole-of-government approach to the application of information technology to spatial data (and not confined to planning information).[23]

2.30 The NSW Government's initial response to the Independent Review Panel's reports, *A New Planning System for NSW - Green Paper*, proposed the establishment of new planning legislation, which is intended to establish the broad framework for a new planning system for NSW.

2.31 The 23 changes to the planning system proposed in the Green Paper are based on four fundamental reforms:

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[21] NSW Government, NSW Planning System Review, http://planningreview.nsw.gov.au/ReviewStages/tabid/103/Default.aspx

[22] NSW Government, *The Way Ahead for Planning in NSW Recommendations of the NSW Planning System Review Volume 1 - Major Issues*, May 2012, p 4 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=p-c_QPFXVNM%3d&tabid=87

[23] NSW Government, *The Way Ahead for Planning in NSW Recommendations of the NSW Planning System Review Volume 1 - Major Issues*, May 2012, p 14 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=p-c_QPFXVNM%3d&tabid=87

- **Community Participation**: the major shift in the planning system is to engage communities as an integral part of making key planning decisions that will affect the growth of their communities.
- **Strategic Focus**: a major shift to evidence based strategic planning in terms of planning effort, community and stakeholder engagement and decision making.
- **Streamlined Approval**: a shift to a performance based system in which duplicative layers of assessment have been removed, decisions are fast and transparent, and code complying development is maximised.
- **Provision of Infrastructure**: a genuine integration of planning for infrastructure with the strategic planning of land use so that infrastructure that supports growth is funded and delivered.[24]

2.32 The Green Paper also recommended that all State Environmental Planning Policies be repealed and replaced with a series of NSW Planning Policies, which would 'provide plain English, clear and practical high level planning direction for key policy areas which are of interest to the state. These policies will provide the policy setting and framework for planning outcomes to be delivered in regional, subregional and local plans.'[25]

2.33 Following further consultation and industry feedback regarding the points raised in the Green Paper, the NSW Government will release a White Paper and draft planning legislation for community input in late 2012. The Government intends to present the new planning legislation to the NSW Parliament in early 2013.[26]

KEY GOVERNMENT POLICIES AND PLANS

2.34 Several NSW Government plans and policies are relevant to the utilisation of air space above and land adjacent to rail corridors in NSW.

NSW 2021

2.35 NSW 2021 is the NSW Government's 10 year plan to guide policy and budget decision making and to deliver on community priorities. It replaced the previous State Plan as the NSW Government's strategic business plan, and it sets priorities and goals for action and guides allocation of resources. NSW 2021 is based around five key strategies, including:

> Renovate Infrastructure – build the infrastructure that makes a difference to both our economy and people's lives.[27]

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[24] NSW Government, *A New Planning System for NSW- Green Paper*, July 2012, p 3
http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=103
[25] NSW Government, *A New Planning System for NSW- Green Paper*, July 2012, p 32
http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=103
[26] NSW Government, *A New Planning System for NSW- Green Paper*, July 2012, p 2
http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=103
[27] NSW Government, *NSW 2021: A Plan to make NSW Number One*, September 2011, p 2
http://2021.nsw.gov.au/sites/default/files/NSW2021_WEB%20VERSION.pdf

2.36 Among the 32 goals listed in the NSW 2021 plan, those of relevance to the inquiry include the following:

- Reduce travel times
- Grow patronage on public transport by making it a more attractive choice
- Improve customer experience with transport services
- Invest in critical infrastructure
- Build liveable centres[28]

2.37 NSW 2021 emphasises that an integrated transport system is needed to ensure different transport modes work together and that the interests of transport users are primary.[29] Within the NSW 2021 plan, the NSW Government has identified as a priority action the need to improve and coordinate existing transport services by defining projects needed for growth, improving the way people travel and how businesses move goods to metropolitan and regional communities.[30]

2.38 A further target of NSW 2021 is to initiate planning policy that encourages job growth in centres close to where people live and to provide access to public transport. As a priority action, NSW 2021 identifies the need to deliver a metropolitan strategic planning framework which details housing and employment growth targets and key planning principles to facilitate the urban development that is needed to increase employment and housing within public transport catchments.[31]

NSW Long Term Transport Master Plan

2.39 The NSW Government commenced the development of a NSW Long Term Transport Master Plan in late 2011. The Plan's development has involved community consultation across the state and is expected to be finalised by late 2012.[32] A draft of the Plan was released in September 2012.[33]

2.40 The NSW Long Term Transport Master Plan is intended to map out a sustainable transport strategy to support the state's development over the next 20 years. The Plan aims to address transport needs in metropolitan, regional and rural areas, along with congestion in cities, and to provide a basis upon which future investment decisions can be made.[34]

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[28] NSW Government, *NSW 2021: A Plan to make NSW Number One*, September 2011, p 3 http://2021.nsw.gov.au/sites/default/files/NSW2021_WEB%20VERSION.pdf

[29] Submission 58,Tranpsort for NSW, p 6

[30] NSW Government, *NSW 2021: A Plan to make NSW Number One*, September 2011, p 20 http://2021.nsw.gov.au/sites/default/files/NSW2021_WEB%20VERSION.pdf

[31] NSW Government, *NSW 2021: A Plan to make NSW Number One*, September 2011, p 40 http://2021.nsw.gov.au/sites/default/files/NSW2021_WEB%20VERSION.pdf

[32] Submission 58, Transport for NSW and http://haveyoursay.nsw.gov.au/faq/index/21#88

[33] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012 http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf

[34] Submission 58, Transport for NSW, p 6

2.41 Transport for NSW indicated in their submission to the inquiry that a key element of the Plan will be determining how Sydney's rail network will develop over the next 20 years:

> The Plan will also form the basis for further consideration of locations on the network that provide the greatest potential for development consistent with the Government's objectives for transport and to cater for population growth.[35]

2.42 The Draft NSW Long Term Transport Master Plan outlines the following approach to integrated planning:

> **Step 1: Integrating transport with land use planning**
>
> Developing the transport system in a way that fully supports the development of strategic centres and precincts identified by the Department of Planning and Infrastructure.
>
> **Step 2: Identifying corridors of demand**
>
> Forecasting the travel demand that will be created by the location and type of population and employment growth, and looking at broad patterns of movement between centres and precincts.
>
> **Step 3: Defining the performance required from the transport network**
>
> Assessing the nature of demand along each of the corridors so that the right transport network service level meets the demand that we have forecasted.
>
> **Step 4: Moving towards a connected and integrated system**
>
> Focusing on a connected network, rather than a radial network, to give customers new travel opportunities and choices.[36]

2.43 During the inquiry, the Department of Planning and Infrastructure observed that the development of the NSW Long Term Transport Master Plan would provide opportunities to strategically identify potential sites for future rail corridor development.[37]

Metropolitan Plan for Sydney 2036

2.44 In December 2010 the NSW Government released its Metropolitan Plan for Sydney 2036. The Metropolitan Plan is focused around a 'city of cities' approach to planning, which is concerned with transforming Sydney from a single centred city to a more connected, networked multi-centred city. The Metropolitan Plan particularly highlights the role of Sydney's 'regional cities' of Parramatta, Liverpool and Penrith in a multi-centred city, and forecasts these regional cities as

[35] Submission 58, Transport for NSW, p 6
[36] Transport for NSW, *Draft NSW Long Term Transport Master Plan: Summary*, September 2012, p 3
[37] Department of Planning and Infrastructure, Answer to follow-up question 6, correspondence to the Chair dated 17 May 2012

providing a greater proportion of jobs and services for large parts of Sydney in the future.[38]

2.45 The Metropolitan Plan relies on the intensification of residential and employment land uses around transport facilities, particularly rail, and also supports the development of Major Centres within the Sydney Metropolitan area, which will cater for expanding populations by concentrating shopping, local jobs and services near homes.

2.46 The Metropolitan Plan focuses on creating efficient transport links and connecting housing with transport nodes, and the Plan makes clear that, along public transport corridors, urban renewal will be focussed within the walking catchments of centres.[39] The Major Centres indicated in the Metropolitan Plan are identified as the building blocks of Sydney's public transport network into the future.[40]

2.47 The Metropolitan Plan identifies potential urban renewal opportunities within rail corridors. The Plan indicates that urban renewal will be accommodated in centres and transport corridors where there is existing transit capacity and in corridors that will benefit from capacity increases in the medium to longer term (see Figure 1 overleaf).

[38] NSW Government, *Metropolitan Plan for Sydney 2036*, December 2011, p 16 http://metroplansydney.nsw.gov.au/Portals/0/pdf/METRO2036_COMPLETE.pdf
[39] Submission 61, Department of Planning and Infrastructure, p 1
[40] NSW Government, *Metropolitan Plan for Sydney 2036*, December 2011, p 16 http://metroplansydney.nsw.gov.au/Portals/0/pdf/METRO2036_COMPLETE.pdf

Figure 1 – Metropolitan Plan: Potential urban renewal opportunities supported by the rail network[41]

2.48 The Plan identifies various actions for the NSW Government to pursue in relation to the development of Major Centres within the Sydney metropolitan area, including:

> Action B3.1 – Plan for new centres in existing urban areas and greenfield release areas
>
> Action B3.2 – Plan for urban renewal in identified centres

[41] NSW Government, *Metropolitan Plan for Sydney 2036*, December 2011, p 71
http://metroplansydney.nsw.gov.au/Portals/0/pdf/METRO2036_COMPLETE.pdf

Action B3.4 – Investigate the economic case for targeted State investment in urban renewal in more challenging localities

Action B3.5 – Identify urban renewal opportunities on State and Federal Government land.[42]

2.49 The Metropolitan Plan for Sydney 2036 is currently being updated by the Department of Planning and Infrastructure in order to align with the NSW 2021 plan. This updated metropolitan strategy will be linked to the NSW Government's other long term plans, including the Long Term Transport Master Plan.

20 year State Infrastructure Strategy

2.50 Infrastructure NSW's State Infrastructure Strategy was released in October 2012. The Strategy identifies priority infrastructure problems in NSW and outlines Infrastructure NSW's recommendations for development of infrastructure in NSW between 2012 and 2032, in relation to a variety of policy areas, including public transport, roads and ports, water, energy, health and education. With specific regard to rail transport, the Strategy identifies the essential nature of trains to the economy of NSW, particularly for commuters to central Sydney.[43]

2.51 Recommendations regarding rail transport include planning for an extension of the Eastern Suburbs Railway to the suburbs of Randwick and Maroubra between 2022 and 2032, and the modernisation of the inner-Sydney train stations at Wynyard and Town Hall between 2017 and 2022.

Regional strategies

2.52 Regional strategies are long term strategic plans for regional areas of NSW, prepared by the Department of Planning and Infrastructure in conjunction with local government, communities and business. The purpose of each regional strategy is to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the respective region's population until 2031. Regional strategies identify opportunities for development in strategic locations and can provide direction for redevelopment and infrastructure improvements around suitable railway stations.[44]

2.53 Regional strategies of relevance to this inquiry include the Lower Hunter Regional Strategy 2006-2031, the Illawarra Regional Strategy 2006-2031 and the Central Coast Regional Strategy 2006-2031.[45] Of particular relevance to the inquiry is the Lower Hunter Regional Strategy, which identifies various 'renewal corridors' in the Hunter Region, areas which provide opportunities for residential and mixed

[42] NSW Government, *Metropolitan Plan for Sydney 2036*, December 2011, pp 73, 74, 76 http://metroplansydney.nsw.gov.au/Portals/0/pdf/METRO2036_COMPLETE.pdf

[43] Infrastructure NSW, State Infrastructure Strategy, October 2012, p 12

[44] Submission 61, Department of Planning and Infrastructure, p 2

[45] Department of Planning and Infrastructure, Regional Strategies http://www.planning.nsw.gov.au/regional-strategies

use development around high frequency transport networks and in close proximity to centres.[46]

National strategies

2.54 National strategies that may have some bearing on long term transport planning in NSW include the National Freight Strategy and the National Ports Strategy. The development of these strategies is the responsibility of Infrastructure Australia, a federal statutory body designed to provide advice to stakeholders and Australian governments in relation to the nation's current and future infrastructure needs and priorities.[47]

2.55 The National Ports Strategy was developed by Infrastructure Australia in 2010 and endorsed by the Council of Australian Governments in July 2012,[48] and highlights the importance of giving consideration in land and transport corridor planning to the centrality of ports to freight flows.[49]

2.56 The National Freight Strategy is currently being developed by Infrastructure Australia and a discussion paper regarding the strategy was released in February 2011. The discussion paper indicates that the strategy will discuss the implications of increased freight movement, the importance of incorporating freight transport considerations into transport corridor, and land use planning and ensuring that transport corridors are suitable for the movement of freight.[50]

2.57 Transport for NSW advised the Committee that the Long Term Transport Master Plan is being developed with consideration given to various national transport strategies that will affect transport in NSW.[51]

CURRENT APPROVAL PROCESS FOR RAIL CORRIDOR DEVELOPMENT

2.58 The current approval process for rail corridor development proposals depends on the nature of the intended development, including consideration of size and complexity. Development can be classified as local, regional or state development.[52]

2.59 For local development, the relevant council is the consent authority while for regional development the relevant Joint Regional Planning Panel (JRPP) is the consent authority. Development proposals may also require additional

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[46] Department of Planning, Lower Hunter Regional Strategy, October 2006, p 16
http://www.planning.nsw.gov.au/regional/pdf/lowerhunter_regionalstrategy.pdf

[47] Infrastructure Australia, Infrastructure Australia functions as set out in the *Infrastructure Australia Act 2008*,
http://www.infrastructureaustralia.gov.au/about/functions.aspx

[48] Council of Australian Governments, National Ports Strategy 2011, http://www.coag.gov.au/node/445

[49] Infrastructure Australia, *National Ports Strategy*, December 2010, p 14
http://www.infrastructureaustralia.gov.au/gateways/files/National_Ports_Strategy_DEC2010_v2.pdf

[50] Infrastructure Australia, *National Freight Strategy: Discussion paper*, February 2011, p 20
http://www.infrastructureaustralia.gov.au/publications/files/NLFS_220211.pdf

[51] Submission 58, Transport for NSW, p 17

[52] Department of Planning and Infrastructure, Answer to follow-up question 1, correspondence to the Chair dated 17 May 2012

assessment processes, such as the requirement for concurrent approval from a government agency.[53]

2.60 JRPPs are appointed by the NSW Government and local councils in the respective region to make independent, merit-based decisions on development that is significant to a particular region.[54] Local and regional development applications follow an assessment process outlined in the EP&A Act.[55]

2.61 Under the S&RD SEPP the Minister for Planning is the consent authority for state significant development, a category which includes development over $30 million.[56]

2.62 Transport for NSW told the Committee that the development process generally involves the Government tendering to market the disposal of surplus railway land, in some cases along with air space development rights, in exchange for developers providing a rail asset and for longer-term lease arrangements. According to Transport for NSW, the structures of agreements for existing development are unique, however the basic principles that should apply include:

- transparent and appropriate risk allocation between the parties;
- a suitable return to Government;
- clear accountabilities for maintenance and upgrade of both rail infrastructure and the development;
- provisions which allow for expansion and upgrades to rail infrastructure.[57]

NSW GOVERNMENT AGENCY ROLES

2.63 Several NSW Government agencies are responsible for aspects of rail corridor management in NSW, and for the development of lands adjacent to rail corridors, as well as rail corridor airspace.

Transport for NSW

2.64 Transport for NSW was established in late 2011 as the lead agency of the NSW transport portfolio.[58] Transport for NSW absorbed the functions of several separate transport agencies in order to become an integrated authority responsible for the co-ordinated delivery of transport services across all modes.[59]

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[53] Department of Planning and Infrastructure, Answer to follow-up question 1, correspondence to the Chair dated 17 May 2012

[54] NSW Government, Joint Regional Planning Panels - Operations, http://jrpp.nsw.gov.au/AboutUs/Operations/tabid/70/language/en-AU/Default.aspx

[55] *Environmental Planning and Assessment Act 1974*, Part 4

[56] NSW Government, Joint Regional Planning Panels - Operations http://jrpp.planning.nsw.gov.au/Operations/tabid/70/Default.aspx#determine

[57] Submission 58, Transport for NSW, p 20

[58] Transport for NSW, About Transport for NSW, http://www.transport.nsw.gov.au/content/about-transport-nsw

[59] Minister for Transport and Minister for Roads and Ports, 'RTA abolished as Transport for NSW takes shape', Media release, 15 July 2011, http://www.transport.nsw.gov.au/sites/default/files/b2b/releases/110715_transport_for_nsw_takes_shape.pdf

2.65 Following the establishment of Transport for NSW, decision making for transport policy for NSW became centralised, while specialist transport service agencies, such as RailCorp, continued to provide transport services.[60]

2.66 Transport for NSW is currently responsible for 'providing consolidated planning and overall investment advice for all modes of transport' and 'integrating freight strategies and programs to meet the current and future needs of the NSW economy and particularly regional economies.'[61] Transport for NSW also works with other agencies in developing and implementing future directions for transport planning and infrastructure development.[62]

2.67 In addition, Transport for NSW is responsible for progressing major rail infrastructure projects in NSW that may provide opportunities for transit oriented development, such as the North West Rail Link Project.[63]

2.68 The Committee was advised that RailCorp traditionally had much greater responsibilities over rail corridor management and development; however with the establishment of Transport for NSW these responsibilities had transferred from RailCorp to the new, integrated transport authority.[64]

RailCorp

2.69 RailCorp is a state owned corporation which provides rail transport services in NSW. RailCorp is divided into two business groups, CityRail and CountryLink, which operate passenger rail services and associated bus networks in the Sydney metropolitan area and regional NSW. As noted above, the establishment of Transport for NSW has resulted in RailCorp's responsibilities being focused to a greater degree on the operation of rail transport services.

2.70 On 15 May 2012 the Minister for Transport, the Hon Gladys Berejiklian MP, announced that RailCorp would be broken up into two specialised organisations to service the different needs of Sydney and intercity/regional train customers. The Minister also stated that previous functions of RailCorp, including construction and major projects, would be transferred to Transport for NSW, to ensure that RailCorp and subsequently Sydney Trains and NSW Trains are able to focus solely on providing customer services.[65]

Department of Planning and Infrastructure

2.71 The Department of Planning and Infrastructure is responsible for 'long term planning for regions across NSW, driving well located housing and employment, assessing State significant development proposals, and ensuring that the NSW

[60] Transport for NSW, About us, http://www.transport.nsw.gov.au/aboutus
[61] Transport for NSW, About us, http://www.transport.nsw.gov.au/aboutus
[62] Transport for NSW, Land use and transport planning, http://www.transport.nsw.gov.au/content/land-use-and-transport-planning
[63] Submission 58, Transport for NSW, p 5
[64] Mr Robert Mason, Chief Executive, RailCorp, Transcript of evidence, 26 March 2012, p 12
[65] Minister for Transport, 'Fixing the trains', Media release, 15 May 2012, p 2 http://www.transport.nsw.gov.au/sites/default/files/b2b/releases/20120515-Fixing-the-trains.pdf

planning system is efficient and effective'.[66] The role of the Department is to deliver strategies and decisions to encourage sustainable growth and employment in NSW, strategies which include transport related planning.[67]

2.72 Mr Giovanni Cirillo, Executive Director, Urban Renewal and Major Sites, Department of Planning and Infrastructure, described the role of the Department in relation to transit orientated developments at a public hearing on 26 March 2012:

> Planning typically is along the lines of the strategic vision for the state and certain key strategic locations. We [Department of Planning and Infrastructure] are not a developer and so I would be reluctant to suggest that Planning should be within the realm of property delivery and urban development, but it certainly has a very important role to play in identifying strategic locations for urban renewal and that includes rail corridors and areas around rail corridors. We do that already and will be increasingly reliant upon that land with a high capability to plan for those areas.[68]

2.73 The Department of Planning and Infrastructure is currently developing a new planning framework for NSW, including the introduction of new planning legislation for the state, as discussed earlier.

Infrastructure NSW

2.74 Infrastructure NSW is an independent, statutory agency established in 2011 to provide strategic policy direction and oversight to the NSW Government for infrastructure planning and delivery. As noted above, Infrastructure NSW has prepared a 20 year State Infrastructure Strategy. In addition to preparing the 20 year State Infrastructure Strategy, Infrastructure NSW's functions include:

- evaluate submissions by agencies for projects greater than $100 million
- prepare infrastructure statements regarding particular sectors or precincts such as a review of the Port Botany-Sydney Airport precinct
- review unsolicited infrastructure proposals from the private sector
- provide advice to the Premier on funding models
- assess public private partnership proposals being considered by agencies
- coordinate NSW infrastructure funding submissions to the Commonwealth.[69]

2.75 Under the Infrastructure NSW Act, Infrastructure NSW is also to oversee and monitor the delivery of major infrastructure projects and other infrastructure projects identified in plans adopted by the Premier; and to carry out or be

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[66] Department of Planning and Infrastructure, About us, http://www.planning.nsw.gov.au/AboutUs/tabid/62/language/en-AU/Default.aspx

[67] Department of Planning and Infrastructure, *Annual Report 2010-11*, p 6

[68] Mr Giovanni Cirillo, Executive Director – Urban Renewal and Major Sites of the Department of Planning and Infrastructure, Transcript of evidence, 26 March 2012, p 24

[69] Infrastructure NSW, About us, http://www.infrastructure.nsw.gov.au/about-insw.aspx accessed 27 September 2012

responsible for the delivery of a specified major infrastructure project in accordance with an authorisation order from the Premier.[70] Infrastructure NSW is currently managing the project to redevelop the Sydney International Convention, Exhibition and Entertainment Precinct at Darling Harbour.[71]

Landcom

2.76 Landcom is a state owned corporation. The principal functions of Landcom are to undertake and participate in residential, commercial, industrial and mixed development projects, and to provide advice and services related to urban development, on a commercial basis, to government agencies and others.[72]

2.77 Landcom's principle objectives include: operating as a successful business; demonstrating social responsibility by taking into consideration community interests; complying with principles for ecologically sustainable development; and undertaking or assisting with strategic or complex urban development projects.[73]

2.78 Landcom is involved in major residential developments around Sydney in both greenfield and brownfield sites. Current and previous Landcom developments have involved incorporating public transport linkages with housing, including the Green Square Town Centre project.[74]

Sydney Metropolitan Development Authority

2.79 The Sydney Metropolitan Development Authority (SMDA) is constituted under the *Growth Centres (Development Corporations) Act* 1974 and reports to the Minister for Planning and Infrastructure. The SMDA was established in December 2010 to pursue urban renewal in the Sydney Metropolitan area and to ensure delivery of the objectives of the State Environmental Planning Policy (Urban Renewal) 2010.

2.80 The primary focus of the SMDA is to work in designated precincts to bring about urban renewal and positive development, while working with relevant stakeholders including the Department of Planning and Infrastructure and Transport for NSW.[75] Under the Growth Centres (Development Corporations) Act, the SMDA has the ability to make proposals to the Minister for Planning in relation to the development and use of land in a designated precinct in connection with local public transport facilities.

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[70] *Infrastructure NSW Act 2011*, Part 3 and Part 5

[71] Infrastructure NSW, Projects, http://www.infrastructure.nsw.gov.au/projects.aspx accessed 27 September 2012

[72] *Landcom Corporation Act 2001*, s 7(2)

[73] *Landcom Corporation Act 2001*, s 6

[74] Landcom, Answers to follow-up questions, correspondence to the Chair dated 28 June 2012, p 2

[75] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, Transcript of evidence, 28 May 2012, p 2

2.81 The SMDA is specifically responsible for urban renewal in designated precincts within the Sydney Metropolitan area; current designated precincts are the Redfern-Waterloo area and the Granville area.[76]

UrbanGrowth NSW

2.82 On 12 June 2012 the Minister for Planning and Infrastructure announced the creation of a new organisation, UrbanGrowth NSW, which would focus on the delivery of new housing in NSW and lead development in identified planning projects.

2.83 The Minister stated that UrbanGrowth NSW would integrate Landcom and the Sydney Metropolitan Development Authority into an organisation that will:

> ... continue the Government's 10,000 housing lots program; coordinate and deliver lead-in infrastructure and service provision to development areas; plan and fast-track urban renewal projects to unlock further private sector investment - providing more housing choice and affordability.[77]

2.84 The Committee was advised by Landcom that UrbanGrowth NSW will be established with a mix of powers and functions, which will allow the organisation to work closely with other Government agencies to identify suitable urban renewal sites, remove barriers to development, and create opportunities for private sector investment in development.[78]

2.85 Landcom advised that UrbanGrowth NSW will concentrate on urban renewal activities to a large degree in its initial years, which will involve working with other NSW Government agencies to identify transit oriented development opportunities around new and existing transport infrastructure.[79]

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[76] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, Transcript of evidence, 28 May 2012, p 1

[77] NSW Government, 'New State Body "Urbangrowth NSW" To Drive Growth', Media release, 12 June 2012, http://www.budget.nsw.gov.au/__data/assets/pdf_file/0018/20583/New_State_Body_Urbangrowth_NSW_to_drive_growth.pdf

[78] Landcom, Answer to follow-up question 4, correspondence to the Chair dated 28 June 2012

[79] Landcom, Answer to follow-up question 4, correspondence to the Chair dated 28 June 2012

Chapter Three – Benefits of utilising rail corridors

3.1 In this chapter the Committee examines the benefits of utilising land adjacent to, and air above, rail corridors. In particular, the Committee examines the potential social, economic and environmental benefits of transit oriented development (TOD) of the rail corridor. Transit oriented developments are high-density, mixed-used developments specifically designed and located to maximise access to public transport and are built over, or close to, rail and bus stations.[80]

3.2 In terms of the overall benefits of such development, Transport for NSW submitted that well-designed development of land adjacent to rail corridors in order to integrate transport with land use would create a more liveable and accessible city:

> One of the Government's goals is a greater proportion of travel by public transport, walking and cycling. This means population growth in Sydney needs to be planned for places that encourage these modes of transport, especially for commuter trips. New housing, shops and services should be located to link with the transport system and, consistent with the Government's objectives, with jobs located closer to where people live. This approach benefits people and the economy by creating a liveable city with more accessible jobs and a transport system that moves people and goods efficiently.
>
> Development adjoining or over rail corridors, particularly at stations and interchanges will promote these outcomes if well-designed.[81]

3.3 The NSW Business Chamber also noted the broad range of social and economic benefits that could result from development of rail corridors:

> Having mixed-use development around rail corridors is likely to increase public transport patronage, thereby reducing traffic congestion and also making public transport services more economically viable. Rail corridor development may also serve social and economic benefits. It can help unite neighbourhoods divided by rail corridors, provide needed neighbourhood amenities and uses, and also generally have a revitalizing effect by bringing jobs, businesses and housing to formerly undesirable locations.[82]

ECONOMIC

3.4 Inquiry participants highlighted the economic benefits of utilising rail corridors, including potential savings through reduced traffic congestion and increased use of public transport.

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[80] Queensland Department of Transport and Main Roads, Transit oriented developments, http://www.tmr.qld.gov.au/Business-industry/Transport-sectors/Rail-services-and-infrastructure/Transit-oriented-developments.aspx accessed 11 October 2012

[81] Submission 58, Transport for NSW, pp 5-6

[82] Submission 43, NSW Business Chamber, p 1

Increase use of public transport and reduce traffic congestion

3.5 The Committee heard that people living near transport hubs are more likely to use public transport, thereby increasing patronage, generating income for the government, and reducing traffic congestion. The Department of Planning and Infrastructure noted that development close to train stations minimises the number of trips people make and reduces reliance on cars:

> ... By locating a variety of land uses close to each other, in areas well serviced by public transport, it is more likely that people will be able to undertake a greater number of the things they need to do (such as get to work, go to the shops, visit a doctor, etc) in a single trip. Minimising the number of trips has important implications for reducing congestion of transport systems and lessening reliance on private vehicles.[83]

3.6 Submission makers also linked the use of rail corridors to Government targets for increasing public transport use. Western Sydney Regional Organisation of Councils (WSROC) stated that better utilisation of rail corridor land encourages public transport use and may 'have economic benefits by minimising the economic costs associated with increased private motor vehicle dependence.' In this regard, WSROC cited Bureau of Transport Economics statistics, which estimated an increase in traffic congestion costs for Sydney from $4.6 billion a year in 2009 to $7.8 billion a year by 2020.[84]

3.7 WSROC also referred to the *NSW 2021* Plan's target of increasing the proportion of journeys to work by public transport in the Sydney Metropolitan region to 28% by 2016, commenting that:

> This will not happen only by improving public transport services. The other half of the equation must be urban planning which results in people living near and/or working near public transport services. Urban renewal and consolidation which makes more effective utilisation of land close to rail corridors is critical to achieving this outcome.[85]

3.8 The Rail, Tram and Bus Union also referred to the high cost of traffic congestion in Sydney, and noted other costs linked to road usage, such as road tolls, air and noise pollution, accident costs, and parking costs. The Union argued that 'adopting schemes encouraging transit use would therefore be greatly beneficial to the individual, whilst minimising government cost by a large proportion, channelling excess funds into systems that need them the most.'[86]

3.9 The Sydney Business Chamber noted that 'mixed-use development around rail corridors is likely to increase public transport patronage, thereby reducing traffic congestion and also making public transport services more economically viable.'[87]

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[83] Submission 61, Department of Planning and Infrastructure, p 1
[84] Submission 2, Western Sydney Regional Organisation of Councils, p 4
[85] Submission 2, Western Sydney Regional Organisation of Councils, p 4
[86] Submission 24, Rail, Tram and Bus Union, p 8
[87] Submission 38, Sydney Business Chamber, p 1

3.10 Transport for NSW highlighted the importance of development that focuses on connectivity to stations, and provided the Committee with examples of patronage growth near urban development centres:

> While local issues and some changes to CityRail operating patterns may influence patronage, most stations on the network displaying above average growth between 2006 and 2011 have been adjoining or nearby to urban development initiatives which have supported increased public transport use. For example following redevelopment at Rhodes, patronage grew by 265% from 2006 to 2011, at Wolli Creek by 45%, and Parramatta by 19%.[88]

3.11 Infrastructure Partnerships Australia submitted that joint development projects at train stations, informed by the principles of transit oriented development, would have several benefits, including:

> - *Reduce Congestion*: People who live and work in close proximity to a train station are more likely to use the service, while people who are located further away from train stations are more likely to use a motor vehicle for the entire journey. By enabling a greater number of people to live and work near train stations, the NSW Government can encourage more train over car trips, reducing the level of congestion on NSW's roads.
>
> - *Increased Patronage*: A well occupied precinct that contains a balance of office, retail and residential spaces, in close proximity to a train station, will encourage greater utilisation of the rail service. Improved patronage can make the service more cost-effective – thereby improving the investment proposition of the initial mass transit infrastructure.
>
> - *Improved Amenity:* building a combination of residential and commercial developments in close proximity to train services enables people to live and work near rail transport, reducing the distance people have to travel in order to access goods, services and employment opportunities.[89]

3.12 According to the Tourism and Transport Forum, transit oriented development makes public transport more convenient for residents by ensuring they live within walking distance of regular public transport services: 'It enables commuters to avoid congested roads by transferring to a readily available public transport alternative. Public transport is an integral rather than incidental part of transit oriented suburbs.'[90]

3.13 Holroyd City Council observed that transit oriented development adjacent to railway stations is designed to encourage transit use; actively encourage non-car travel; and maximise access to transit for the surrounding area. The Council expressed the view that the Committee's recommendations should encourage genuine transit oriented development, rather than higher density development and that 'increased patronage can only be achieved if TOD is matched by improvements to services'.[91]

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[88] Submission 58, Transport for NSW, p 4
[89] Submission 51, Infrastructure Partnerships Australia, p 8 (footnotes omitted)
[90] Submission 30, Tourism and Transport Forum, pp 1-2
[91] Submission 35, Holroyd City Council, p 2

3.14 In its submission, Parramatta City Council stated that land adjacent to rail corridors provides opportunities for 'utilisation and intensification of public transport infrastructure, thereby improving the availability of public transport services and encouraging public transport use', while also noting that frequency of services should be considered.[92]

3.15 The City of Ryde argued for an approach to rail corridor development that integrates public transport with strategic planning and urban design to create 'a pedestrian friendly, public transport orientated built environment in the vicinity of public transport nodes'.[93]

3.16 The University of Wollongong's SMART Infrastructure Facility noted several benefits associated with supporting public transport use by concentrating development around railway stations:

- Reduction in car dependence: rail corridor developments with appropriate density and mix, and with transit systems between centres, can substantially reduce community car-dependence and increase the use of public transport systems.
- Wealth creation by reducing costly car based travel: estimates that car travel costs around 85c per passenger kilometre compared to 50-60c per passenger kilometre in public transport.
- Saving commuting time: easy connection with a fast rail-based transport system can save on local and long distance travel time. Rail is faster than bus based transport, and is the only transport mode that can quickly move large volumes of people.
- Saving space: space requirements for cars are 20 times greater than for rail. It has been predicted that if 200,000 people who access central Sydney each day had to get there by car it would mean an extra 65 freeway lanes and 782 hectares of car parks.
- Realising investment opportunity: several US studies on improving access to railway stations provided proven land value premiums and rail corridor utilisation.
- Reducing the costs of car dependence: car dependence is costly in terms of environmental, social and economic externalities. A study suggests an extra 20c savings per passenger kilometre resulting from use of public transport systems such as rail systems, with development built around stations.[94]

3.17 In terms of encouraging use of public transport, several submission makers noted the importance of a quality transport system with good interchange facilities.[95] WSROC submitted that, although 'improved interchange facilities will not be the

[92] Submission 32, Parramatta City Council, p 3
[93] Submission 62, City of Ryde, p 8
[94] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 5 (footnoted omitted)
[95] Submission 25, Willoughby City Council, p 3; Submission 40, SMART Infrastructure Facility, University of Wollongong, p 12; Submission 31, Australian Institute of Architects (NSW Chapter), p 2

decisive factor for all who commute, improvements which make journeys more seamless will encourage greater use of public transport and the rail system in particular'.[96]

3.18 Infrastructure Partnerships Australia emphasised that transit oriented developments must be accompanied by a quality transport system in order to achieve many of the benefits outlined above: 'A number of complex factors, such as the quality of transit services or the capacity of the wider transport network will contribute to the effectiveness of the TOD in helping to ease congestion and increase the utility of transit networks.'[97]

3.19 Penrith Council observed that before rail corridor development is considered, the need for supplementary transport services such as transport interchanges and parking facilities should be considered as a priority.[98]

3.20 Campbelltown City Council stated that in facilitating transit oriented developments around railway stations consideration must be given to park and ride facilities and express bus services linking to local railway stations, and that 'commuter parking stations and kiss and ride facilities over the corridor have the potential to remove pressure off local streets and street entrances to stations. The provision of easy access for commuters should be significantly improved.'[99]

3.21 In this regard, Transport for NSW noted that:

> Over the next 20 years train patronage is expected to grow by around two percent each year, meaning overall patronage could grow by 40 percent by 2031. Over the next ten years the focus will be on extending the reach of the CityRail network, with construction of the South West Rail Link and the North West Rail Link. Alongside these it will be necessary to make the existing network function more effectively and to address capacity constraints as they occur, through initiatives such as the Rail Clearways Program, which is delivering improved capacity and reliability on the network. Patronage on many existing parts of the rail network is increasing as a result of urban development for example, on parts of the North Shore and Illawarra lines. Capacity enhancements will be required and options for network amplification will need to be preserved to cater for this growth.
>
> As well as the rail corridor and rail specific facilities such as stations, stabling yards and maintenance facilities, provision will also need to be made for additional car parking at stations and interchange facilities that provide for ease of transfer between modes.[100]

Provide additional employment opportunities

3.22 Inquiry participants observed that mixed use developments along the rail corridor may create additional employment opportunities near where people live. Willoughby City Council noted that the 'development of new rail corridors that provide public transport connections to urban release areas is an opportunity to

[96] Submission 2, Western Sydney Regional Organisation of Councils, pp 8-9
[97] Submission 51, Infrastructure Partnerships Australia, p 8 (footnotes omitted)
[98] Submission 12, Penrith City Council, p 2
[99] Submission 42, Campbelltown City Council, p 3
[100] Submission 58, Transport for NSW, p 7

create new centres of employment, housing and commerce in conjunction with railway stations.'[101]

3.23 Parramatta City Council observed that developments situated close to the rail corridor provide commercial opportunities for businesses:

> The viability of the commercial component of mixed use developments is enhanced if such developments are located within close proximity to transport, such as railway stations. Rail corridors provide the transport infrastructure and services necessary to allow for suitable access to commercial premises, thereby enhancing the ability for businesses to attract customers and being structured economically.[102]

3.24 WSROC submitted that, although utilisation of rail corridor land was not a central part of employment generating policies, it could nonetheless contribute by providing employment opportunities closer to housing and public transport:

> Providing a range of employment options across the Sydney region and as close as possible to where people live, is a key to reducing social disadvantage and reducing travel time and costs. Because of the benefits of the increased use of public transport and reduced reliance on private motor vehicles, the Metropolitan Strategy Review aims "... to ensure most new housing and jobs are located near public transport."
>
> The strategic use of land adjacent to rail corridors can be part of this formula. Clearly it is not suitable for manufacturing, warehousing or logistics, but is suitable for other employment types such as retail, business financial and professional services, government services, and community services.[103]

3.25 WSROC in particular noted the potential for attracting business and professional jobs to Western Sydney, thereby improving employment opportunities for local residents:

> ... business and professional jobs are the ones which need to be attracted to suburban centres in Western Sydney to provide a better range of employment opportunities for its residents. They are also the jobs which can be more easily accommodated as part of a strategic program of urban renewal and targeted economic development, including better utilisation of land adjacent to rail corridors.[104]

3.26 Using rail corridor land for development that could house relocated government departments was also identified as an employment opportunity. WSROC noted that government offices in Western Sydney adjacent to railway stations are important sources of employment:

> ... The relocation of selected government agencies and departments from Sydney's CBD to strategic locations close to rail lines in outer suburbs can be a significant generator of jobs in regions such as Western Sydney. For example, significant government offices adjacent to Parramatta station, and smaller examples in other

[101] Submission 25, Willoughby City Council, pp 5-6
[102] Submission 32, Parramatta City Council, p 3
[103] Submission 2, Western Sydney Regional Organisation of Councils, pp 8-9
[104] Submission 2, Western Sydney Regional Organisation of Councils, pp 8-9

> locations such as Blacktown, Liverpool and Penrith are vital providers of local employment. As well as providing much-needed local jobs they reduce travel time for a large number of commuters, potentially increase public transport usage and reduce congestion on the roads. Further, they provide a magnet to attract associated private sector support activities and the employment opportunities they generate.[105]

3.27 Parramatta City Council submitted that rail corridors 'provide local and regional links to employment areas and are considered critical for economic development'. The Council further commented on the importance of focussing employment growth in established centres that are close to transport systems, and the opportunities that rail corridors represent, particularly for the Parramatta CBD:

> - The Parramatta CBD contains the 4th busiest railway station on the CityRail network. In a hub like Parramatta it will be important to provide for future growth and integration of multiple modes including pedestrian traffic, heavy rail, buses, light rail and the East Coast Fast Rail. For a city, the rail corridor provides a clear sense of entry and arrival.
>
> - The rail corridor provides public transport access to jobs at Westmead, a world class bio-medical and biotechnology cluster. Facilities at Westmead are set to expand, and Council in the future will rezone lands in the centre to encourage the intensification of commercial and residential development. ...
>
> ... Development and redevelopment of industrial lands for employment must look to best adapt existing rail infrastructure so as to maximise the future transport and land use opportunities that would come with increased jobs density.[106]

Generate funding for infrastructure projects

3.28 Some submission makers noted that developments alongside and in the air space above rail corridor could be a source of revenue, which could be used to fund transport infrastructure. Rockdale City Council stated that 'additional funding gained from development over rail air space could provide funding for the provision of sustainable transport facilities.'[107]

3.29 The Rail, Tram and Bus Union noted that transit oriented development provides financial benefits to transit infrastructure. The Union observed that rail development has historically received less funding than road development, with the introduction of road tolls and privatisation of road infrastructure generating income that funded road construction. The Union submitted that transit oriented development of the rail corridor could provide funds for improvements to rail infrastructure:

> The benefit of TODs is that in selling the airspace above and adjacent to, railway stations, the revenue earned can be channelled directly back into financing and improving rail infrastructure. An example of this was Subi Centre in Perth, Western

[105] Submission 2, Western Sydney Regional Organisation of Councils, pp 8-9
[106] Submission 32, Parramatta City Council, p 2
[107] Submission 46, Rockdale City Council, p 4

> Australia, in which the construction of a TOD not only increased fare box revenue, but was also able to gain enough momentum that it now earns the Western Australian Government, and local council, a healthy revenue.[108]

3.30 The NSW Business Chamber echoed this view:

> The additional revenue streams from this type of development could offer greater value-for-money for an infrastructure project, which may make the difference between a rail infrastructure project being built, and it not being built at all. It could also encourage governments, the private sector and the community to deem an infrastructure project viable, and act as a mechanism for funding the infrastructure investment itself.[109]

3.31 In its submission to the inquiry, Transport for NSW stated that a challenge associated with developing and implementing the Long Term Transport Master Plan is identifying additional sources of funding for transport infrastructure. Transport for NSW noted that transit oriented development along or above the rail corridor could support an increase in rail network patronage and 'unlock under-utilised real estate value'. Value capture mechanisms would enable the government to capture some of the financial benefits of the development. Although this revenue would be small in terms of the high cost of infrastructure, the increased revenues captured from these arrangements can assist with funding further infrastructure investment.[110] The Committee examines value capture mechanisms in detail in chapter 5.

SOCIAL

3.32 Inquiry participants pointed to the potential social benefits of transit oriented rail corridor development, including that it could build social cohesion and connectedness, provide additional community facilities, and improve public health by reducing dependence on cars.

3.33 The Sydney Business Chamber outlined the wide-ranging social benefits that could flow from rail corridor development:

> Rail corridor development may also serve social and economic benefits. It can help unite neighbourhoods divided by rail corridors, provide needed neighbourhood amenities and uses, and also generally have a revitalizing effect bringing jobs, businesses and housing to formerly undesirable locations. This kind of development in Sydney could also address the issue of Sydney's housing affordability by providing residential development in infill areas.[111]

Provide additional community facilities

3.34 Submission makers noted that rail corridor developments could include community facilities such as child care centres, open spaces, or commuter car parking. WSROC commented on the potential community benefits, in particular for socially disadvantaged communities:

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[108] Submission 24, Rail, Tram and Bus Union, p 9
[109] Submission 43, NSW Business Chamber, p 1
[110] Submission 58, Transport for NSW, p 6
[111] Submission 38, Sydney Business Chamber, pp 1-2

> Urban consolidation and renewal close to public transport can reduce the effects of geographical and social isolation associated with urban sprawl. Access to a range of community services such as community health, early intervention services, primary health care, education and community centres is more difficult in low density outer metropolitan areas such as western Sydney where such services are less available than in eastern and inner Sydney suburbs. Mixed use medium and high density housing, particularly close to town centres, shopping services and transport, can increase access to such services. This is particularly important for socio-economic groups who are already disadvantaged such as the elderly, people with a disability and those who cannot afford private transport.[112]

3.35 Parsons Brinckerhoff Australia observed that transit oriented developments in other jurisdictions have successfully incorporated affordable housing and childcare facilities, and that permitting higher density development is a way of ensuring that developers can recover any additional costs they incur: 'Additional density is attractive to developers and can provide an offset to the provision of low cost housing. It is also important to remember that community facilities and open space in TODs enhance the value of the overall development.'[113]

3.36 Lane Cove Council's submission discussed the planned St Leonards bus/rail interchange development, and outlined the community facilities that may form part of the development:

> ... Lane Cove envisages that the interchange would provide superior public access and amenity to the area. It is intended that the design and development stage explore innovative options and partnerships suited to a transport /health hub including:
>
> - occasional day care facilities for health clients (in partnership with Department of Health and Council)
> - special access from public transport exits to assist health clients (in collaboration with multiple Transport agencies);
> - long day child care facilities
> - consideration of temporary accommodation options for health clients (provided through a Voluntary Planning Agreement with developers); and
> - consideration of an active open space to provide a community focus.[114]

Build social cohesion and connectedness

3.37 The Committee heard that transit oriented rail corridor development could create a more socially cohesive community for residents. The Rail, Tram and Bus Union referred to the ability of transit oriented developments 'to create a community culture and the health benefits salient to those types of communities', citing a study which concluded that such developments enable greater social interaction between residents, and a survey to which most

[112] Submission 2, Western Sydney Regional Organisation of Councils, pp 1-2

[113] Parsons Brinckerhoff Australia, Answers to follow-up questions, correspondence to the Chair dated 29 June 2012, p 2

[114] Submission 36, Lane Cove Council, p 7

respondents indicated that they 'created more "vibrancy and community life" due to greater accessibility'.[115]

3.38 The City of Ryde expressed the view that creating a pedestrian friendly built environment close to public transport would 'enhance social and economic performance in these areas as a consequence e.g. increased street activation, vibrancy, social cohesion and pedestrian safety'.[116]

3.39 WSROC submitted that development which incorporates medium and higher density housing 'can reduce levels of isolation and build community connectedness by providing more opportunities for incidental contact and interaction', noting that:

> An extensive literature review by UNSW found that: "Research suggests that sprawling suburbs... undermine social capital. This is generally attributed to the increased distances between uses, overt reliance on private car travel and typically closed residential form... these factors reduce opportunities for interaction and result in feelings of disconnectedness and isolation".[117]

3.40 WSROC also referred to the *Metropolitan Strategy Review - Sydney Towards 2036*, which states that well designed and planned mixed use development 'has the potential to generate an interesting, vibrant atmosphere that brings people closer, increases social capital and social cohesion, addresses environmental issues and fosters economic development.' WSROC argued that:

> Carefully planned use of land adjacent to rail corridors as part of an urban renewal program can help achieve this outcome. Importantly, it needs to include an integrated component of public housing, in order to help address issues of social disadvantage.[118]

3.41 Penrith City Council stated that the rail corridor could be utilised to improve connectivity, noting that a master plan it had commissioned for part of the Penrith CBD 'addressed the significant barrier of the railway line which fragments the social, economic and physical connection between North Penrith and the Penrith City Centre' and that:

> The connection and integration of these urban spaces should be of high quality. Campement Urbain provides an inspired idea of utilising the rail corridor to provide better amenity for Jane Street which could attract activity, build community and enhance public transport patronage.[119]

3.42 This view was echoed by Walking Volunteers who noted that, as railways can act as barriers to pedestrian and cyclist movements and divide communities, the land adjacent to the rail corridor and overpasses 'can provide opportunities to break

[115] Submission 24, Rail, Tram and Bus Union, p 9
[116] Submission 62, City of Ryde, p 8
[117] Submission 2, Western Sydney Regional Organisation of Councils, pp 4-5
[118] Submission 2, Western Sydney Regional Organisation of Councils, pp 4-5
[119] Submission 12, Penrith City Council, p 2

through these barriers, unite communities and provide sustainable transport and healthy recreational facilities'.[120]

3.43 The Tourism and Transport Forum submitted that the Committee should consider ways in which air space above rail corridors can be used to 'improve connectivity between communities on either side of the corridors. In many instances, development and economic growth opportunities have been forgone due to the presence of a physical barrier between one part of a city and another'.[121]

Improve public health

3.44 Inquiry participants pointed to the potential health benefits of transit oriented development of the rail corridor. The Rail, Tram and Bus Union noted that studies have indicated 'a high correlation between lower body mass indices and reduced risk of problems related to obesity, and residents of transit oriented communities', as residents of car dependent communities are more likely to become overweight and have a higher risk of suffering associated health problems.[122]

3.45 WSROC argued that 'utilisation of land adjacent to rail corridors needs to focus on increasing residential densities with mixed use development and urban design which encourages physical activity. It may well need to incorporate renewal of commercial and service facilities with residential renewal'. In support of this point WSROC noted that:

- Well-planned urban renewal with increased housing density and mixture of development can improve public health by affecting the "walkability" of suburbs, and impacting on exercise levels:

  "The intuitive notion that higher density may encourage physical activity is now being substituted in the research by the concept that density, mixed use and micro-design elements in some combination are most likely to influence levels of physical activity."

- The National Heart Foundation recommends that food stores, shops and local facilities should be located within close walking distance (between 400 to 800 metres) of houses and businesses.[123]

3.46 WSROC stated that for these reasons, the utilisation of land adjacent to rail corridors should 'focus on increasing residential densities with mixed use development and urban design which encourages physical activity. It may well need to incorporate renewal of commercial and service facilities with residential renewal.'[124]

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[120] Submission 14, Walking Volunteers, p 1
[121] Submission 30, Tourism and Transport Forum, pp 2-3
[122] Submission 24, Rail, Tram and Bus Union, p 9
[123] Submission 2, Western Sydney Regional Organisation of Councils, p 6
[124] Submission 2, Western Sydney Regional Organisation of Councils, p 6

3.47 The Planning Institute of Australia recommended that measures that support active transport be included in strategic planning for rail corridors, consistent with the principles of transit oriented development:

> The links that rail corridors provide between centres make them attractive for active transport (pedestrians and cyclists). Their direct links to employment, schools and services support the principles of TOD which relies strongly on supporting active transport use to minimise car use and dependency, improved health, community interaction and cohesion.[125]

3.48 Sutherland Shire Council recommended that active transport uses be permitted within rail corridors, where they do not affect operational safety:

> Rail corridors present major opportunities for active transport (cycling and walking), due to their width, strong direct links to key centres, employment, schools and services as well as gentle grades / topography. These characteristics make them fundamental to creating a more compact city built around the principles of Transit Orientated Development. Active transport can complement the rich mix of land use development enabling many short trips to be undertaken without the need for a motor car, significantly reducing traffic congestion and car dependency, as well as greatly improving public health, community cohesion and interaction.[126]

Encourage bicycle ways and pedestrian use

3.49 Inquiry participants referred to the benefits of encouraging active transport by pedestrians and bike riders along the rail corridor. The majority of submission makers supported the use of rail corridors for bike ways and improved pedestrian access. The National Trust of Australia supported using the rail corridors for bicycle ways, where possible:

> These corridors could be turned into cycling paths, removing cyclists from interactions with road traffic, without sacrificing road space used by vehicular traffic. Areas would need to be graded and gravel or bitumen surfaces lain. Safety fencing between the cyclist and the rail infrastructure would also be needed, along with some bridges or local diversions at road and waterway crossings. The more of these facilities that are developed the less pressure there will be for car parking and car parking stations and the more efficiently the rail corridors can be utilised. ....[127]

3.50 Parramatta City Council submitted that bicycle routes along the rail corridor could be a cost-effective means of expanding Sydney's cycling network, while also noting that routes should be separated from passenger activity to prevent conflicts between cyclists and rail users.[128] Bike North Inc recommended that 'the use of railway easements for walking and cycling facilities should be actively encouraged wherever there is sufficient room to enable safe use without impinging on railway use.'[129]

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[125] Submission 56, Planning Institute of Australia NSW Division, p 5
[126] Submission 33, Sutherland Shire Council, pp 6-7
[127] Submission 19, National Trust of Australia, p 3
[128] Submission 32, Parramatta City Council, p 3
[129] Submission 54, Bike North Inc, p 5

3.51 Sutherland Shire Council reflected that a shared pedestrian/cycle way would be beneficial in car dependent areas such as the Sutherland Shire:

> The benefits and opportunities to the community of incorporating a shared cycleway along the rail corridor for active transport was confirmed in a report prepared for the RTA and Sutherland Shire Council by GTA in 2010. It showed that various sections of the rail corridor situated outside of the rail operational safety zone are suitable to accommodate active transport uses.[130]

3.52 Lake Macquarie City Council also expressed the view that consideration should be given to utilising rail corridors for cycleways, noting that 'the relatively flat gradient of rail corridors provides ideal cycling conditions.'[131] The City of Newcastle also supported cycleways along rail corridors.[132] The Central and North Miranda Precinct Residents' Association submitted that 'provision should be made within rail corridors where possible and on land adjacent to rail corridors for continuous off road shared cycleways/pedestrian paths'.[133] Go Alliance submitted in favour of facilitating the 'development of rail infrastructure that better integrates with other modes of transport and in particular adequate footpaths and cycle paths and facilities.'[134]

3.53 Holroyd City Council noted that parts of the rail network can act as a barrier between communities and argued for measures to encourage connectivity across rail corridors and links for pedestrians and cyclists:

> The inquiry should address whether greater funding should be directed to providing more connections across rail corridors for pedestrians and cyclists. Where mixed use development is proposed, a mandatory requirement of approval should be the provision of improved pedestrian and cycle links across the rail corridor.
>
> The inquiry should also examine potential for cycle and pedestrian links along rail corridors. In various locations around the metropolitan rail, space exists within the rail corridor for parallel cycle - pedestrian paths, which in many cases will be suitable for dual use for access for track maintenance.[135]

3.54 The Newcastle Cycleways Movement also supported cycleways: 'Now that there is greater pressure on land space it is logical to squeeze extra functions onto the existing rail corridor, especially new cycleways that provide a community transport objective fully compatible with the original objectives of the rail corridor.'[136]

Meet housing targets

3.55 Inquiry participants noted that developments along the rail corridor would provide an opportunity to meet targets for new housing. WSROC referred to forecast population growth and the role of rail corridor development in meeting

[130] Submission 33, Sutherland Shire Council, p 6
[131] Submission 47, Lake Macquarie City Council, p 8
[132] Submission 55, City of Newcastle, p 3
[133] Submission 15, Central and North Miranda Precinct Residents' Association, pp 2-3
[134] Submission 37, Go! Alliance, p 2
[135] Submission 35, Holroyd City Council, p 3
[136] Submission 16, Newcastle Cycleways Movement, pp 1, 4

the aim of the Metropolitan Strategy Review to locate new housing close to transport:

> The Metropolitan Strategy Review targets 70% of Sydney's additional housing in existing areas and 30% in greenfield sites with 80% of new housing within walking catchment of existing or new centres. These figures have profound implications for the location of development and the features of urban design.
>
> ... WSROC supports the 2036 Metropolitan Plan for Sydney's objective of locating at least 70% of new housing in existing urban areas. As this will require considerable consolidation and increased housing density over existing levels, WSROC's view is that much of that consolidation should be adjacent to rail corridors. Specifically, WSROC supports The Metropolitan Plan's aim to locate 80% of all new housing within the walking catchment of existing and planned centres with good public transport links.[137]

3.56 Parramatta City Council also commented on the need to meet housing growth targets, stating that: 'Lands adjacent to rail corridors, particularly to railway stations, provide excellent opportunities for development to meet the intentions of the RDS [Residential Development Strategy] as well as the NSW Government's Metropolitan Plan for Sydney 2036.[138]

3.57 The Council also noted the potential social benefits of providing affordable housing close to transport, by locating it close to the rail corridor:

> Affordable housing often forms a component of mixed use developments. Locating affordable housing close to transport provides for a good social outcome, as the transport systems available in the corridors provide for the requirements of residents. Locating affordable housing close to transport systems such as those in rail corridors should therefore be a priority for land use planning.[139]

3.58 In this regard, the Planning Institute of Australia noted that the introduction of a state legislated ratio of affordable housing for new development could address the possible displacement of lower socio economic groups from centres that are undergoing urban renewal.[140]

Architectural and heritage benefits

3.59 The Committee heard that utilising the rail corridor could have benefits in terms of preserving heritage buildings. The National Trust noted that redeveloping rail corridor land may reduce pressure on heritage sites along rail corridors:

> The use of rail corridor land for development has the potential to reduce the development pressures on land adjoining railway stations which may have a significant stock of heritage-listed commercial buildings dating from the period of railway introduction. However, in such situations there could be problems of over-shadowing from multi-storey development. Both the Kogarah and Hurstville railway

[137] Submission 2, Western Sydney Regional Organisation of Councils, pp 1-2
[138] Submission 32, Parramatta City Council, p 3
[139] Submission 32, Parramatta City Council, p 3
[140] Submission 56, Planning Institute of Australia NSW Division, p 3

> corridor developments are of a scale that does not overwhelm nor overshadow the adjoining townscapes of Edwardian and Interwar period two-storey shops. ...[141]

3.60 The potential architectural benefits of developments along rail corridors were also identified, with the National Trust noting that 'In its ultimate expression, major, new internationally significant architecture could be sited on rail corridors and recognized as the heritage of tomorrow.'[142]

ENVIRONMENTAL

3.61 Inquiry participants highlighted the environmental benefits of rail corridor development, in particular reducing greenhouse gas emissions, encouraging sustainable development and reducing urban sprawl.

Reduce greenhouse gas emissions from reduced car usage

3.62 The Committee heard that people who live in transit oriented developments are more likely to use public transport and are less reliant on cars, which decreases greenhouse gas emissions.

3.63 WSROC submitted that residential developments which reduce reliance on cars are likely to reduce greenhouse gas emissions. They noted that residents of medium and high density developments close to railway stations are more likely to use the rail system, with a range of benefits including:

> ... increased utilisation and economies for the rail system, reduced traffic congestion and its associated social and economic costs, reduced energy consumption and greenhouse gas emissions, a more sustainable transport system and improved activity and health levels as more residents walk or cycle to access rail services.[143]

3.64 In terms of car usage, WSROC referred to the Australian Government's projection of increases in car traffic levels in Sydney of 33% by 2020, compared with levels in 2002, and the 2005 NSW Greenhouse Plan, which indicated that the total number of cars in Australia had grown three times faster than population growth during the last 30 years.[144]

3.65 WSROC noted that 'motor cars are a major contributor to air pollution, affecting both greenhouse gas levels and air quality through nitrogen oxides (over 70% from motor vehicle emissions) carbon monoxide and dioxide, ozone, photochemical smog and particulates'.[145]

3.66 The Rail, Tram and Bus Union cited studies of transit oriented development:

- Public transport use – a study of Californian residents who lived close to a transit oriented development showed they were five times more likely to use

[141] Submission 19, National Trust of Australia, p 3

[142] Submission 19, National Trust of Australia, p 3

[143] Submission 2, Western Sydney Regional Organisation of Councils, pp 3, 7

[144] Submission 2, Western Sydney Regional Organisation of Councils, pp 3-4. WSROC noted that there were uneven patterns of increased usage: the total annual average vehicle kilometres travelled for Sydney grew by an average of 2.3% a year over the past two decades, however the increase for south-west and outer west of Sydney was 23%, with a 10% decrease in inner and eastern Sydney.

[145] Submission 2, Western Sydney Regional Organisation of Councils, pp 3-4

public transport than those who did not. Another study of over 100 transit oriented developments across twelve regions of America concluded that residents were 2.5 times more likely to use public transport compared with average citizens of their region.

- Car ownership - residents of transit oriented developments are far less likely to own a private vehicle: the Centre for Transit-Oriented Development found that residents located within walking distance of a railway station owned 0.9 cars per household, compared with 1.6 cars per household in non transit oriented development centres.[146]

3.67 The Union noted that transport emissions account for 14% of Australia's total emissions, 54% of which come from private vehicles, compared with 6% and 5% for rail and sea transport. The impact of this will grow given that demand for private transport is projected to increase. According to the Union 'this demonstrates how cars alone release more than 40 times more CO2 into the air than rail per each kilometre travelled by a patron.'[147]

Encourage sustainable development and reduce urban sprawl

3.68 Inquiry participants highlighted the role that utilisation of rail corridors could play in reducing urban sprawl, by facilitating higher density development close to transport. The Department of Planning and Infrastructure stated that the 'concentration of activity in centres well served by public transport is also integral to containing the expansion of urban areas – and instead achieving greater density in existing urban areas.'[148]

3.69 WSROC submitted that developments that contain urban sprawl would have several environmental benefits, and that development occurring adjacent to the rail corridor would provide an opportunity for slowing urban sprawl:

> ... residential developments which reduce the rate of urban sprawl will reduce the rate of land clearing, the removal of carbon sinks and threats to biodiversity through the removal of remnant Cumberland Plain woodland, listed as an endangered ecological community under the 1995 NSW Threatened Species Conservation Act. ...
>
> Clearly urban consolidation is no panacea for these issues but planned consolidation and renewal which slows the rate of urban sprawl is critical to addressing environmental degradation related to development. And as stated above, strategic utilisation of land adjacent to rail corridors provides significant potential for supporting urban renewal.[149]

3.70 WSROC also noted that urban sprawl in recent decades has resulted in a decline in agricultural land in the Sydney basin, citing an estimate that the area under agriculture in the Sydney basin decreased from around 100,000 hectares in 1994 to 82,000 hectares in 2007. WSROC pointed to the importance of urban consolidation in protecting productive agricultural land from urban sprawl,

[146] Submission 24, Rail, Tram and Bus Union, pp 7-8
[147] Submission 24, Rail, Tram and Bus Union, pp 7-8
[148] Submission 61, Department of Planning and Infrastructure, p 2
[149] Submission 2, Western Sydney Regional Organisation of Councils, pp 7-8

consistent with the NSW Metropolitan Strategy Review, which stated that 'viable agricultural lands are facing continual pressures from alternative land uses and have a role in contributing to a sustainable future for Sydney.'[150]

3.71 Sutherland Shire Council pointed to international examples of development of rail corridors reducing sprawl and congestion, with transit oriented development having been used 'as a major strategic land use/transport planning platform in the United States and parts of Europe over the past 20 to 30 years to better manage urban growth and congestion.'[151]

3.72 The Committee notes that Willoughby City Council emphasised the importance of assessing environmental factors and meeting environmental standards, including the impact of proposed rail corridor development on local wildlife habitats and native vegetation:

> ... the matters to be considered in the Inquiry should also include how the rail corridors can and should continue to contribute to the protection and maintenance of existing habitats and habitat linkages within and adjoining the corridors. More specifically ... assessment of the impact of development within rail corridors on the environmental values of habitats and habitat linkages as well as identifying measures to mitigate impacts and better manage areas of significant habitat value.[152]

3.73 Lake Macquarie Council also referred to opportunities for biodiversity links across railway lines, noting that rural or semi-rural rail corridors in the Lake Macquarie area could be used to improve the connectivity and health of local biodiversity.[153]

BEST PRACTICE IN OTHER JURISDICTIONS

3.74 The Committee heard evidence of best practice transit oriented development schemes in other jurisdictions, which illustrate many of the social, economic and environmental benefits that the Committee has examined. The SMART Infrastructure Facility at the University of Wollongong drew the Committee's attention to development in the city of Stockholm:

> The policy of creating highly dense centres and developments around rail stations radiating out from the city in Stockholm provides an excellent example for integrated transport and land use activity. The main characteristics of these centres as illustrated by Newman and Kenworthy are: employment close to residential dwellings; personal services that are easily accessible; shops close to residential areas; residential density higher near stations then radiating out: all multi-occupancy units, etc, within 500 metres of a rail station; all family dwellings within 300 metres of a bus stop; a bus-rail interchange in all centres; and a good network of pedestrian and cycle ways within and between centres.
>
> During 1980's, public transit based trips rose from 302 to 348 per person. This growth of public transit as preferred modal choice is attributed to developments

[150] Submission 2, Western Sydney Regional Organisation of Councils, p 6
[151] Submission 33, Sutherland Shire Council, p 3
[152] Submission 25, Willoughby City Council, p 6
[153] Submission 47, Lake Macquarie City Council, p 11

around transit stations that promote higher density and pedestrian movement. This has achieved one of the highest transit levels in the world.[154]

COMMITTEE COMMENT

3.75 The Committee received evidence regarding a range of possible benefits arising from utilisation of rail corridors. Inquiry participants expressed the view that development occurring at appropriate rail corridor sites could generate income for funding future infrastructure projects, facilitate sustainable urban renewal and development, improve the connectivity of communities and provide opportunities for mixed use property development. The Committee considers that utilising the rail corridor for transit oriented development in particular would achieve these aims by ensuring that development integrates transport with housing, and community facilities.

FINDING 1

The Committee finds that transit oriented development of appropriate sites along and above the rail corridor could benefit the community by generating income for funding future infrastructure projects, facilitating sustainable urban renewal and development, encouraging the use of public transport and reducing car usage and improving the connectivity of local communities.

3.76 The Committee examines ways to facilitate utilisation of the rail corridor, and transit oriented developments in particular, in chapter 5.

[154] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 11 (footnotes omitted)

Chapter Four – Barriers for rail corridor projects

4.1 In this chapter the Committee examines the barriers associated with development adjacent to or above the rail corridor.

CONSULTATION WITH RAILCORP

4.2 Building in or adjacent to the rail corridor can be challenging. Not only is it a dangerous environment requiring compliance with legislation which imposes particular standards on any building project, but for RailCorp, whose concurrence is required for a development within 25 metres of the rail corridor, the primary concern is providing safe and efficient passenger and freight services and ensuring that the rail corridor has the capacity to expand to meet future increased demand and any changes in operating systems and rail infrastructure.

4.3 A number of Councils told the Committee, in submissions and evidence, about their frustrations in dealing with RailCorp, for example Lake Macquarie City Council:

> The opportunity for mixed use development in the rail corridor and adjoining lands in Glendale would assist in achieving Council's long-term vision for sustainable communities. Unfortunately, despite the Master Plan, Council has found it difficult to progress discussions and achieve agreed outcomes with Railcorp to implement the Master Plan.[155]

4.4 Campbelltown City Council also expressed the view that better planning and consultation are required for rail corridor projects:

> The use of adjacent land to the advantage of RailCorp with little regard for the other uses is not acceptable; especially given the likely financial burden on infrastructure transferred to Council by RailCorp, i.e. safety barriers, gardens, sub stations. ...
>
> Financial benefits could probably be gained by reviewing the complicated process adopted by RailCorp in assessing and endorsing projects requiring access over rail corridors. The planning of the rail corridor should be undertaken in close association with planning for the road network and with consultation with local Councils. There appears to be limited consultation between the relevant stakeholders which is of concern to Council given the pressure for significant population increases in South West Sydney. There would appear to be no strategic plan for what future infrastructure will be provided.[156]

4.5 The Council was also concerned that RailCorp did not sufficiently consider the impact of their activities on the community. An example was the placement of a substation for the South West Rail Link in a road reservation at Glenfield. Council foresaw that increased traffic flows once the Glenfield bus/rail interchange

[155] Submission 47, Lake Macquarie City Council, p 7
[156] Submission 42, Campbelltown City Council, p 4

becomes fully operational will mean the road will have to be widened, at additional cost, to accommodate the substation.[157]

4.6 Bankstown City Council was also critical of RailCorp's engagement with the community. The Council sought RailCorp's participation in its planning for the renewal of Bankstown CBD, including the public domain around Bankstown Station. The Council told the Committee that 'while many of the other State agencies actively participated in the improvement to the centre, unfortunately it did not extend to the station and Railcorp lands ...'[158]

4.7 The Council considered that the Bankstown renewal project, comprising a bus interchange, improved connectivity across the rail corridor and upgrades to the public domain, had been the optimum opportunity for RailCorp to upgrade Bankstown Station and to give consideration to how airspace and rail corridor lands could contribute to the local government area dwelling and job targets, but RailCorp had not made Bankstown Station a priority. The Council reported that, more recently, it had received little feedback about RailCorp's consultation with the local community about the future of the station, despite the Council's requests for information.[159]

4.8 The Council had a similar experience at Yagoona:

> ...Council approached RailCorp with a view of better utilising the airspace and connections to the adjoining public and RailCorp owned land. Council developed several schemes which would have benefited the provision of rail services, improved commercial and development opportunity and access to the station. Unfortunately, the identification of priorities by RailCorp did not match... While Council has delivered on significant improvements to the [Yagoona Town] Centre, this was another lost opportunity to more holistically plan and implement an integrated list of works and development for the area.[160]

4.9 Transit oriented developments have been built at St Leonards and Chatswood, in the Willoughby City Council local government area. Willoughby City Council submitted that RailCorp should be more willing to work collaboratively with stakeholders on developments in the rail corridor. It has been the Council's experience that '...dialogue with State Rail is more a case of meeting its demands rather than an interaction to resolve issues.'[161]

4.10 The Council told the Committee that when RailCorp sold land at St Leonards RailCorp did not make it a requirement of future development on the land that traffic congestion issues from the increased development density be adequately addressed. As well, there had been delays in getting responses to operational issues which arose during the approval and construction of the projects, caused by an over-reliance on legal advice and a reluctance to make decisions:

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[157] Mr Paul Tosi, General Manager, Campbelltown City Council, Transcript of evidence, 28 May 2012, p 46
[158] Submission 48, Bankstown City Council, p 3
[159] Submission 48, Bankstown City Council, p 3
[160] Submission 48, Bankstown City Council, p 4
[161] Willoughby City Council, Answer to follow-up question 1, correspondence to the Chair dated 18 May 2012

> This resulted in matters not being resolved or being deferred for multiple meetings or until somebody else accepted responsibility or end[ed] in conditions on the future development that are unpalatable, [and] impact viability and future management of the development.[162]

4.11 In response, Transport for NSW advised the Committee that the complexity of transport development means that legal professionals must be involved in the negotiation process to ensure the State's rights and responsibilities are identified and observed:

> The scale and complexity of transport development, and the interaction of multiple parties, necessitates the use of appropriate legal professionals to ensure the rights and responsibilities of the State are known, understood and acted upon.
>
> TfNSW considers legal representation is necessary in the creation and amendment of legal documentation, particularly as negotiations progress for the finalisation of consents and during the execution of the construction phase.[163]

4.12 The Committee heard that delays can arise from a lack of awareness by applicants of the information required by RailCorp in considering applications for development impacting on the rail corridor. The Committee also heard that recent changes have reduced delays.

4.13 RailCorp was asked by the Committee at a public hearing on 26 March 2012 whether it had been characterised unfairly as being a reluctant passenger in the development process. RailCorp's Chief Executive, Mr Robert Mason, told the Committee that, since the introduction of the *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP), RailCorp has granted concurrence on all of the 173 applications it had received, with an average turnaround time of twenty-two days. He explained that delays were often caused by applicants not adequately addressing the matters which RailCorp must consider in granting concurrence.[164]

4.14 The Committee heard that, prior to the introduction of the ISEPP, some developments occurred without RailCorp being advised, which meant that construction controls to mitigate impact on the corridor were not in place, and there was no requirement to meet derailment protection, noise and vibration, and electrolysis standards. The introduction of the ISEPP meant that:

- RailCorp is a concurrence authority for major developments involving excavation in, above or adjacent to rail corridors, and can advise councils of requirements to protect rail infrastructure and train services, and ensure that councils impose requested consent conditions. RailCorp has not withheld concurrence for any development referred to it under these provisions.
- Councils must advise RailCorp of other developments adjacent to the rail corridor and take its comments into consideration when determining the application.

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[162] Submission 25, Willoughby City Council, p 2

[163] Transport for NSW, Answer to follow-up question 7, correspondence to the Chair dated 22 May 2012

[164] Mr Robert Mason, Chief Executive, RailCorp, Transcript of evidence, 26 March 2012, p 14

- The Director-General of Planning released the *Development Near Rail Corridors and Busy Roads – Interim Guideline* to assist with planning, designing and assessing development in, or adjacent to rail corridors. For RailCorp to grant concurrence, developments above or adjoining the rail corridor must comply with this Guideline, and RailCorp Engineering Standards and Australian Standards.[165]

4.15 Mr Mason told the Committee that RailCorp's aim is to ensure that rail operations are not adversely affected by development:

> RailCorp's objective in requiring developers to comply with its engineering standards is to minimise the impact of development activities on the integrity, the safety and the current and future operations of the railway to protect our service to our 1 million customers a day and to our freight customers as well.[166]

4.16 In evidence to the Committee, the Director General of Transport for NSW said that RailCorp's ability to resolve development related issues is limited, as its primary role is to operate the rail network:

> [RailCorp] cannot solve all of the problems. They can just deal with the transport issues at a particular time. They cannot solve all the planning issues. They cannot solve all of the construction coordination. They are set up to run a railway network, not build developments. They have not been resourced adequately to do it.[167]

4.17 Landcom worked with RailCorp to develop its projects at Green Square and Penrith and commented that:

> Generally, Landcom does experience some challenges in reconciling overall land use and development planning objectives with the RailCorp process. Understandably, RailCorp is largely concerned with its station operations and considerations such as the broader role of the station within an urban environment are secondary concerns. Recent organisational changes placing greater transport planning responsibility under Transport for New South Wales (TNSW) may help address this issue, as TNSW has a greater focus on integrating transport and land use outcomes.
>
> Landcom and other developers typically require a high level of certainty in the planning process, given that the requirements of dealing with rail corridors can have significant impacts on the project feasibility. Unfortunately the technical nature of dealing with a rail interface can mean that early or 'in principle' agreements are of little benefit and these agreements can quickly be overtaken by detailed engineering and operational considerations as planning and design progress.[168]

COSTLY AND COMPLEX CONSTRUCTION

4.18 Potential sites for air space development on the rail corridor have been considered by RailCorp and its predecessors since the 1960s, but only a small

[165] Submission 58, Transport for NSW, pp 13-14
[166] Mr Robert Mason, Chief Executive, RailCorp, Transcript of evidence, 26 March 2012, p 12
[167] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, p 8
[168] Landcom, Answer to follow-up question 3, correspondence to the Chair dated 28 July 2012

number of these sites have been developed. This reflects the difficulty and cost of building over an operating railway.[169]

4.19 The Department of Planning and Infrastructure stated that developments near rail corridors occur in a more challenging environment than those in other locations. The Department noted that such developments involve complex construction practices and techniques, which are necessary to ensure the development's structural integrity and that there is no adverse impact on the operation of the railway corridor in both the long and short term. The Department also observed that the rail corridor is 'a potentially more challenged environment for future building occupants in terms of noise and vibration', noting that special acoustic reports may be required for such developments. Other reports, which are not required for most other developments, may also be required: geotechnical; safety; vibration; and electrolysis (electricity used to power trains corroding metal structures), and this can add to the length and cost of the project.[170]

4.20 As noted above, different, and in some cases, higher standards apply to a development built adjacent to or over the rail corridor in order to mitigate risks that the development can have for the integrity of the rail infrastructure and to protect the building from the effects of rail operations.[171] Any development above or adjoining the rail corridor must comply with the *Interim Guideline for Development Near Rail Corridors and Busy Roads*, RailCorp Engineering Standards and Australian Standards in order for RailCorp to grant concurrence.

4.21 Mr Mason told the Committee that the rail corridor 'is a dangerous environment to work in. Legislation specific to railway controls work in and around the rail corridor and compliance with this legislation can impose different and in some cases higher standards to comply with than would otherwise apply.'[172]

4.22 Common issues that need to be addressed include: geotechnical, structural and foundation engineering; derailment protection of structures within 20 metres of the rail line; dilapidation surveys; stray currents and electrolysis; stormwater management; minimising the potential for vandalism of the rail corridor; and glare from external lighting and finishes.

4.23 Residential developments over or adjacent to the rail corridor must be protected from noise and vibration. Measures must be taken to ensure that certain noise levels are not exceeded. There will be increased levels of noise and vibration, as well as noxious emissions, where freight trains run on the line.

4.24 In its submission to the inquiry, Transport for NSW noted that freight services, which operate over a large part of the network, 'are powered by diesel locomotives and generally have greater noise and noxious emissions impacts than passenger services. As such their operation will impose limits on the nature

[169] Mr Robert Mason, Chief Executive, RailCorp, Transcript of evidence, 26 March 2012, p 11
[170] Department of Planning and Infrastructure, Answer to follow-up question 3, correspondence to the Chair dated 17 May 2012
[171] See *State Environmental Planning Policy (Infrastructure) 2007*, clauses 85, 86, 87
[172] Mr Robert Mason, Chief Executive, RailCorp, Transcript of evidence, 26 March 2012, p 11

and type of nearby developments more so than those imposed by the impacts of passenger rail services.'[173]

4.25 The extensive technical analysis required to demonstrate that developments meet the requisite standards can significantly increase planning and approval timeframes, and the holding costs for developers who have purchased the land.

4.26 Consideration must also be given to on-going maintenance and future upgrades to both rail infrastructure and the development. In terms of longer term management, Transport for NSW noted that rail infrastructure generally has a 100 year life span and will require major refurbishments during that time, while residential, commercial and retail premises have a shorter life span and will require regular refurbishment:

> Early in negotiations for developments adjacent to and/or over rail corridors consideration must be given to the engineering and ongoing operational and maintenance requirements associated with developments interfacing with an operating railway, that appropriate arrangements are negotiated with developers to address these and that they form part of the development agreement/structure.
>
> These agreements should also address expectations and requirements for how the development will be adapted and updated over time and make provision for upgrades to rail infrastructure and facilities and for increased rail patronage.[174]

4.27 Market demand and the availability of finance will ultimately determine the feasibility of development on the rail corridor. The State, too, requires sufficient return on the sale of its assets. Transport for NSW considers that currently:

> Developments surrounding rail corridors across the CityRail network are yet to peak in utility, scarcity and desirability. Consequently, the value of rail corridor air space across the Greater Metropolitan Area of Sydney is relatively low across the entire network (with some exceptions, for example the Sydney CBD, Parramatta, Bondi Junction and Chatswood), and not yet at a level sufficient to negate the high costs of developing over an operating railway ...[175]

Air space development

4.28 Rail corridor developments can take significantly longer due to the need to carry out construction during limited periods of track possessions. RailCorp typically closes down its rail corridor four times a year on weekends to carry out its own maintenance and capital works program and developers must fit in to those constraints.[176] Mr David Spiteri from RailCorp told the Committee that, for development in the air space above the rail corridor, gaining access to the site could be a major impediment from developers' perspective:

> What makes it unattractive at the moment is the cost and the cost is because of time and I think the biggest constraint to a developer is that constraint around shutting

[173] Submission 58, Transport for NSW, p 8
[174] Submission 58, Transport for NSW, p 20
[175] Submission 58, Transport for NSW, p 18
[176] Mr David Spiteri, General Manager, Asset Planning and Performance, RailCorp, Transcript of evidence, 26 March 2012, p 15

> the railway down to do the work. ... The engineering works that we do for our own maintenance and capital works program, and any other work we have to facilitate that comes in from developers, et cetera, has to fit into those constraints. I think what makes it so hard for a developer to actually build over is that, number one. ...
>
> I believe that the number one constraint is access. ... If a developer gets a greenfield site right now, he gets a block of land and, bang, he is into it and building all day every day. It is just going up. With us it is two days sorry, you have to walk away. You might get a couple of piers in. The next access in that area might be three months away.[177]

4.29 The Planning Institute of Australia observed that the high cost of development above a rail corridor will result in high density development, and the scale of such projects will transform the surrounding area, unless it occurs in a high density location. Identification of suitable sites should occur after 'strategic examination of suitable centres, station facilities, population patterns and trends, infrastructure availability and access.'[178]

4.30 The importance of assessing the economic feasibility of air space development was highlighted by Willoughby Council. The Council noted that given the high cost and complexity of such development, substantial, high density or mixed use projects will result, which may not always be suitable:

> ... The developer will seek to achieve a "reasonable" return as well as cover the high risk of the venture by maximising the density. This means that the economics of a project as well as the planning controls need to be determined before a project is put to the market so that the parameters are defined. It also means that the outcomes can be properly anticipated and assessed in a strategic context before determining whether to proceed.[179]

4.31 Transport for NSW observed that 'because of interface issues with rail operations, development directly above the rail corridor may often not be possible from an engineering perspective or represent suitable land use.'[180]

4.32 According to Mr Brendan Lyon, the Chief Executive Officer of Infrastructure Partnerships Australia 'If you are talking about aboveground rail corridors it is quite difficult. I understand the private sector has had a look at a number of different locations over time but found the construction cost of building over large rail quite difficult.'[181]

4.33 As the submission from Transport for NSW explains:

> In order to cover these costs and realise a desired return on investment, higher building heights and floor space ratios are normally required. These controls are contained in local environmental plans and may not provide for the extent of

[177] Mr David Spiteri, General Manager, Asset Planning and Performance, RailCorp, Transcript of evidence, 26 March 2012, p 14
[178] Submission 56, Planning Institute of Australia NSW Division, p 2
[179] Submission 25, Willoughby City Council, p 3
[180] Submission 58, Transport for NSW, p 12
[181] Mr Brendan Lyon, Chief Executive Officer, Infrastructure Partnerships Australia, Transcript of evidence, 28 May 2012, p 19

development that would make proposals feasible. Councils may be reluctant to amend these controls because of community sentiment.[182]

LAND OWNERSHIP AND ZONING

4.34 Developments along the rail corridor may require more land than just that along the rail corridor. Ownership of adjoining land can be fragmented and also have strata title. The purchase price of additional properties is potentially high, further limiting the financial viability of a development.

4.35 Mr Brendan Lyon, the Chief Executive Officer of Infrastructure Partnerships Australia, told the Committee that land ownership can be a challenge in terms of planning rail corridor development, as it can involve several parcels of land with different owners:

> ...when you are looking at trying to bring together parcels of land, structure it up so that you can begin to develop a joint development type proposal or a precinct ... one of the challenges that you often face is the non-contiguous ownership of the land surrounding the station. You often have a mixture of State agencies, private landholders, commercial landholders and so forth.[183]

4.36 Mr Mick Owens from Landcom highlighted the importance of land ownership and land acquisition to achieve effective co-ordination of rail corridor projects:

> If you really want to get great coordination one of the things that we should be considering in the new areas is land acquisitions. A lot of these areas are fragmented around transport nodes. When you are talking about major regional stations you need to do more land acquisition to ensure there is future land use coordination around the stations.[184]

4.37 Mr David Stuart-Watt also noted that there may be a requirement for land acquisition by government to secure land in suitable locations:

> There has to be a lot of government facilitation and often it may mean government aggregation of land as well. It is important. You have to make sure there is proper connection to the rail. This idea of developing next to the rail and asking people to walk across King Georges Road or Parramatta Road is nowhere near as attractive and they do not get the same value out of that. They end up discounting their commercial units, or whatever, because it is not as attractive.[185]

4.38 WSROC submitted that urban renewal can be made more difficult by a number of factors, including:

- fragmentation of land and strata title blocks
- the potentially high purchase price of such properties and doubtful financial viability

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[182] Submission 58, Transport for NSW, p 12

[183] Mr Brendan Lyon, Chief Executive Officer, Infrastructure Partnerships Australia, Transcript of evidence, 28 May 2012, p 13

[184] Mr Mick Owens, General Manager, Urban Development, Landcom, Transcript of evidence, 28 May 2012, p 21

[185] Mr David Stuart-Watt, Parsons Brinkerhoff, Transcript of evidence, 28 May 2012, p 68

- the lack of co-ordination across council jurisdictions
- potential conflicts between profit maximisation and open space and community amenity requirements
- lack of co-ordination and differing objectives of state and local authorities.[186]

4.39 Bankstown City Council submitted that the current planning framework does not address the challenges and complexities associated with developing high cost land with multiple owners:

> ...the current planning framework cannot address broader economic realities where property development and existing high land value and improvement, along with multiple land owners, makes any urban renewal in an existing built up centre extremely challenging. For renewal of these centres to occur it may require further incentives from Government, or clear powers to ensure that redevelopment is achieved.[187]

4.40 Zoning for a potential site may not be appropriate. The Transport for NSW submission explains:

> The ISEPP does allow for State land (that is not zoned for conservation purposes and not subject to a standard local environmental plan) to adopt the zoning and development controls of neighbouring land, subject to a site compatibility certificate being issued by the Director-General of the Department of Planning. Where neighbouring land is zoned residential this may overcome the limits on residential development adjacent to but not over the rail corridor. However it doesn't address those circumstances where the neighbouring land is not zoned residential. Furthermore, the ISEPP doesn't apply to land adjacent to the corridor which is not state-owned land. This complicates planning processes where development of such land is part of a proposal including rail land covered by the ISEPP.[188]

4.41 Transport for NSW also noted that 'not all the permitted land uses may be suitable or appropriate when located above a rail corridor', due to factors such as noise and vibrations:

> For example, an air space site may be zoned mixed use and may allow the conversion of an office building above the rail corridor to be converted to residential accommodation. While the original office building may have been constructed to meet noise and vibration requirements applying to a commercial building, these requirements may be lower than those applying had the building been originally constructed for residential purposes. Future occupants may be subjected to unreasonable noise and vibration impacts that in turn increase the number of complaints about rail operations.
>
> Furthermore certain activities may not be suitable above or near a rail corridor due to the way a rail corridor operates. For example, health services may not be suitable as the electro-magnetic frequencies emanating from a rail corridor may affect digital

[186] Submission 2, WSROC, p 8
[187] Submission 48, Bankstown City Council, p 5
[188] Submission 58, Transport for NSW, p 12

> imaging equipment or research facilities due to the strict tolerances they need to adhere to.[189]

4.42 In terms of zoning that is appropriate for transit oriented development, the Planning Institute of Australia emphasised the importance of mixed use development in order to achieve the aims of such development:

> ... without appropriate land use controls and policies to maintain mixed use development, centres can be vulnerable to gentrification and specialised activity that leads to the displacement of lower income residents, reduced access to jobs and increased labour costs. This can lead to a concentration of wealth and activity that supports increased car ownership levels and car trips by residents that need to access a broader range of goods and services - all contrary to the intention of TOD.[190]

4.43 Another consideration is whether title for airspace rights will be leasehold or freehold. Historically the policy was not to grant freehold title, especially to air space rights over rail stations. However existing developments on the rail network operate under both freehold and leasehold arrangements.[191] Leasehold arrangements may be less attractive to developers of mixed-use buildings as buyers of residential units prefer freehold to leasehold title.

APPROVAL PROCESS

4.44 The Committee heard that approval for rail corridor development can be a protracted and complex process, which can deter developers. As noted above, such developments involve complicated, highly detailed and technical analysis of various factors, due to the proximity to the rail corridor. The legislative framework for gaining approval is outlined in chapter 2 of this report.

4.45 Lane Cove Council told the Committee that in relation to a planned development of St Leonards Plaza, 'Council has taken over six (6) months to date liaising and negotiating with different government departments, and are yet to be advised whether our proposal even has in principle government support.'[192] With regard to the Forum at St Leonards:

> Gaining the approval for this development [the Forum] took the Winten Group over seven (7) years... they advised Council that they were not willing to wait nearly that long when they could proceed with a development proposal that already had a Part 3A Concept approval with stipulated conditions.[193]

4.46 Campbelltown City Council submitted that the timeframe of the approval process is a major obstacle for both developers and councils, as they require greater certainty in terms of planning and budgeting for construction:

> Approval timeframes are considered to be a significant barrier to development particularly if consideration is to be given to income providing opportunities

[189] Submission 58, Transport for NSW, p 14
[190] Submission 56, Planning Institute of Australia (NSW Division), p 2
[191] Submission 58, Transport for NSW, p 9
[192] Lane Cove Council, Answer to follow-up question 2, correspondence to the Chair dated 18 May 2012
[193] Lane Cove Council, Answers to follow-up questions 2 & 4, correspondence to the Chair dated 18 May 2012

> associated with development over or around the rail corridor which may impact on financing and associated cash flows. These matters need to be addressed to allow greater certainty in allowing Councils and developers to appropriately plan construction timeframes and budgets for projects where there is currently a significant uncertainty in the approval and cost process.[194]

4.47 The Department of Planning and Infrastructure advised the Committee that the 2007 Infrastructure SEPP improved the efficiency and timeliness of the approval process by consolidating 20 previous plans into a single planning instrument, and providing specific processes for infrastructure such as railways. This removed reliance on sometimes differing individual local government planning instruments. Other changes that improved timeframes included:

- Removing the need for land to be rezoned to permit residential, retail or business premises in a rail corridor if the development is wholly or partly above a rail station, even if the land is part of an infrastructure zone.
- Providing greater flexibility in the location of infrastructure and services by identifying zones where types of infrastructure are permitted.
- Allowing for efficient development, redevelopment or disposal of government land and permitting additional uses on state land, allowing adjacent land uses to be undertaken (except conservation lands) if compatible with surrounding land uses.[195]

4.48 The Department noted that social impact assessments may be required for significant development along the rail corridor. Developers are responsible for preparing the assessments, which involve preparing a community profile and assessing the needs of the community, particularly in terms of social infrastructure such as schools, community facilities and open space.[196]

4.49 The Director General of Transport for NSW, Mr Les Wielinga, told the Committee that 'planning approvals are quite complex around these areas and it does depend on the nature of the development and the land it impacts and the planning and approval authority that is impacted.'[197]

4.50 Mr Wielinga outlined the many factors that come into play in assessing such projects:

> ... you need a good understanding of what is happening with your transport corridor over a long period of time, to give you confidence that what is being done is compatible with the developments going forward in the longer terms. There needs to be a strong connection with land use. ...
>
> In addition to the planning approval that we are talking about, there is a construction coordination process that needs to be put into place to make that

[194] Submission 42, Campbelltown City Council, p 2
[195] Department of Planning and Infrastructure, Answer to follow-up question 8, correspondence to the Chair dated 17 May 2012
[196] Department of Planning and Infrastructure, Answer to follow-up question 2, correspondence to the Chair dated 17 May 2012
[197] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, p 2

> happen. The truth is that you need to bring together a development opportunity, management of the transport system, the planning approvals and the construction management and looking after the development of the precinct over a longer time. You have to deal with property issues, the stratum that need to be created. To make this happen effectively you have to bring together a group of people who have the capabilities, the skills and the knowledge to make these developments happen.[198]

4.51 The Committee also notes the comments of Mr Roy Wakelin-King from the Sydney Metropolitan Development Authority, who stated that the process of preparing development plans, undertaking consultation and obtaining approval is 'fundamentally important to creating the foundation of the deliverability' of a plan and 'critical to building ... the ability to champion the outcome'.[199]

4.52 According to Mr Wakelin-King 'if sufficient rigor, study, analysis and engagement have been undertaken throughout that process, it enables bodies such as the Sydney Metropolitan Development Authority ... to become a champion of the renewal of that area'.[200]

4.53 Mr Les Wielinga observed that private sector developers must undertake an analysis of the viability of such projects:

> Ultimately the people who have to deliver this at the end of the day is the private sector, by and large, and so they have got to form a view that it is sufficiently viable for them to take the significant risk that there would be to undertake those sorts of developments.[201]

STRATEGIC APPROACH TO DEVELOPMENT

4.54 Many submissions and witnesses to the inquiry considered that a strategic approach to planning, approving and delivering transit oriented development on the rail corridor was vital and that the implementation of mixed-used development, particularly at major transit nodes, should be actively promoted.

4.55 At the hearing on 28 May 2012, the Committee Chair drew attention to individual government agencies disposing of land, which could have been consolidated to provide significant community benefit. The Chief Executive Officer of the Sydney Metropolitan Development Authority responded that:

> ... a theme has emerged that I would support from a personal perspective—a strategic approach to identifying those opportunities and identifying those challenges, in particular, in transport corridors and development adjacent to or over transport corridors that needs to be adopted. In principle everybody is supporting that. In relation to rail corridors I know it has been attempted previously but that was a number of years ago when the problems ... of congestion and population growth were not as acute as they are today. The opportunity exists for a strategic approach to be revisited. You could then look for and identify areas such as those

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[198] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, p 3
[199] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, *Transcript of evidence*, 28 May 2012, p 7
[200] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, *Transcript of evidence*, 28 May 2012, p 7
[201] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, p 9

> you have described as being a potential opportunity and a value-adding component to the renewal of a particular area.
>
> The issue is: How do you take that strategic approach, who leads it, and then who implements it? From our perspective, as has been identified when they selected the two precincts for the Sydney Metropolitan Development Authority, we clearly have a role to play in that. When a precinct is identified, as I indicated, we would look at all the opportunities that you have just described and see whether those opportunities could be (a) integrated and (b) realised; and in doing so, we would be able to engage across a range of stakeholders—land owners, and particularly where they were State or local government agencies. [202]

4.56 The Department of Planning and Infrastructure considered that a whole of government approach was necessary to optimise the benefits of government investment in transport and other infrastructure. The Department considered that in the past, RailCorp's 'selection of surplus land for divestment does not appear to have been informed by integrated land use and strategic planning investigations, as this has not been RailCorp's key area of focus.' [203] It was the Department's view that there have been 'challenges associated with interagency coordination and cooperation in implementing whole of government policies and objectives which are beyond the traditional scope and priorities of the individual agencies.' The Department noted however that co-ordination between agencies is necessary 'to optimise the benefits of government investment in transport and other infrastructure.' [204]

4.57 Bankstown City Council submitted that 'the non-alignment of Railcorp's master planning processes with NSW State planning process and Council's planning for the City has hindered co-ordinated planning for our centres and led to lost opportunities for more integrated urban renewal.' [205]

4.58 The Council recommended that there be 'greater coordination of strategic planning processes between State and Local Government and stakeholders than has existed in the past' to increase opportunities for urban development, along with clarity on the rail corridors that need to be protected due to freight movements and those which may be appropriate for future residential/commercial development. [206]

4.59 Mr David Stuart-Watt told the Committee that a single agency should take the lead for long-term development related to the rail network:

> There are too many agencies involved; we need one group to lead the process, backing from the Parliament, backing from the Cabinet, because it carries across a series of Ministers, and a long term vision—provide that leadership. It has to be a 20 to 30-year plan otherwise you are scratching around the edges [207]

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[202] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, Transcript of evidence, 28 May 2012, p 8

[203] Submission 61, Department of Planning and Infrastructure, p 3

[204] Submission 61, Department of Planning and Infrastructure, p 4

[205] Submission 48, Bankstown City Council, p 3

[206] Submission 48, Bankstown City Council, p 5

[207] Mr David Stuart-Watt, Parsons Brinkerhoff, Transcript of evidence, 28 May 2012, p 67

4.60 The Australian Institute of Architects discussed the importance of integrated planning involving key agencies. The Institute noted that the NSW planning system is under review, and stated that state and precinct plans that integrate land use, transport and infrastructure strategic planning should be developed, with the co-operation of key agencies.[208]

4.61 Lane Cove Council told the Committee about its efforts to take advantage of two concurrent developments on either side of the rail corridor at St Leonards and build a plaza across the corridor, thereby creating a significant public space for the benefit of local residents and workers. Its plans also included new retail facilities and upgrading the public transport interchange. While the Council had been praised for its plans and encouraged by the government agencies it had approached about the scheme, its proposal had not progressed:

> ...no one appears to be aware who needs to provide the strategic "stewardship" to assist Council to progress the idea to implementation. Council has been enamoured by the amount of support provided from within the government departments that we have consulted. However, there was clearly little understanding about the process that Council should follow and who would ultimately provide the strategic sign off for the project to proceed to implementation. Each meeting has resulted in Council being referred to a different government department to seek that strategic direction and approval. The fact that no one appears able to take responsibility to either approve or reject Council's proposal has been very frustrating to date.[209]

4.62 A strategic approach to transit oriented development should include planning for how the development will work in its particular setting. The City of Ryde recommended a joint approach to properly coordinate land use and master planning around station precincts, which was responsive to the local context and planning controls, and which incorporated good urban design. It was one of many councils which drew attention to the way a rail corridor divided a community, creating traffic pinch points and congestion, limiting the capacity to change transport modes, blocking pedestrian access and impacting on local growth potential.[210]

4.63 Mr Paul Tosi, the General Manager of Campbelltown City Council, told the Committee that a strategic approach to major projects brings benefits for the community: 'we should be looking for the best community outcome at the end of the day and whatever that is, saving the money or having to spend that bit of extra money to preserve the long-term benefit of the whole thing. We would have thought there needs to be a more strategic view of these major projects, and we are facing a large number of them.'[211]

4.64 Mr Jeffery Lawrence, Director of Planning and Environment at Campbelltown City Council, expressed the view that integrated planning is the key to realising opportunities for long-term, strategic development around rail corridors:

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[208] Submission 31, Australian Institute of Architects (NSW Chapter), p 1

[209] Lane Cove Council, Answer to follow-up question 1, correspondence to the Chair dated 18 May 2012

[210] Submission 8, Liverpool City Council, p 2; Submission 12, Penrith City Council, p 3; Submission 26, Gosford City Council, p 1; Submission 35, Holroyd City Council, p 3

[211] Mr Paul Tosi, General Manager, Campbelltown City Council, Transcript of evidence, 28 May 2012, p 47

> ... it is the need to integrate both policy planning and strategic planning with all other government agencies and stakeholders, including local businesses in terms of the future opportunities that rail hubs and corridors give you for economic development. The Department of Planning is quite clearly indicating its metropolitan strategy. It wants to drive growth around railway stations. To fully realise that opportunity to accommodate growth there has to be a commitment for the sake of certainty if for nothing else to really ensure that all these authorities act in a complementary way to achieve the outcome and the benefits that could come from this cooperation.[212]

4.65 Major reviews of land use and transport planning were being undertaken during the course of the Committee's inquiry. The Committee was advised that:

> Transport for NSW recognises, and is acting in concert with, the need for integration between land use and transport planning. Both the Department of Planning and Infrastructure and Transport for NSW are focussed on preparation of the Long Term Transport Master Plan and review of the Metropolitan Plan for Sydney.
>
> Cross-department working arrangements have been established and senior staff secondments are in place between the departments. DoPI and TfNSW share data, hold joint workshops and undertake joint analysis on a regular basis to ensure that the Long Term Master Plan is closely integrated with strategic land use planning.[213]

STRATEGIC ANALYSIS OF TRANSPORT NEEDS

4.66 The need for a strategic approach which addresses the future needs of public transport users was highlighted by several inquiry participants.

4.67 The Committee heard that rail corridor development should incorporate strategic planning for future transport needs in terms of expansion to accommodate growing patronage. Transport for NSW submitted that:

> [Transit oriented] development must be compatible with the primacy of the transport function of the corridor and its related infrastructure and services. Most importantly, adjacent development must support the integrity and safety of the transport infrastructure and services and, over time, allow for their amplification, expansion and development (for example for additional tracks, interchanges, car parking and stabling facilities for passenger rail and intermodal terminals for freight services).[214]

4.68 Transport for NSW noted that rail patronage is projected to increase by 2% annually, which may result in an overall growth in patronage of 40% by 2031. Transport for NSW stated that future planning would need to focus on network improvements to enhance capacity and efficiency, as well as increasing interchange facilities:

> Over the next ten years the focus will be on extending the reach of the CityRail network, with construction of the South West Rail Link and the North West Rail Link. Alongside these it will be necessary to make the existing network function more

[212] Mr Jeffery Lawrence, Director of Planning and Environment, Campbelltown City Council, Transcript of evidence, 28 May 2012, p 47
[213] Transport for NSW, Answer to follow-up question 6, correspondence to the Chair dated 22 May 2012
[214] Submission 58, Transport for NSW, p 8

> effectively and to address capacity constraints as they occur, through initiatives such as the Rail Clearways Program, which is delivering improved capacity and reliability on the network. Patronage on many existing parts of the rail network is increasing as a result of urban development for example, on parts of the North Shore and Illawarra lines. Capacity enhancements will be required and options for network amplification will need to be preserved to cater for this growth.
>
> As well as the rail corridor and rail specific facilities such as stations, stabling yards and maintenance facilities, provision will also need to be made for additional car parking at stations and interchange facilities that provide for ease of transfer between modes.[215]

4.69 Increasing demand for freight services was also identified as an area requiring future planning. Transport for NSW noted that *NSW 2021* sets a goal of doubling the proportion of container freight movements through NSW ports by rail by 2020: 'To deliver an efficient and competitive rail freight transport system, improvements are necessary to increase capacity and efficiency across the rail-based supply chain.'[216]

4.70 In terms of freight services, the NSW Division of the Planning Institute of Australia submitted that notwithstanding the benefits of using rail for freight, there is a need to increase the pace of government investment in quieter locomotives and long-term electrification of rail lines. The Institute also argued that new rail corridors should include 'buffers and noise mitigation measures ... so as to reduce the impacts on the community.'[217]

4.71 The Hon Patricia Forsythe from the Sydney Business Chamber told the Committee that services should meet community requirements, in terms of offering frequency, cross-regional links between different modes of transport, and car parking:

> The challenge then is that you are offering services that meet the needs of the community. That is frequent services, on time, and that ultimately we have got that cross-section of lines intersecting usually with a bus. So you have got a bus-rail interchange that enables people to go to many different suburbs—it is not all about the central business district—and can do it reliably on public transport.[218]

4.72 The importance of long-term planning to provide for interchange between various types of transport modes was raised by Sydney City Council:

> It has been the City's experience that transport modes must now be more responsive both to cost and the transport task, for example walking and cycling for short trips, light rail for longer trips, heavy rail for greater distances with buses serving a mix of these tasks. It follows that efficient intermodal interchange will be increasingly important. Therefore, any air-rights redevelopment around existing stations must hold as a priority - above maximising yield - the immediate and long-

[215] Submission 58, Transport for NSW, p 7
[216] Submission 58, Transport for NSW, p 7
[217] Submission 56, Planning Institute of Australia (NSW Division), p 4
[218] Hon Patricia Forsythe, Executive Director, Sydney Business Chamber, Transcript of evidence, 28 May 2012, p 59

> term efficiency of modal interchange, for which the announced NSW Long Term Transport Master Plan will be an essential guide.[219]

4.73 WSROC argued that the quality of interchange facilities had the potential to significantly affect public transport patronage, citing a 2007 report of the Audit Office, which stated that 'poor interchanges with long walks, stairs, poor travelling information and poor weather protection can substantially discourage access to public transport.' WSROC recommended targeted investment focussing on interchanges to encourage accessibility and passenger transfers.[220]

4.74 Lack of strategic planning can have unfortunate consequences. Transport for NSW gave the example of redevelopment at North Sydney Station which:

> ...was limited by the previous sale of freehold and leasehold air space over and adjoining the station. Capacity for passenger movement between the platforms and concourse was consequently constrained, meaning the stairs could not be located in the optimum location to meet crowd flow requirements. The redeveloped concourse was also less extensive than desired.[221]

4.75 Piers supporting the Goulburn Street car park, built in the 1960s above the rail corridor in the Sydney CBD, restrict the speed of trains travelling on a critical section of the CityRail network.[222]

4.76 The potential consequences of a lack of strategic planning and foresight in designing rail corridor developments was also raised by Willoughby City Council, who told the Committee that recent development at Chatswood station would not be able to cater for future expansion of the railway line and the bus interchange is already over capacity.[223]

4.77 In this regard, the Central and North Miranda Precinct Residents' Association opposed rail corridor development that would prevent future expansion of the rail network. They argued that any new developments should be set back from the corridor to allow for additional track to be built.[224]

COMMUNITY SUPPORT

4.78 The Committee heard that community support is an important aspect of successful development. Mr David Stuart-Watt told the Committee that transit oriented development must have community support:

> It has got to be part of the community's vision for growth, though. Unless you take the community with you, it gets very difficult. ... It is the basis to gain greater and broader support for success. It is more than just rail and bus. As I said, it is about

[219] Submission 53, Sydney City Council, p 2
[220] Submission 2, WSROC, p 10
[221] Submission 58, Transport for NSW, p 10
[222] Submission 58, Transport for NSW, p 11
[223] Submission 25, Willoughby City Council, p 3 and Transcript of evidence, 26 March 2012, p 45
[224] Submission 15, Central and North Miranda Precinct Residents' Association, pp 1-2

> place, and building partnerships with community is essential if you want to do something radical.[225]

4.79 Mr Stuart-Watt also emphasised the importance of council involvement in gaining community support:

> ... If you see council as a stakeholder and part of the community, it has got to be a partnership. If you are talking about giving some good examples, and one of your first few examples is that you jackbooted the council, kick them out of the scheme and demonstrated that they are not needed, it is probably not going to be a good example. It is then going to be hard to go round and sell that to the next community that you want to go to; and the council will probably be out there protesting, or whatever.[226]

4.80 Mr Giovanni Cirillo from the Department of Planning and Infrastructure told the Committee that, although large developments exceeding $30 million are State significant developments under the State and Regional Development SEPP which would be determined by the Minister or the Planning Assessment Commission, local councils play an important role in terms of community consultation:

> ... councils have an important role, not just, as I say, as a third party but insofar as their ability to engage with their communities and local government is very good at that grass roots communication so, as a facilitator of community dialogue, as a key referral body, as a provider of basic services in local government areas, local government has an important role but the determining role, because these matters are typically in excess of $30 million, would be coordinated at a State level. That is not to say local government does not have an important role. It certainly does.[227]

4.81 Submissions from a number of councils (eg Wollongong, Gosford, Liverpool, City of Sydney, Ryde) were supportive of transit oriented development at stations in their LGA. For example, Wollongong and Gosford Councils had worked with relevant transport and planning agencies and developed masterplans for station precincts compatible with transit oriented development. Community consultation had shown support for the councils' plans.[228]

4.82 The Committee notes the potential impact on the community of factors such as the heritage value of existing buildings. According to Transport for NSW, RailCorp owns more heritage listed buildings than any other government agency, and the potential impact on the heritage value of a RailCorp property and of any surrounding buildings has to be considered in planning work on such buildings:

> RailCorp has more statutory listed heritage assets than any other NSW Government agency and manages these assets in accordance with the NSW Heritage Act 1977 and State Agency Heritage Guide. The listing of an item does not preclude alterations or additions for utilisation of air space and land adjacent to the rail corridor. However, it is necessary to ensure that any proposed works consider impacts on heritage significance.

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[225] Mr David Stuart-Watt, Parsons Brinkerhoff, Transcript of evidence, 28 May 2012, p 61

[226] Mr David Stuart-Watt, Parsons Brinkerhoff, Transcript of evidence, 28 May 2012, p 69

[227] Mr Giovanni Cirillo, Executive Director, Urban Renewal and Major Sites, Department of Planning and Infrastructure, Transcript of evidence, 26 March 2012, p 26

[228] Submission 27, Wollongong City Council; Submission26, Gosford City Council

> Many stations are located in historic town centres and new works need to consider impacts on the heritage items in the vicinity and the social significance of a place to its community. Opportunities for conservation works and/or interpretation works for further revealing the significance of a place should be accounted for when proposing and budgeting for works adjacent to heritage assets. Any new works to a heritage location should ensure new design is of high quality and sympathetic to its historical context.[229]

4.83 The National Trust submitted that rail corridor development should be sympathetic to the heritage of a site:

> The use of rail corridor land for development has the potential to reduce the development pressures on land adjoining railway stations which may have a significant stock of heritage-listed commercial buildings dating from the period of railway introduction. However, in such situations there could be problems of over-shadowing from multi-storey development. Both the Kogarah and Hurstville railway corridor developments are of a scale that does not overwhelm nor overshadow the adjoining townscapes of Edwardian and Interwar period two-storey shops.[230]

4.84 In this regard, the Ku-ring-gai Historical Society submitted that building over and adjacent to the railways in Ku-ring-gai 'would destroy the character and heritage of the highly significant North Shore Railway Line which was heritage listed by the State Rail Authority under Section 170 [*Heritage Act 1977*]'.[231]

CONCLUSION

4.85 Participants including councils told the Committee of difficulties that have arisen in their consultations with RailCorp, resulting in a lack of certainty and delays to projects. However it is important to recognise that the complexity of construction involving the rail corridor means that stringent technical requirements must be met. Construction may suffer delays in order to minimise the impact on rail infrastructure and train services. These factors mean that careful consideration is required to assess the feasibility of some developments. Property development will not always be a suitable way to utilise the rail corridor, due to some of the barriers outlined by inquiry participants, in particular incompatibility with the future needs of the rail network.

4.86 An overly complex planning and approvals process was also identified as an impediment to development along the rail corridor and the Committee heard that this can deter developers and councils from proceeding with projects involving the rail corridor. Inquiry participants also highlighted the need for a strategic focus in assessing the state's transport needs and planning developments along transport corridors.

4.87 Given the considerable social, economic and environmental benefits that developments along the rail corridor could bring to local communities and the state, the Committee considers that it is important to facilitate developments

[229] Submission 58, Transport for NSW, p 14
[230] Submission 19, National Trust, p 1
[231] Submission 45, Ku-ring-gai Historical Society, p 1

that utilise the rail corridor. The Committee examines reforms that would expedite and simplify the process of undertaking such development in chapter 5.

Chapter Five – Facilitating utilisation of the rail corridor

5.1 In this chapter the Committee examines proposals to facilitate development along and above the rail corridor and overcome the barriers identified in the previous chapter. Issues covered include the development of principles to guide transit oriented developments along the corridor, funding mechanisms, the establishment of a co-ordinating body to manage developments, and reforms to the planning and assessment process.

WHOLE OF GOVERNMENT APPROACH

5.2 The Committee heard evidence that a whole of government approach is required to facilitate effective utilisation of rail corridors, in particular through transit oriented development. WSROC argued that an effective approach entails strategic government leadership that co-ordinates planning and housing policies, and involves stakeholders such as local councils, public housing authorities, private investors and community organisations. WSROC referred the Committee to research conducted by UNSW, which identified factors including:

> 1) Local urban renewal strategies must take a "whole of government" approach which considers housing, social amenity, employment and local amenity issues.
>
> 2) Local government planning will need to be proactive and will need to be given the flexibility to identify opportunities for renewal and rezoning and to set locally suitable development guidelines. ...[232]

5.3 Sutherland Shire Council submitted that a whole of government approach is required for rail corridor development, arguing that 'the planning and delivery of measures to make best use of rail corridors must incorporate a whole of government approach and not be constrained to a rail agency or operator.'[233]

5.4 City of Ryde also submitted that a whole of government approach 'is necessary for implementing best practice in planning for appropriate use of airspace and development of land in and around existing railway stations, especially those within existing built up areas.'[234]

5.5 Parramatta City Council emphasised the importance of effective co-ordination of land use policy and planning for areas around railway stations that are covered by several local government areas, noting that different councils may have different policies for addressing such development. The Council stated that 'the system should enshrine a new whole-of-government approach to the provision and planning of transport infrastructure which is a fundamental component to

[232] Submission 2, Western Sydney Regional Organisation of Councils, p 7
[233] Submission 33, Sutherland Shire Council, p 8
[234] Submission 62, City of Ryde, p 15

the acceptability of increased densities in both residential and commercial development.'[235]

Alignment with government strategies and plans

5.6 The Committee heard that rail corridor development should align with the directions and priorities of key government policies, such as the Long Term Transport Master Plan and the Metropolitan Strategy for Sydney 2036. The Committee outlined the relevant state and federal strategies and plans in chapter 2.

5.7 Inquiry participants linked the use of land adjacent to rail corridors to objectives stated in the NSW Metropolitan Strategy and regional and local planning.[236] Sutherland Shire Council observed that transit oriented development is consistent with the goal of the Metropolitan Plan to create a compact, accessible city: 'the integration of rail corridors and land use policies that support Transit Orientated Development could compliment and help achieve this objective.'[237]

5.8 Mr Norman Johnston told the Committee that transit oriented developments need to be facilitated as part of the government's overarching planning strategy:

> ... you set your metropolitan planning strategy, you set your subregional plans, and you set your local government plans. What they are doing is flagging in these high-level strategic documents that you are going to have transit-oriented developments.[238]

5.9 Penrith City Council also noted the importance of linking with the Long Term Transport Master Plan, while the City of Ryde submitted that the use of air space and land adjacent to rail corridors should occur in the context of a comprehensive, integrated transport master plan for the Greater Sydney Metropolitan Area.[239]

5.10 Bankstown City Council noted the need to co-ordinate and integrate diverse plans that may have conflicting aims, for instance freight and land use strategies:

> ... there appears to be incompatibility between the need to protect freight corridors by restricting adjacent incompatible landuse (such as residential development), and the Metropolitan Plan for Sydney 2036, which is promoting development around rail centres. It is understood that the NSW Government are in the process of developing a Freight Strategy which will be integrated into the overall NSW Transport Master Plan, however there is little reference to its impact on new development along rail corridors.[240]

5.11 According to the Department of Planning and Infrastructure, the Metropolitan Plan aims to integrate transport and land use:

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[235] Submission 32, Parramatta City Council, p 3

[236] Submission 2, Western Sydney Regional Organisation of Councils; Submission 12, Penrith City Council, p 2; Submission 48, Bankstown City Council, p 4; Submission 46, Rockdale City Council, pp 1-2

[237] Submission 33, Sutherland Shire Council, p 2

[238] Mr Norman Johnston, Principal, Johnston Enterprises, Transcript of evidence, 28 May 2012, p 39

[239] Submission 12, Penrith City Council, p 3; Submission 62, City of Ryde, p 5

[240] Submission 48, Bankstown City Council, p 4

> Under the Metropolitan Plan, 80% of all new homes must be provided within the walking catchments of existing and planned centres with good public transport accessibility. There is also a continued focus on the use of rail to move freight – both between urban areas; and within urban areas, in conjunction with intermodal terminals.
>
> The accessibility of land close to train stations typically makes it an appropriate location for higher density mixed use development. Land which is not close to a train station is less suitable. The Metropolitan Plan makes clear that, along public transport corridors, urban renewal will be focussed within the walking catchments of centres. Centres are typically focused on public transport infrastructure – usually in the form of a train station – or otherwise in the form of bus services.[241]

5.12 Transport for NSW submitted that the Long Term Transport Master Plan will align with state and federal plans and strategies, including the Metropolitan Plan, the National Freight and Ports Strategies, *NSW 2021* and the NSW 20 year Infrastructure Strategy being prepared by Infrastructure NSW:

> It will include a number of modal strategies, including one each for rail and for freight. Within this broader context, for the first time TfNSW will be well-positioned to robustly identify locations across the rail network from Newcastle to Wollongong and to the Blue Mountains, suitable for development.[242]

5.13 The Committee notes that the Green Paper issued as part of the review of the planning system indicates that reforms to the current system are designed to implement a framework that emphasises strategic planning at the regional, subregional and local level:

> The new planning system will substantially and significantly shift its emphasis and provisions to a strategic planning framework. The NSW Government is proposing a transformative approach both in scope and in application with statutory recognition of strategic plans at the regional, subregional and local levels.[243]

CO-ORDINATING AUTHORITY

5.14 Inquiry participants told the Committee that a co-ordinating development authority with powers and expertise to promote transit oriented development of sites along and above the rail corridor would facilitate development.

5.15 The Director General of Transport for NSW, Mr Les Wielinga, told the Committee that there is a need for a development authority to manage all aspects of the development process for sites along the rail corridor:

> ... you need a development authority type structure as a state owned corporation or someone with the authority to make it happen, to make that precinct happen. It is not just about developing a land use plan, putting that on public display for the community to comment, but it is about bringing together the infrastructure needs,

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[241] Submission 61, Department of Planning and Infrastructure, p 1

[242] Submission 58, Transport for NSW, p 17

[243] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 25 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 13 September 2012

> to have a look at water and sewerage and transport and communications and public safety, all of those sorts of things that are needed.
>
> It is about looking at that relationship between population growth and transport systems and liveable communities and understanding why people migrate into and out of particular areas as they are being developed. But just as critically, once you have a plan, someone has to stay there for the long run to make the development happen in the way that it is planned, to manage the development applications, to make sure that you get the outcomes that government is looking for in these particular areas and to generally monitor what is going on with the precinct's development. ...[244]

5.16 Mr Wielinga argued that RailCorp and the Department of Planning and Infrastructure do not have the authority or resources to co-ordinate and manage the complexities associated with transit oriented rail corridor developments. Therefore a body with appropriate powers and functions is required:

> That is why the coordination authority, with some powers to interact with those agencies is so important and this particular authority needs a power to plan. It needs a power to coordinate and facilitate infrastructure and services in these precincts that have been declared. It will need some power to acquire land when it is needed, power to levy charges for development applications like local councils do and the state government does, open closed roads, to enter property for investigation type work. It needs a degree of independence to get the outcomes that are detailed. A state owned corporation to make it happen, that is their task.[245]

5.17 Infrastructure Partnerships Australia noted that development of land along rail corridors could involve the Department of Planning and Infrastructure, Transport for NSW, NSW Treasury, RailCorp, Landcom and the Sydney Metropolitan Development Authority, which could result in a lack of strategy and co-ordination: 'Each agency and department has a primary function meaning greater corridor utilisation and value capture are likely to be a secondary concern. However, if a multi-department approach was taken the result could be fragmented and chaotic.'[246]

5.18 Infrastructure Partnerships Australia recommended that 'a single agency lead a whole-of-government approach to station and precinct development opportunities – the agency should be equipped with appropriate powers and capabilities to deliver a strategic plan, gain planning approval, engage private sector developers ...'.[247]

5.19 According to Infrastructure Partnerships Australia, the agency should work with the private sector on large-scale development plans:

> In cases of joint development it would be the role of the agency to develop strategic plans and acquire planning approval to build on the land. The agency would then engage private sector participants to bid for and deliver the development projects.

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[244] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, pp 5, 8
[245] Mr Les Wielinga, Director General, Transport for NSW, Transcript of evidence, 26 March 2012, pp 5, 8
[246] Submission 51, Infrastructure Partnerships Australia, p 21
[247] Submission 51, Infrastructure Partnerships Australia, p 21

> The lead-agency would be responsible for the interface with private sector deliverers and other Government agencies whilst also being the administrative agency for the implementation of the value capture options outlined in this submission.[248]

5.20 Mr Brendan Lyon, the Chief Executive Officer of Infrastructure Partnerships Australia told the Committee that enabling a single agency 'to undertake these kinds of projects would work well ... because it would bring together and have the ability to bring together those disparate landholders, have a precinct-wide strategy and begin to package it up into the sort of shape it would need for private development.' Mr Lyon also observed that a dedicated agency could work with NSW Treasury and the Department of Finance to develop and implement the most appropriate funding opportunities and mechanisms.[249] The Committee discusses funding and financing later in this chapter.

5.21 WSROC expressed the view that a coordinating body was needed to bring together the private and public sector and acquire land in order to manage development:

> A coordinating agency such as an "Urban Renewal Trust" will be required to bring the public and private sector resources together, to undertake the necessary land and property acquisitions and to manage the resulting developments and publically owned property assets. ...[250]

5.22 Willoughby Council also expressed support for a single co-ordinating body or unit with the expertise to manage such projects:

> I honestly think for this to really work government needs to set up some kind of multi-disciplinary management unit that draws on the experience of people who have been involved in this sort of thing and whether or not that is co-opted on an as needs basis, I do not know. But it certainly needs a coordinating facility that brings together people who can plan these things.
>
> By that I mean not just planning the concepts in a strategic planning sense and working with local communities to get them on side for what is going to happen, but it is also managing it through the detailed design and the manner in which the site is going to operate for future generations.[251]

5.23 Mr Mick Owens from Landcom stated that a single development agency would be able to take a co-ordinating role in managing issues and dealing with local councils and private developers:

> I think it is a matter of picking areas in which you think it is the right thing to do, and setting up some sort of development agency or some sort of control group that goes around those areas, and pulling those things together. ... you need another body to actually pull together all these other issues around it, say the local councils or those responsible for the essential services that have to happen. Somebody has to

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[248] Submission 51, Infrastructure Partnerships Australia, p 21

[249] Mr Brendan Lyon, Chief Executive Officer, Infrastructure Partnerships Australia, Transcript of evidence, 28 May 2012, p 14

[250] Submission 2, Western Sydney Regional Organisation of Councils, p 7

[251] Ms Noni De Carvalho, CBD Place Manager, Willoughby Council, Transcript of evidence, 26 March 2012, p 46

> coordinate that. To understand the commercial drivers of the private industry and pull all those together, you need somebody like that.[252]

5.24 Mr Greg Woodhams from the Planning Institute of Australia referred the Committee to the Subiaco Development Authority as providing a model for a single authority with relevant powers and expertise:

> ... in Perth, the Subiaco Development Authority, the East Perth Redevelopment Authority, is an entity that is established with powers for land acquisition and for fund raising. They do the community consultation. They engage with the different agencies to deliver the product. Subi Centro is an excellent product that has been delivered and it is on time, on budget and it is a mixed use centre around a very good rail head. That model is one way to establish an independent authority that is overseen by Parliament to deliver a product and I think that is a good model.[253]

UrbanGrowth NSW

5.25 As noted in chapter 2, the Government announced the establishment of UrbanGrowth NSW in June 2012. The new agency - a merger of Landcom and the Sydney Metropolitan Development Authority (SMDA) - will lead development for identified projects. In answers to follow-up questions, Landcom outlined UrbanGrowth NSW's role and powers:

> UrbanGrowth NSW will be established with a mix of powers and functions, allowing it to work closely with a range of Government agencies to identify suitable urban renewal sites, remove barriers to development, and create opportunities for private sector investment in development. While UrbanGrowth NSW will have a wide-ranging mandate, it is expected to concentrate on urban renewal activities in its initial years. This will involve working with other Government agencies such as the Department of Planning and Infrastructure, Transport for NSW and the Department of Finance and Services to identify transit oriented development opportunities around new and existing transport infrastructure.
>
> Landcom has the experience and capability to coordinate and lead developments above and adjacent to rail corridors, and has done so at Green Square, Edmondson Park, The New Rouse Hill and North Penrith. We understand the financial drivers of commercial development and also the planning objectives of state and local authorities. We have the experience of delivering infrastructure and public domain.[254]

5.26 Earlier in the inquiry, the Committee heard from Landcom and the Sydney Metropolitan Development Authority regarding their respective roles and expertise. The Sydney Metropolitan Development Authority's role includes:

- Working with transport and planning departments to identify precincts for renewal;
- Undertaking land use planning investigations and feasibility analyses;

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[252] Mr Mick Owens, General Manager, Urban Development, Landcom, Transcript of evidence, 28 May 2012, p 24
[253] Mr Greg Woodhams, NSW Policy Convener, Planning Institute of Australia (NSW Division), Transcript of evidence, 26 March 2012, p 52
[254] Landcom, Answers to follow-up questions 4 and 5, correspondence to the Chair dated 29 June 2012

- Delivering an overarching precinct plan;
- Coordinating transport and infrastructure planning;
- Planning for open space in identified precincts;
- Levying infrastructure contributions and entering into planning agreements;
- Dealing with land where appropriate;
- Borrowing and managing funds; and
- Partnering with public agencies and private entities when necessary.[255]

5.27 Mr Roy Wakelin-King from the Sydney Metropolitan Development Authority told the Committee that 'a particular focus is obviously working with the Transport for NSW organisation to look at those opportunities where we can improve transport-orientated development next to rail, or adjacent to or close to rail corridors, which is part of this work.'[256]

5.28 Mr Wakelin-King emphasised the importance of taking on a leadership role and collaborating with stakeholders:

> ... the key thing is our continued collaboration with our State agency colleagues and recognition by those colleagues—being a new agency we are building our capacity and our capabilities—to take a leadership role in those precincts for which we have responsibility. Once you get that credibility and recognition with a range of stakeholders, particularly State Government but also local government, that is a capacity value adding process to the organisation.[257]

5.29 During his appearance before the Committee, Mr Mick Owens, the General Manager of Urban Development at Landcom, discussed the role that his agency takes in terms of co-ordinating development:

> ... our objective is to implement government urban objectives in a practical and commercial way. As part of our developments we do a lot of coordination of infrastructure. Part of it is transport infrastructure; residential infrastructure; essential services—water, sewer and electricity; and community infrastructure—parks, cycleways and other local road infrastructure. We actually pull a lot of things together. ...
>
> With a lot of our developments we will do the original planning, implement design, resolve conflict issues—there are always conflict issues when you talk about complex projects like these—and then implement them. Along the way we will always try to create development opportunities for the private sector. Our role really is to be a catalyst for the private industry.[258]

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[255] Sydney Metropolitan Development Authority, Who we are, http://www.smda.nsw.gov.au/about/who-we-are accessed 25 July 2012

[256] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, Transcript of evidence, 28 May 2012, p 2

[257] Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority, Transcript of evidence, 28 May 2012, p 8

[258] Mr Mick Owens, General Manager, Urban Development, Landcom, Transcript of evidence, 28 May 2012, p 20

5.30 As an example of co-ordinating development, Landcom provided detail about its role in the recent Green Square development:

> Landcom's role in the overall Green Square Town Centre has been to negotiate with 19 different land owners; create a common masterplan for the town centre; work with major stakeholders, in particular the City of Sydney; devise a viable infrastructure plan and funding arrangements; create opportunities for the private sector and deliver key elements of the public domain and infrastructure.
>
> ... The Rail Station site is not part of this agreement and will remain with Landcom to facilitate its development once all constraints have been finalised.
>
> The Rail Station is to be augmented with the addition of a future surplus road corridor and a small open space area. The road corridor and open space area will only be unlocked once the Bourke and O'Riordan Streets and Botany Road intersection has been re-aligned. To achieve this outcome, Landcom needed to negotiate agreements for the development rights and amalgamation of the site with RailCorp; Roads & Maritime Services; the City of Sydney; and Airport Link Company (who are the operators of the rail). This site will provide the opportunity for a 40,000sqm commercial building to be developed directly above the Rail Station in conjunction with a transport interchange.[259]

Committee comment

5.31 Participants in the inquiry told the Committee of the difficulties and challenges associated with development along and above the rail corridor, including a lack of co-ordination and strategy in terms of government plans and policies for land use and transport, and a complex approvals process for development.

5.32 The Committee heard that a single agency with appropriate functions and powers could assist with overcoming many of the challenges associated with rail corridor development. A single agency or development authority would have the ability to take a more strategic approach that implements government objectives and strategies in managing development at given sites. The agency could also oversee the development process, working with relevant agencies, local government authorities and developers to progress development from designing and planning through to obtaining approval and construction. Once a site has been identified, the agency would facilitate the necessary approvals and consultation and work with the developer to ensure that the defined community benefits are delivered.

5.33 In the Committee's view, the agency should facilitate and drive projects from their inception to completion. The Committee heard that having a single agency to take responsibility for the entire development process would avoid a piece-meal approach involving several agencies, which can result in a fragmented and time-consuming process. It would also address risks and challenges such as obtaining access to the rail corridor for construction.

5.34 A single agency would also have a broad overview of projects to ensure they align with, and implement the goals of, relevant state strategic plans and policies in regard to regional development, transport and infrastructure, land use and

[259] Landcom, Answer to follow-up question 1, correspondence to the Chair dated 29 June 2012

housing. Inquiry participants emphasised the need for utilisation of the rail corridor to implement long-term government strategies and goals.

5.35 During the inquiry, the Minister for Planning announced the creation of UrbanGrowth NSW from Landcom and the Sydney Metropolitan Development Authority. The Committee heard evidence that both of these agencies have expertise and experience in relevant areas, having been responsible for complex developments such as Green Square. The Committee therefore considers that UrbanGrowth NSW is the appropriate agency to undertake this co-ordinating role.

5.36 The Committee considers that in undertaking its role, UrbanGrowth NSW should focus on achieving social objectives such as:

- delivering a range of housing options to meet changing community needs and to help make housing more affordable
- delivering a range of community facilities that increase local patronage of public transport as well as decrease travel demand to regional facilities
- creating jobs through the development of mixed use facilities
- increasing the percentage of the population living within 30 minutes by public transport of a major centre in the Greater Metropolitan Area.

5.37 The Committee heard that in order to perform its role, a co-ordinating agency would require powers, including the power to plan, co-ordinate and facilitate housing, infrastructure and services in declared transport corridors; to compulsorily acquire land for core business purposes; to levy charges; to open/close roads; and to enter property.

5.38 Rather than a new, stand-alone agency, the Committee is recommending that a specialised unit within UrbanGrowth NSW be established and given the role of co-ordinating development along and above the rail corridor. In undertaking this role, the new unit within UrbanGrowth NSW, which has the expertise to address the risks and challenges that such projects raise, would perform functions including:

- Identifying and promoting specific opportunities for development and use of land along the rail corridor and at rail transport nodes.
- Creating standard guidelines or principles for the design of transit oriented development precincts.
- Assisting with planning and approvals processes, including local planning instruments to facilitate developments that benefit the local community.
- Consulting and co-ordinating with local councils and state government agencies.
- Working with developers and investors to achieve a balance between commercial opportunities and community benefits.

5.39 The Committee considers that a specialised unit within UrbanGrowth NSW is required in order to champion transit oriented developments.

RECOMMENDATION 1

That a specialised unit within UrbanGrowth NSW be given the role of promoting and co-ordinating development in the air space above, and on land adjacent to, the rail corridor in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra.

RECOMMENDATION 2

That UrbanGrowth NSW's functions with regard to land adjacent to and air space above the rail corridor include:

- **Identifying and promoting specific opportunities for development and use of land along the rail corridor and at rail transport nodes.**
- **Creating standard guidelines or principles for transit oriented development precincts.**
- **Assisting with planning and approvals processes, including local planning instruments to facilitate developments that benefit the local community.**
- **Consulting and co-ordinating with local councils and state government agencies.**
- **Working with developers and investors to achieve a balance between commercial opportunities and community benefits.**

PLANNING FRAMEWORK AND APPROVAL PROCESSES

5.40 The Committee heard that improvements to the planning framework and approval processes are required to facilitate utilisation of the rail corridor. The Committee examined the NSW planning framework in chapter 2, and outlined the evidence received during the inquiry regarding difficulties with the current planning and approval framework in chapter 4.

Improvements to approval process

5.41 The Committee heard that the approval process lacks clarity and is too complex. Lake Macquarie Council submitted that it has experienced difficulty with the approval process, and that the process can hinder development:

> ... Council has experienced a lack of clarity as to what policies and procedures apply in seeking development over the railway line. Without a transparent and coherent approval mechanism, continued urban renewal and development of the area is severely hindered. The value of the rail corridor in facilitating TODs ... is in turn limited. State policies and guidelines need to be developed that provide Councils with the necessary standards around which they can plan development.[260]

[260] Submission 47, Lake Macquarie City Council, p 8

5.42 The SMART Infrastructure Facility, University of Wollongong, argued that 'existing rail corridors ... will benefit from an approvals framework which is transparent and simplified in order to encourage private sector investment.'[261]

5.43 The SMART Infrastructure Facility noted that development near railway lines must conform to complex safety regulations. The need to maintain services can impose constraints on development and involve multiple approvals and risks to developers. These and other factors mean that a standard approval framework would be beneficial to developers:

> Developing a standard approval framework and carrying out preliminary evaluation of risk against the preferred development site will identify where developers must evaluate and allow for additional risk. An approval framework will seek to identify and track approvals as outlined above. For rail corridor development, a generic set of approvals can be identified as a first step in establishing an oversight plan and identify risks.[262]

5.44 Mr David Stuart-Watt from Parsons Brinkerhoff argued that there should be a quicker approvals process for developments that conform to the requirements of relevant precinct and local environment plans:

> Once you have developed a plan for a precinct, or whatever it is that you are planning as your high priority, you develop the plan, get the overall local environment plan or whatever it is you have agreed to do, and then your stakeholders and industry guarantee that approvals will be facilitated for proposals that fit within the envelope of your plan. If someone comes in with a development that is 10 storeys higher than your envelope: well, sorry, go somewhere else. But once it fits within the envelope, there should be a fast-track approval process, because you want to attract industry and you want to attract investment. Otherwise, they will go to one of the other portions of land available somewhere else and put up their development.[263]

5.45 In answers to follow-up questions the Department of Planning and Infrastructure noted that opportunities to shorten or simplify the development application process may occur as part of the review of the planning system currently underway, and identified other possible opportunities to expedite the process:

- streamlining consultation with RailCorp
- reducing timeframes for concurrence as part of the local and regional planning process
- proactive identification and zoning of rail corridor land for development strategically ahead of the DA process. This can engage local communities, raise awareness and allow issues to be worked through, potentially avoiding a high number of objections and consequential delays as part of the subsequent DA process.[264]

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[261] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 4

[262] SMART Infrastructure Facility, Answer to follow-up question 1, correspondence to the Chair dated 30 May 2012

[263] Mr David Stuart-Watt, Parsons Brinkerhoff, Transcript of evidence, 28 May 2012, p 69

[264] Department of Planning and Infrastructure, Answer to follow-up question 1, correspondence to the Chair dated 17 May 2012

5.46 The Department suggested the following improvements to streamline the process:

> Following the strategic identification by Transport for NSW, the Department of Planning and Infrastructure could work with local government to proactively zone identified land to provide greater certainty to both the community and the development industry on the potential for redevelopment of areas around railway stations in Major Centres. This would reduce the need to rely on the Infrastructure SEPP to permit alternative land uses to occur over and adjacent to railway stations.
>
> This proactive approach to the zoning of land for alternate uses would also enable the community to comment on the concept much earlier as part of the plan making process. Currently, the primary opportunity for the community to express their views on these developments occurs as part of the statutory consultation process during the assessment of development applications for specific development proposals.[265]

5.47 Transport for NSW stated that the Urban Renewal SEPP provides a mechanism for transit oriented development at designated sites, however 'there would be improved outcomes from developments adjacent to rail corridors more generally if the principles on which the SEPP is based – for land use and transport planning integration - were given greater prominence at all levels of the planning system.'[266]

5.48 According to Transport for NSW, 'as such developments become more commonplace, the planning framework will need to provide a predictable and transparent pathway for their assessment.'[267] Transport for NSW stated that it is seeking to ensure that the current review of the planning system considers the need for integrating transport and land use and simplifies the assessment process for transport infrastructure:

> TfNSW is participating in this review and in relation to rail corridor developments to ensure that particular regard be given to:
>
> - The need for integration of land use and transport planning to be given greater prominence at all levels of the planning system;
> - Development of better mechanisms for transport infrastructure contributions;
> - More streamlined assessment for major transport infrastructure, including TOD and SSD; and
> - Better protection of transport corridors and transport infrastructure.[268]

5.49 According to the Green Paper issued as part of the review of the NSW Planning System, the EPAA will be repealed and replaced with a new planning framework:

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[265] Submission 61, Department of Planning and Infrastructure, p 4
[266] Submission 58, Transport for NSW, pp 12-13
[267] Submission 58, Transport for NSW, p 12
[268] Submission 58, Transport for NSW, pp 19-20

> The new Act will be an 'enabling' Act which will establish the broad framework for the planning system rather than contain detailed prescriptions for how land use planning and development assessment is to be carried out.[269]

5.50 The Green Paper states that in order to streamline and simplify the current system, all State Environmental Planning Policies (SEPPs) and section 117 Directions will be repealed and replaced with a set of NSW Planning Policies:

> NSW Planning Policies will be introduced to provide plain English, clear and practical high level planning direction for key policy areas which are of interest to the state. These policies will provide the policy setting and framework for planning outcomes to be delivered in regional, subregional, and local plans.[270]

Flexible local government planning instruments

5.51 Inquiry participants told the Committee that local government planning instruments are important in terms of achieving transit oriented developments. Councils may need to be more flexible in terms of their local environment plans, to encourage development that benefits the community and facilitates the aims of longer term strategic plans to reduce urban sprawl and improve public transport use.

5.52 Many Councils that participated in the inquiry expressed support for flexible zoning for rail corridor developments. In discussing the benefits of using land adjacent to rail corridors, WSROC noted the importance of zoning and local environment plans that allow for varied uses, including mixed used activity:

> Thus utilisation of land adjacent to rail corridors needs to focus on increasing residential densities with mixed use development and urban design which encourages physical activity. It may well need to incorporate renewal of commercial and service facilities with residential renewal.
>
> Mixed use activity will not happen on its own. As a prerequisite, zoning and LEPs need to be appropriate to allow varied uses, combining medium to high density housing with retail and commercial activities, community facilities and open spaces that create or retain amenity. ...[271]

5.53 Bankstown City Council outlined measures it has taken to facilitate better utilisation of land around rail centres. The Council has amended planning instruments to encourage mixed-use development around rail centres; facilitated sustainable urban renewal and development through a specific program; and promoted transit oriented development schemes near railway stations by concentrating future development growth in major centres.[272]

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[269] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 18 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 24 September 2012

[270] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 32 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 13 September 2012

[271] Submission 2, Western Sydney Regional Organisation of Councils, pp 5-6

[272] Submission 48, Bankstown City Council, p 2

5.54 Holroyd City Council stated that the Local Environment Plan Standard Instrument Order and the Infrastructure SEPP 2007 may require amendment to facilitate development on or adjacent to rail corridors, as:

> Currently, residential, retail and commercial development is permitted within the rail corridor "if the development is wholly or partly above a railway station". To facilitate transit oriented development, it may be necessary to extend this to parts of the rail corridor not above stations and to adjoining land.[273]

5.55 The Director of Planning and Environment at Campbelltown City Council observed that local environment plans need to be flexible to accommodate the future needs of the local community:

> In relation to where local government and local environmental plans are heading in the future I do not think they will be cast in concrete. They need to be fluid and responsive to changing economic circumstances. The councils and State will look towards certainty as to what is the bottom line outcome we can expect. If there are measurable benefits and you want to vary from the default position I think our council would be fairly and squarely prepared to look at what benefits to the community could flow from that type of situation.[274]

5.56 The Committee notes that even where councils encourage transit oriented development, problems can arise due to lack of consultation. For example, Willoughby City Council is supportive of transit oriented development; nonetheless the Council considered that problems arose from developments at Chatswood Station which could have been avoided had the Council's advice and plans for the area been adequately taken into account:

> The Mirvac development of railway land north of Chatswood Station originally was planned co-operatively with Council and rezoning occurred. This was until Mirvac took the last building on the site, more than doubled its size and reduced the office component in favour of residential and had it approved as a Major Project MP 09_0154 in February 2011. As a result the amount of residential on the Pacific Place site significantly exceeds expectations and the jobs generation floor space has reduced from more than 1 ,400 jobs to around 150. This has removed Chatswood's ability as a compact major centre in the Sydney region to achieve its future job targets required by the State Government's Metro Strategy and the Metropolitan Plan 2036.[275]

5.57 In this regard, Mr John Hely from Campbelltown City Council emphasised the need for early consultation with councils at the concept stage of development, noting that currently 'we are always being asked to react or respond as opposed to progress or contribute'. He told the Committee that:

> ... at concept stage, having that roundtable or workshop about what is in the community and what is the future planning, whether RailCorp is the prime mover but understands the community, there is more opportunity at that concept stage in developing the way council sees that local area developing. One can actually

[273] Submission 35, Holroyd City Council, p 4
[274] Mr Jeffery Lawrence, Director of Planning and Environment at Campbelltown City Council, Transcript of evidence, 28 May 2012, p 51
[275] Willoughby Council, Answer to follow-up question 3, correspondence to the Chair dated 18 May 2012

> influence the other far more, but very much at the concept stage. Then there is that increased ownership rather than a package that arrives that goes through the presentation to council almost as though it is going through the tick a box.[276]

5.58 Campbelltown City Council stated that 'it is critical that RailCorp liaise with Councils in order to ensure that land adjoining station precincts is appropriately zoned and master planned to address the need for optimal planning and infrastructure outcomes.'[277]

5.59 In terms of planned reforms to local government planning instruments, the New Planning System Green Paper states that more flexible development controls will enable quicker, merit-based decision making and more strategic development standards:

> The NSW Government proposes to reform local planning by moving away from rigid development controls to local plans that provide strategic context and deliver fast, merit–based planning decisions and strategically based development standards and guidelines. ...
>
> Key issues in relation to the existing Local Environmental Plans are:
>
> - lack of clear link between the strategic intent and statutory planning controls
> - lack of consistency with, and clarity of, state and regional strategies or priorities
> - narrow focus on measurable development controls (e.g. heights, floor space ratios) rather than merit–based planning outcomes ...[278]

5.60 Relevant changes proposed as part of the review of the planning system include: 'full delegation to councils to undertake amendments to plans that are consistent with NSW Planning Policies, applicable Regional Growth Plans and Subregional Delivery Plans'.[279]

Improvements to community consultation

5.61 The Committee heard that improvements to the community consultation process would be of benefit in terms of facilitating transit oriented developments that benefit the community, and reducing approval timeframes.

5.62 Mr Giovanni Cirillo from the Department of Planning and Infrastructure told the Committee that early and effective engagement with constituents and agencies was 'very important, particularly where you have a long term vision for a

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[276] Mr John Hely, Director City Works, Campbelltown City Council, Transcript of evidence, 28 May 2012, p 50

[277] Submission 42, Campbelltown City Council, p 3

[278] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 40 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 13 September 2012

[279] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 42 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 13 September 2012

corridor'. He highlighted the role of councils in undertaking community consultation:

> My tip, personally, is work closely with local councils and work closely with them as representatives of their communities, to ensure there are no surprises later in the piece, so that you actually do your planning well and do it early so that you can best manage risk and manage expectations.[280]

5.63 Mr Greg Woodhams from the Planning Institute of Australia suggested that community consultation be undertaken at an initial strategy phase of the development to expedite the approval process:

> ... we can deliver that by getting the sign-offs through the strategic areas and then the delivery. You do not need community consultation at that point because it has occurred at the strategic level. So the council and the state should have done consultation at that point and not hold up the development when it is consistent with the strategy. So you can cut that out and one would hope that during that process, the different agencies involved in developing strategy, the vision for an area, and signed it off at that point. So it is more machinery at the end of the line, if you like, in delivering the product, rather than all the interrelated referrals that you have got to do and the community consultation which is just endless.[281]

5.64 Mr Robert Senior also emphasised the importance of early consultation, to be undertaken as part of an assessment of a site's suitability for development:

> Basically, you are telling the community of the what, why, where, when and how—so that the community gets a full understanding, and hopefully achieves buy-in on an agreement. That is the first step. The second step of the two is really letting the community know that they are entitled to put forward their objections in writing and thereby demonstrate, in measurable terms, that they will be as individuals injuriously affected. Unless that criterion is met, submissions or objections do not have merit. It is raising the standard. ...[282]

5.65 The Committee notes that the NSW Planning System Green Paper states that proposed changes to the planning system will seek to encourage genuine community participation and early engagement in planning decisions:

> The community will be engaged early at the strategic planning stages in the setting of the overall planning outcomes for an area. This is important so that decision makers can fully articulate the trade–offs involved in strategic planning decisions.[283]

Committee comment

5.66 The terms of reference for the inquiry require the Committee to consider the current planning and policy framework and regulatory and policy barriers to

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[280] Mr Giovanni Cirillo, Executive Director, Urban Renewal and Major Sites, Department of Planning and Infrastructure, Transcript of evidence, 26 March 2012, p 29

[281] Mr Greg Woodhams, NSW Policy Convener, Planning Institute of Australia (NSW Division), Transcript of evidence, 26 March 2012, p 57

[282] Mr Robert Senior, Director, Certain Planning, Transcript of evidence, 28 may, 2012, p 40

[283] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 19 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=128 accessed 13 September 2012

implementing rail corridor projects. The Committee heard that the current planning system can impede effective utilisation of the rail corridor and that improvements are needed to streamline the planning process.

5.67 Inquiry participants suggested reforms to key elements of the planning framework. Areas highlighted included the need for a standard, clear approvals process that expedites development in key sites that have been identified for transit oriented development. The need for a broad focus on integrated land use and transport planning and improved consultation with RailCorp were also identified by inquiry participants. Inquiry participants also recognised the importance of greater flexibility in terms of local environment plans and zoning, for instance with respect to facilitating mixed use development of key areas.

5.68 Several participants in the inquiry highlighted the importance of early community consultation to determine the needs of the local community, obtain community support, and expedite the approval process. The Committee considers that the planning system should provide for consultation at an early phase of development to expedite the process and ensure development meets community needs.

5.69 In terms of policy reform, the Committee has noted that the Government is undertaking a review of the NSW planning system, and has recently issued a Green paper as part of the review. The Paper identifies the following as key reforms:

> **Community Participation** - The major shift in the new planning system is to engage communities as an integral part of making key planning decisions that will affect the growth of their communities.
>
> **Strategic Focus** - A major shift to evidence based strategic planning in terms of planning effort, community and stakeholder engagement and decision making.
>
> **Streamlined Approval** - A shift to a performance based system in which duplicative layers of assessment have been removed, decisions are fast and transparent, and code complying development is maximised.
>
> **Provision of Infrastructure** - A genuine integration of planning for infrastructure with the strategic planning of land use so that infrastructure that supports growth is funded and delivered.[284]

5.70 The Committee notes that these key proposed reforms address many of the main impediments to utilisation of the rail corridor which were raised during the inquiry. The Committee considers that reforms to the planning system are particularly important to overcoming barriers to effective utilisation of land adjacent to and above the rail corridor, given the challenges that are associated with these types of developments and the potential benefits of well-designed development of appropriate sites.

5.71 In the Committee's view, it is important that the current review seek to build on past experience to improve future planning practices and procedures. With

[284] NSW Government, *A New Planning System for NSW - Green Paper*, July 2012, p 3

respect to use of the rail corridor, the Committee would like to see a new planning system that streamlines the development process for key sites, and builds capacity to incorporate mixed-use development, if appropriate, when planning station upgrades and new developments along the corridor. The Committee is hopeful that the reforms to the planning system will enable a broader focus on balancing transport and land use needs. This would ensure that community requirements are met in planning the future use of the rail corridor.

5.72 The Committee encourages the Government to institute reforms to the planning system that will streamline the planning process for significant, transit oriented type developments involving the rail corridor by implementing a single standard planning instrument. The Committee envisages that a standardised, simplified approval process would minimise delays currently arising from complex legal and technical checks.

RECOMMENDATION 3

That, as part of the current review of the NSW planning system, the NSW Government consider ways to shorten approval timeframes, consistent with statutory requirements, and provide for early community consultation for identified priority developments along the rail corridor.

RECOMMENDATION 4

That, as part of the current review of the NSW planning system, the NSW Government develop a standard, comprehensive state planning instrument for major transport corridors.

TRANSIT ORIENTED DEVELOPMENT SCHEMES

5.73 The Committee outlined the evidence it received regarding the benefits of transit oriented development of land along, and air space above, the rail corridor in chapter 3 of this report.

5.74 The Committee heard that reform is required in order to facilitate effective utilisation of the rail corridor, through developments that reflect the principles of transit oriented development. Participants in the inquiry argued that an audit of land along the rail corridor should be undertaken to identify appropriate sites, and that guidelines should be developed to assist key stakeholders such as developers and government agencies in promoting transit oriented development. Mechanisms for funding development through value capture mechanisms was also explored by stakeholders. The Committee examines these issues below.

Identifying transit oriented development precincts

5.75 Inquiry participants argued that an audit should be undertaken of available land along the rail corridor to assess the suitability of particular sites for development. It was also noted that consideration of the long term needs of the rail network is critical to identifying sites that are appropriate for development.

Long term planning for rail network

5.76 Several participants emphasised the need to ensure the integrity of the rail network, and future transport needs, in considering sites suitable for development.[285] Transport for NSW submitted that, in assessing which areas are suitable, understanding future transport needs in regard to freight and passenger services is the key consideration:

> The primacy of the transport function must remain the principal consideration when determining locations for potential development. As a starting point, the demands on the rail network over the longer-term must be understood and provided for in determining what land adjacent to the rail corridor can be made available for development.[286]

5.77 Transport for NSW submitted that in order to minimise the risk of development limiting future infrastructure upgrades and improvements to services, Transport for NSW should 'take the lead or remain a major stakeholder in preparing master plans or development applications, ensuring engineering and design requirements of operating adjacent to and/or over a rail corridor are incorporated in any approved development which may be subsequently tendered to the market.'[287]

5.78 The Department of Planning and Infrastructure submitted that 'it is important that any program to utilise land above, or adjacent to rail corridors, does not unduly compromise the effective functioning of the rail system or future plans to expand the capacity of the rail system and wider transport network. Safe and efficient rail operations (both passenger and freight) are the priorities for activity and development in these locations.'[288]

5.79 This view was echoed by the City of Ryde: 'The existing and future function of the rail corridor as a public transport network should not be compromised in any decision on future development or disposal of railway land.'[289] Lake Macquarie Council stated that 'facilitation of TOD around railway stations needs to accommodate the need of freight rail transport.'[290]

5.80 The Tourism and Transport Forum argued that any development occurring along or above the rail corridor should not hinder rail services, and that land which may be required for future rail infrastructure should not be developed:

> ... the regular operation of these corridors for moving people and freight must remain paramount. Any development and associated activity, particularly in the air space above rail lines, must be able to occur so as not to directly impede, nor create the potential for impediments to the regular operation of rail services. Similarly, any such development must occur with careful regard to the future expansion of rail

[285] Submission 41, Commuter Council of NSW, p 1; Submission 28, Save Our Rail NSW, p 3; Central and North Miranda Precinct Residents' Association, Submission 15, pp 1-2
[286] Submission 58, Transport for NSW, p 17
[287] Submission 58, Transport for NSW, pp 17-19
[288] Submission 61, Department of Planning and Infrastructure, p 3
[289] Submission 62, City of Ryde, p 5
[290] Submission 47, Lake Macquarie City Council, p 10

> infrastructure and not limit options through the alienation of land that could be required in the medium or long term.[291]

Audit to identify sites

5.81 Inquiry participants argued that possible sites along the rail corridor should be identified as part of strategic planning to encourage transit oriented development. The Sydney Business Chamber recommended that:

> ... an audit of all RailCorp-owned land should be undertaken to identify both the short and long term opportunities for development around rail corridors. Relevant strategic planning documents should reflect these opportunities for development around rail corridors, combined with appropriate mechanisms in place to ensure these strategic priorities are reflected in local planning decisions. This would provide guidance to planners as well as demonstrate to developers that there will be opportunities for this type of development to occur. When an area is identified as a TOD precinct, certain conditions apply to those that don't apply to others.[292]

5.82 The Hon Patricia Forsythe from the Business Chamber told the Committee an audit of land adjacent to rail corridors could reveal any underutilised land:

> ... if adjacent to those rail lines is vacant land then it is an underutilisation of potential development sites. I do not want wish to take from RailCorp or Transport for NSW land which for the future they may need for development. ... We do need from time to time to take an audit, just see where we are at, because I think we could find some useful need for some of it.[293]

5.83 The City of Ryde observed that the choice of location for transit oriented development should be informed by the hierarchy of centres identified under the Metropolitan Strategy, and that growth potential and developer take up near railway stations 'relies on well designed and efficient transport interchanges of a commuter system and its ability to attract and serve local communities.'[294]

5.84 The SMART Infrastructure Facility referred the Committee to a major rail-link project undertaken in London, noting that strategies adopted to ensure the success of the development had included: identifying areas across London which could provide significant opportunity for growth; identifying stations with the capacity for sustained growth; and considering the benefits that a new station and increased connectivity could deliver to an area.[295]

5.85 Transport for NSW also noted additional factors to be considered in terms of strategic identification of sites for development:

- Understanding the potential value of locations - the value of rail corridor air space in the Greater Metropolitan Area is relatively low, with some exceptions, and not at a level that would negate the high cost of developing over an operating railway.

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[291] Submission 30, Tourism and Transport Forum, p 1
[292] Submission 38, Sydney Business Chamber, p 2
[293] Hon Patricia Forsythe, Executive Director, Sydney Business Chamber, Transcript of evidence, 28 May 2012, p 58
[294] Submission 62, City of Ryde, p 14
[295] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 8

Air space rights—in terms of building heights and floor space ratio—can be bought and transferred to another location.

Developments adjacent to stations—rather than in air space above the corridor—are more common; this is likely to continue until economic factors increase market demand.

Land adjacent to rail corridors, especially near stations, is increasing in value due to lower construction costs, the competing housing and commercial interests and market demand for development in close proximity to rail services.

- Market conditions - determining feasibility and timing to develop in the rail corridor will depend on market conditions, both in terms of demand and the availability of finance.
- Rail Infrastructure Capital Program - the Long Term Transport Master Plan will enable identification of potential locations across the network suitable for development. Planning for the network's capital works program should assess, with local councils and the Department of Planning and Infrastructure, opportunity for complementary development.

  Benefits can be obtained from smaller scale initiatives, eg. an upgrade at a local station may provide an opportunity to develop a nearby parcel of rail or privately-owned land, which may result in improved access, amenity and connectivity for station users and possible developer contribution to the upgrade.
- Controlled development - for proposed developments over and adjacent to rail corridors, including those encompassing privately-owned property, precinct master planning should be undertaken with stakeholders, including councils and the Department of Planning and Infrastructure, to establish a development framework.[296]

Precinct plans

5.86 Transport for NSW submitted that precinct planning should be undertaken with key stakeholders for developments adjacent to, and over, the rail corridor so that a development framework can be established. Precinct planning will help to identify:

- land availability and the scope of potential development, including potential development partners;
- objectives of the development, how it will connect to and enhance the local community and align with transport and land use planning outcomes;
- rail network and operational demand and design requirements, including for future service and infrastructure capacity requirements; and

[296] Submission 58, Transport for NSW, pp 17-19

- requirements for access to all forms of transport to and through the station, including bus interchange, walking and cycling and commuter car parking location.[297]

5.87 Transport for NSW outlined the approach that will be taken for the development around the North West rail link, including establishing a planning working group and the development of a precinct plan:

> A North West Rail Link Precinct Planning Working Group comprised of the Project Office, the Department of Planning and Infrastructure and Councils along the corridor has been established to progress urban development and connectivity around stations and within the NWRL corridor. It will also investigate funding mechanisms for development.
>
> The Working Group will oversight development of precinct plans for stations on the corridor and work will be undertaken with local Councils and other stakeholders to address long-term opportunities to improve connectivity. The aim is to ensure that the precinct planning will enable future transit oriented developments associated with the North West to achieve:
>
> - a mix of uses – employment, retail and community services located within a five minute (400 metres) walkable catchment – to reduce the need for trips to meet daily needs;
> - precincts that promote connectivity and access to the stations, interchange facilities, key activities and uses;
> - a population density within walking distance of each station (generally 800 metres) to provide the threshold to deliver a range of activities and uses;
> - promote use of public transport including through parking policies and cycling strategies that aim to reduce car use; and
> - facilitate well-designed development.[298]

Design principles for transit oriented development

5.88 The Committee heard that transit oriented developments should follow certain standard design principles. Transport for NSW referred to the Queensland Government's guide for practitioners of transit oriented development, in which transit oriented development is described as having the following features:

- a rapid and frequent transit service
- high accessibility to the transit station
- a mix of residential, retail, commercial and community uses
- high quality public spaces and streets, which are pedestrian and cyclist friendly

[297] Submission 58, Transport for NSW, p 19
[298] Submission 58, Transport for NSW, p 4

- medium- to high-density development within 800 metres of the transit station (i.e. the TOD precinct)
- reduced rates of private car parking.

... TOD refers to the set of principles applying to the broader precinct surrounding the station, rather than any individual development within it.[299]

5.89 Sutherland Shire Council stated that the main aim of transit oriented development is 'to concentrate mixed use and residential development around transport nodes such as railway stations, so as to provide residents in those areas with the opportunity to access the majority of their work and non-work needs by active transport (walking and cycling) and public transport.'[300] The Council recommended that a hierarchy or typology be developed and adopted for transit oriented development of the rail corridor, in order to ensure a co-ordinated, whole of government approach to managing land use and transport infrastructure:

> ... By applying a typology / hierarchy, issues such as air space development, the intensity and type of mixed use development, the location and provision of commuter car parking, bus / rail / taxi interchange facilities, lighting, pedestrian linkages and cycling access can be better and more strategically addressed.[301]

5.90 The Council recommended that the typology reflecting the principles of transit oriented development be synchronised with and implemented through state and local planning instruments and subregional strategies.[302]

5.91 The Planning Institute of Australia recommended that the principles of transit oriented development be applied to rail corridors in Sydney. The Institute emphasised the need for consistent planning, recommending that a centre typology be established, which defines the principal transport function and land use within a centre and its role within the rail corridor:

> ... Incorporated into policy and strategic planning objectives, the application of a transport / land use typology for centres would define the transport function of centres to best reflect their primary purpose – i.e. ranging from major regional public transport hubs to local centres that primarily have a park and ride function. A defined typology similar to the NSW Department of Transport Guidelines for Development of Public Transport Interchange Facilities (2008) should be applied through a strategic planning instrument / plan that would ensure a consistent land use / transport outcome. This would cover matters such as airspace development, the location and provision of commuter car parking; bus / rail / taxi interchange facilities, public domain works, and active transport access. ...
>
> ... significant rail corridor development should only occur where there is an existing or proposed centre consistent with the typology and that the project is supported by access to the rail service, that the surrounding road system has the capacity to accommodate the percentage of private vehicle use that would occur and that the

[299] Submission 58, Transport for NSW, pp 4-5
[300] Submission 33,Sutherland Shire Council, p 3
[301] Submission 33,Sutherland Shire Council, pp 3-4
[302] Submission 33,Sutherland Shire Council, pp 3-4

community and other social infrastructure to serve the needs of the residents and/or employees is, or will be, available within a reasonable time and in close proximity.[303]

5.92 The Institute provided an example of a typology that would apply to areas within an 800 metres radius of a railway station, based on 6 measurable features:

- Location of the station area relative to the urban region;
- Dominant land uses permitted by the state and or local government regulations;
- Level of public transport connectivity;
- Potential residential and employment capacity and density permitted by the current zoning;
- Jobs-to-housing balance permitted by the existing zoning; and
- Physical street pattern as a measure of pedestrian and cycling connectivity.[304]

5.93 The typology would be supported by the following goals, which aim to set standards for transit oriented development:

- Pedestrian and bicycle connectivity;
- Housing affordability;
- Residential and employment density;
- Mix of uses;
- Green infrastructure and open space;
- Car parking; and
- Urban design.[305]

5.94 The Institute recommended that the Committee consider the Queensland Government's work on the social planning principles of transit oriented development communities, in summary:

- Diversity and inclusion - strive for a social mix and create an inclusive and sociable environment where members feel a sense of belonging and cultural relevance. Physical and social connectivity is achieved with adjoining communities.

[303] Submission 56, Planning Institute of Australia NSW Division, p 2
[304] Planning Institute of Australia NSW Division, Answer to follow-up question 1, correspondence to the Chair dated 18 May 2012
[305] Planning Institute of Australia NSW Division, Answer to follow-up question 1, correspondence to the Chair dated 18 May 2012

- Housing choice and equity - offer high-amenity, affordable housing across households and housing that is designed to meet residents' diverse and changing needs.
- Accessibility - supported with convenient access to employment, services and facilities required to support daily needs, including commercial and retail services, jobs, social services and facilities and open space.
- Vibrancy and a healthy lifestyle - enjoy a high level of amenity that supports a healthy and active lifestyle, and an appreciation for sustainable living. The public domain is a lifestyle feature that connects people with the place, each other and nature.
- Participatory and collaborative processes - precincts are developed with a long-term commitment to collaboration with key stakeholders, consultation with affected communities and empowerment of residents. This extends to the planning, design, implementation, monitoring and review phases of development.[306]

5.95 The SMART Infrastructure Facility made the following suggestions in terms of guidelines for planning and implementing rail corridor projects:

- Using zoning and land development to create higher density mixed-uses near transit stations, and prioritising rapid transit projects where local conditions are appropriate.
- Planning and designing a transit system with frequent connections to major centres. Improved transit will encourage community development. Locations with sufficient density to support rapid transit should be given early consideration.
- Mixed use development helps reduce car use, increase walking and public transit use. Mixed use for other infrastructure (water, gas, electricity, telecommunications) should be considered to reduce land demand.
- Focussing on pedestrian-friendly projects to avoid the complication of sequencing development with new transit facilities.
- Density affects travel behaviour, establishing minimum densities and raising maximums are considerations for planners in developing effective strategies.[307]

Community benefits

5.96 The City of Ryde submitted that projects should 'involve community benefit testing, including a balanced assessment of net community benefits ... as well as what disbenefits and how these will be ameliorated.'[308] The importance of assessing community benefits was also highlighted by Willoughby City Council:

[306] Submission 56, Planning Institute of Australia NSW Division, pp 2-3
[307] Submission 40, SMART Infrastructure Facility, University of Wollongong, pp 7-8
[308] Submission 62, City of Ryde, pp 15-16

> ... a Community or Public Benefit Test should prevail and be the overarching principle for development over rail corridors which are public lands. The benefits should be identified through a strategic planning process involving Councils, key government agencies, communities and the property industry. These then become the basis for assessing any proposal in each particular case. The "benefits" may include protection of significant habitats, sustainable urban renewal of an area, funding of new public transport infrastructure, housing and jobs delivery in appropriate locations and utilising rail facilities to reduce urban sprawl.
>
> Not all corridors or railway stations will be suitable for development and the strategic planning process to identify sites and the approvals process should address heads of consideration that are endorsed and understood by Government and its agencies as well as other stakeholders before any project is contemplated.[309]

5.97 Ms Noni De Carvalho from the Council used recent development at Chatswood to illustrate how various factors must be weighed up in conducting an analysis of community benefits:

> The only issue with Chatswood is probably too many residential units, we need some commercial jobs generating because when you have a nodal point you should have a balance. You have to have your dwellings but you need your jobs generating floor space as well.
>
> This is what I mean by weighing up the benefit so that in that particular instance the benefit test would have been getting that balance, it would have been getting your rail infrastructure, making your station work for the connection between two rail lines. For us a big thing was our old station did not have any disabled access. You could only get to the platform via stairs so obviously that was a big thing for us at the time and the interconnecting of Chatswood.[310]

5.98 The Planning Institute of Australia emphasised the importance of mixed use development that delivers community benefits:

> If the plan says this will be a mixed use development that will deliver these outcomes, do not fall to the dollar and just say we are going to do residential development. Time and time again the Institute is seeing capitulation, whether it is by a developer or the government, to the financial outcome rather than the community outcome. So there is not this net community test about community benefit rather than financial benefit.[311]

5.99 Mr Greg Woodhams from the Planning Institute told the Committee that the regulatory framework should enable negotiation between council and the developer, in order to ensure community benefits are provided through facilities such as child care centres:

> ... if you have a very clearly codified way of delivering community benefits for incentives through FSR [floor space ratio], and there are councils that have done that, then you can make it clear to everybody yes, we are going to get a child care

[309] Submission 25, Willoughby City Council, p 9

[310] Ms Noni De Carvalho, CBD Place Manager, Willoughby Council, Transcript of evidence, 26 March 2012, p 49

[311] Mr Greg Woodhams, NSW Policy Convener, Planning Institute of Australia (NSW Division), Transcript of evidence, 26 March 2012, p 56

> centre out of this and there will be a bit of open space and there will be bicycle facilities and so on and the developer will still get his return.
>
> ... What the Institute has advocated is through the strategic planning process you determine what those community benefits are right through the process and you develop a mechanism to achieve that on a particular site. That is not possible in the current legislation.[312]

5.100 Mr Woodhams also argued that an independent authority could overcome difficulties with the current system in terms of representing community interests:

> ... an independent authority that has equal representation with council planners and with others on it would probably be a better model than one where a developer comes in, deals with TIDC [Transport Infrastructure Development Corporation], deals with RailCorp, and then the council planner then has to do battle with everybody to try and reflect the community's interests. I do not think that model is working effectively in New South Wales.[313]

5.101 The SMART Infrastructure Facility submitted that modelling should be undertaken to assist planners with assessing the impact of development proposals on the local community and community involvement with the proposal:

- How communities are involved with development proposals and how planners proactively anticipate the effects that proposals will have on individuals and the choices they make should be explored through simulation and modelling the geo spatial and general consequences of an intervention.
- In developing rail corridors NSW could do well by adopting the principle that facilities and station developments should cater for the lifestyle needs of the customers they serve by providing environments that are sought out by the public and traveller alike just as in the Hong Kong case.[314]

5.102 The Planning Institute noted that social impact assessments can assist with establishing community benefits: 'Any project regarding rail corridors should include a Social Impact Assessment (SIA) as part of the assessment process. The SIA should ensure that benefits and any disadvantages to the community are considered.'[315]

Utilising air space above the rail corridor

5.103 The Sydney Business Chamber noted that although air space development can have many benefits, the suitability of individual sites for such development needs to be carefully considered in light of engineering and construction challenges:

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[312] Mr Greg Woodhams, NSW Policy Convener, Planning Institute of Australia (NSW Division), Transcript of evidence, 26 March 2012, pp 56-57

[313] Mr Greg Woodhams, NSW Policy Convener, Planning Institute of Australia (NSW Division), Transcript of evidence, 26 March 2012, pp 54-55

[314] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 3

[315] Submission 56, Planning Institute of Australia (NSW Division), p 4

> ... such developments are not always financially feasible due to significant engineering requirements. In addition, if buildings are to be built over train lines, this could require decommissioning operations at critical times of construction. Therefore, each development of this kind should be regarded individually, as development above the air space should not be regarded as a given solution to raise revenue and fund infrastructure projects. On the other hand, if it is not viable in one area this should not mean it should be ruled out in other areas. Through early engagement between RailCorp and the developers, developers will be provided with greater certainty about logistics and costs.[316]

5.104 The Business Chamber commented that 'it is questionable whether the market demand will support anything like this level of investment [a potential 75 sites] over rail stations' arguing that developments should be assessed on a case by case basis for financial viability, due to the high cost and risks when compared with developing land adjacent to the corridor:

> It is going to depend on market demand, amenities of the location (beyond just being close to transport), configuration and topography of the station and site area, and the short and long term plans of CityRail and Transport for NSW.[317]

Draft NSW Long Term Transport Master Plan

5.105 The Government's Draft NSW Long Term Transport Master Plan was released for comment in September 2012. The final Plan is due to be released in late 2012. The Draft Master Plan signals the planned delivery of more transit oriented urban renewal projects and the introduction of minimum land use and transport requirements for new residential developments.[318]

5.106 The Draft Master Plan states that in addition to proposed transit oriented development of North West rail link stations, Transport for NSW will 'identify opportunities for transit oriented development at existing transport hubs in partnership with the Department of Planning and Infrastructure.'[319]

5.107 More specifically, the Plan states that Transport for NSW will support transit oriented urban renewal in Sydney and the Greater Metropolitan Area by working with agencies to:

- Identify the interventions required to support urban renewal in different localities (potentially ranging from providing technical advice to local councils through to large scale urban regeneration projects undertaken in partnership with the private sector)
- Identify and champion wider mechanisms for overcoming barriers inhibiting private sector-led urban renewal

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[316] Submission 38, Sydney Business Chamber, pp 2-3

[317] Sydney Business Chamber, Answer to follow-up question 1, correspondence to the Chair dated 27 June 2012

[318] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012, pp 195, 279 http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf

[319] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012, p 195, http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf accessed 11 September 2012

- Establish a centre for excellence within Government on transit oriented development and work with the private sector to deliver best practice examples of transit oriented development that demonstrate the social, environmental and economic benefits and address community concerns regarding increasing urban density

- Improve the rate of urban renewal across Sydney and the Greater Metropolitan Area, and meet housing production and employment growth targets while enhancing land use and transport efficiency and supporting economic growth and high quality of life.[320]

Committee comment

5.108 In the Committee's view, development of appropriate sites along and above the rail corridor would bring many benefits to the community and would have long-term economic, social and environmental benefits. As noted in chapter 3, evidence received by the Committee indicated that targeted projects with a focus on transit oriented development would benefit the community by improving access to public transport, which would reduce reliance on cars and resulting greenhouse emissions. It would also encourage sustainable urban renewal and reduce urban sprawl, and could provide a source of income for partial funding of future infrastructure projects and local infrastructure improvements.

Identifying sites for development

5.109 The Committee heard from inquiry participants on measures that would promote transit oriented development of sites along and above the rail corridor. A key step is identifying appropriate sites. In the Committee's view, an audit of land along the rail corridor is required to identify sites that are appropriate for development. As noted above, the Draft NSW Long Term Transport Master Plan states the Government's intention to consider sites for transit oriented development.

5.110 The Committee considers that this investigation of possible sites is key to effective utilisation of the rail corridor, in particular to promoting transit oriented development, where appropriate. The Committee envisages that the investigation of appropriate sites would focus on areas along principal transport corridors which are expected to experience urban growth and are targeted for urban renewal. The Committee considers that it is important that the assessment of potential sites along the rail corridor take into consideration the long term housing, transport and land use needs of the state. Existing and planned transport capabilities should be the principal consideration in determining locations.

5.111 The Committee encourages Transport for NSW and the Department of Planning and Infrastructure to prioritise the identification of rail transport nodes suitable for transit oriented development, based on compatibility with relevant plans including the Metropolitan Plan, the Transport Long Term Master Plan and the 20 year State Infrastructure Strategy. This would enable development that utilises

[320] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012, p 299, http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf accessed 11 September 2012

the rail corridor to be planned with regard to the existing capacity of public transport nodes, as well as forecasted urban growth. Once the sites have been identified they should be ranked in order of priority for development.

5.112 The Committee envisages that once the key sites have been determined, the task of promoting and delivering specific transit oriented developments, including developments over and adjacent to the rail corridor, would be executed by UrbanGrowth NSW, as recommended by the Committee.

RECOMMENDATION 5

That Transport for NSW and the Department of Planning and Infrastructure identify and prioritise rail transport nodes in the Greater Metropolitan Area of Sydney, including the Hunter and the Illawarra, that are appropriate for transit oriented development.

In conducting the assessment of sites, the agencies should have regard to relevant strategies and plans including the finalised Long Term Transport Master Plan, the Metropolitan Plan and the 20 year State Infrastructure Strategy.

Precinct plans and design principles for transit oriented development

5.113 The Committee heard that precinct planning and design principles would facilitate transit oriented development of designated sites. Inquiry participants expressed the view that precinct planning would help to assess important issues including land availability and the scope of any potential development, the objectives of development, how it would enhance the local community and align with transport and land use. Such planning would also enable consideration to be given to the future operational needs of the rail network, and transport to and through railway stations including interchange, walking, cycling and parking facilities. The Committee notes evidence from Transport for NSW indicating that this approach will be adopted for the North West rail link, through the appointment of a precinct planning working group. In the Committee's view, precinct plans should be developed for sites that have been identified for development, to ensure that the potential benefits of development are realised.

5.114 The Committee also agrees that principles to inform and give direction to the planning process should be developed. These principles should reflect best practice for transit oriented development, including mixed use development integrated with transport infrastructure, pedestrian friendly, liveable design. It is the Committee's view that these principles can be applied to all transport corridors, not just rail. The Committee has noted that there is potential to streamline the planning process through early identification of sites and reducing reliance on planning instruments. Transit oriented development guidelines would also assist developers with designing developments that meet certain requirements, thereby ensuring that potential community benefits are realised.

5.115 The Committee has recommended that a specialised unit within UrbanGrowth NSW be given responsibility for co-ordinating and managing such development. UrbanGrowth NSW's role would include working with developers to ensure

designs are responsive to community needs and deliver benefits to the local community.

RECOMMENDATION 6

That Transport for NSW and the Department of Planning and Infrastructure require precinct plans to be developed, in conjunction with local government, for each of the identified transit oriented development sites.

RECOMMENDATION 7

That, in undertaking its co-ordinating role (recommendation 1), UrbanGrowth NSW develop and promote best practice transit oriented development design principles.

Air space development

5.116 The Committee notes the challenges associated with development above the rail corridor. The high cost of construction, zoning and ownership of adjacent land can impact on the feasibility of projects. Inquiry participants emphasised the importance of careful assessment of the viability of such developments given their high cost. The Committee agrees that a rigorous assessment of the suitability of certain sites for air space development is key.

5.117 The Committee recognises that analysis of various factors, for instance the future needs of the rail network and rail infrastructure and whether air space development would be feasible in terms of long-term transport requirements, needs to be undertaken. These factors should be taken into account in identifying appropriate sites where air space development is feasible.

5.118 Giving a single body responsibility to manage identified development sites would assist with overcoming some of the difficulties associated with development in the air space above the rail corridor, by ensuring a co-ordinated approach to assessing the feasibility of developments, working with developers to obtain planning approvals and overcome construction difficulties.

FUNDING FOR FUTURE INFRASTRUCTURE PROJECTS

5.119 The Committee heard that there is potential for the government to raise money to fund current and future infrastructure projects through the use of value capture mechanisms. The Committee outlines these mechanisms in the following section.

Current development contributions framework and proposed reforms

5.120 Under the current planning system, section 94ED of the EPAA Act provides that the Minister may require a consent authority to impose a condition on the granting of development consent in relation to certain land. Under the Act, the Minister determines the level and nature of development contributions to be imposed as conditions for the provision of infrastructure in relation to a

development. The contribution may take the form of a levy of a percentage of the proposed cost of carrying out development.[321]

5.121 Proposed reforms to the planning system include changes to development contributions. The Green Paper states that the current tools available to fund the new infrastructure and facilities - including roads, drainage, and community facilities - that are required when new development occurs, are inefficient and inequitable. According to the Green Paper, the framework should be fairer and more transparent including by ensuring that infrastructure levies: contribute to cost-recovery; not compromise housing affordability; be competitive with other jurisdictions; reflect the cost of providing infrastructure; and spread costs over a broad base of beneficiaries.

5.122 The Paper states that reform is needed to simplify current administrative arrangements for contributions, as well as to resolve issues around the timing of development contributions and link development contributions to the delivery of infrastructure.[322]

Value capture

5.123 In answers to follow-up questions, Transport for NSW commented on value capture mechanisms, noting that the basic premise is that improved transport facilities will help to increase demand for property in the vicinity. Value capture mechanisms allow a portion of the resulting increase in land value to be returned to the state.

5.124 Transport for NSW saw value capture as working for both the private sector and the government by means of:

- Planning instruments: the Infrastructure SEPP assists in commercial value capture associated with the rail corridor by giving greater certainty in relation to timing of approvals and, subsequently physical delivery, which is of direct financial benefit to private sector developers.
- Development agreements: agreements between developers and the state detail how value is to be delivered - typically through a combination of new assets and cash.[323]

5.125 According to Transport for NSW, the combination of advantages to development embedded in planning instruments and the specific provisions of development agreements between state entities and the private sector consolidate the value

[321] EPAA, s 94EE. Section 94 ED defines the provision of infrastructure as including the provision, extension and augmentation of (or the recoupment of the cost of providing, extending or augmenting) public amenities or public services, affordable housing and transport or other infrastructure relating to land, and the funding of recurrent expenditure relating to the provision, extension and augmentation of public amenities or public services, affordable housing and transport or other infrastructure.

[322] NSW Government, *A New Planning System for NSW- Green Paper*, July 2012, pp 72-73, 76 http://planningreview.nsw.gov.au/LinkClick.aspx?fileticket=amJqcsb0YOQ%3d&tabid=103

[323] Transport for NSW, Answer to follow-up question 1, correspondence to the Chair dated 22 May 2012

capture opportunity: 'These mechanisms are not alternatives. Rather they work together to create value for government in commercial development.'[324]

5.126 In terms of the current approach, Transport for NSW advised that expert advice is sought to maximise value from commercial developments, with consideration being given to: benefits and risks associated with the site proposed for commercial value capture; tenure (typically leasehold or freehold); current or future zoning; and market acceptance of proposed opportunity, as the main drivers of value capture:

> TfNSW ensures maximum value is achieved through the formalised business case methodology and its reliance on both financial and economic benefit, along with open market procurement processes to ensure a competitive market.
>
> At all times, value capture opportunities remain a secondary consideration relative to the transport objectives.[325]

5.127 The Planning Institute of Australia expressed support for value capture mechanisms which would enable development of rail corridors to yield a return to the state, noting that these methods have 'been used in Portland, Oregon in the United States as a means of funding new rail infrastructure and the growth of new centres to accommodate population increases and new employment.'[326]

5.128 Infrastructure Partnerships Australia observed that 'budget capacity to invest in critical infrastructure has diminished, meaning that NSW has been unable to maintain the development of infrastructure at the same pace as the growth of the State.' They submitted that value capture is an opportunity for governments to increase funding options to maintain ongoing investment in infrastructure. New infrastructure, such as public transport, increases local property values, and governments can recoup some of this value and use it to offset the cost of current or future infrastructure:

> The concept of value capture is informed by the principles of equity and fairness in taxation as it seeks to ensure that the benefits of public infrastructure investment are shared by all of the community.
>
> The focus of value capture mechanisms - the financial value of infrastructure, is codependent on the utility value that patrons derive from its use. A reliable, efficient and fast train service is crucial to maximising the value that can be captured following the provision of infrastructure. Equally, high quality infrastructure services are critical to maximise the sustainability, liveability and productivity of NSW.[327]

5.129 Infrastructure Partnerships Australia outlined value capture mechanisms which 'utilise revenue from existing property taxation streams as a *financing* access mechanism for infrastructure investment and those that levy a new geographically limited tax on residents and businesses in order to generate an additional stream of *funding* for infrastructure projects':

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[324] Transport for NSW, Answer to follow-up question 1, correspondence to the Chair dated 22 May 2012
[325] Transport for NSW, Answer to follow-up question 2, correspondence to the Chair dated 22 May 2012
[326] Submission 56, Planning Institute of Australia NSW Division, pp 3-4
[327] Submission 51, Infrastructure Partnerships Australia, pp 4-5 (footnotes omitted)

- Tax Increment Financing (TIF) is a partial financing mechanism that allows governments to take tax revenues from future increases in property values within a prescribed geographic precinct and use tax revenue increases to obtain finance to fund transport infrastructure projects that will lead to, or add to, value appreciation.

- The government defines a TIF district, usually based on identification of infrastructure needs. Base property tax revenue in the district is then defined; this revenue base is a pre-TIF and pre-infrastructure investment level. The 'above base revenue' projection is used by government to borrow funds, usually through bonds tied to the particular investment, and use the income provided by the mechanism to partially repay the debt.

- The new infrastructure leads to increased economic activity and higher property values, and tax revenue generated by the precinct will increase. A portion of the difference between the tax revenue and the base tax level, set at the beginning of the TIF, is directed to servicing the debt used to fund the infrastructure.

- Benefit Assessment Districts (BAD) are discrete geographic precincts where land owners are likely to gain property value increases from investment to enhance transport infrastructure. The government can partially recover this value increase by levying a tax on local property owners and using the revenue to part-fund the infrastructure. The tax - collected annually on top of local property taxes - is generally determined by calculating anticipated or actual increases in property value.[328]

5.130 Infrastructure Partnerships Australia reflected that, although there are risks associated, such mechanisms can have several benefits, including:

- Encouraging sustained commitment to building planned infrastructure as, in order to realise property value uplifts and generate revenue to pay back the bonds issued to finance infrastructure, governments are required to deliver planned infrastructure. Governments are less likely to have their commitment eroded by competing priorities.

- Specific taxation mechanisms, created to generate funding for a discrete infrastructure project, mean that government has greater control over the design and implementation of the mechanism.[329]

5.131 However, it is relevant to note that revenue generated through these mechanisms is collected by local councils, while state significant infrastructure is under the jurisdiction of the state government: 'the effective implementation of value capture structures in NSW is likely to require a re-alignment of the way some taxation streams are levied and distributed in specified areas.'[330]

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[328] Submission 51, Infrastructure Partnerships Australia, pp 13-14

[329] Infrastructure Partnerships Australia, Answer to follow-up question 5, correspondence to the Chair dated 3 July 2012

[330] Submission 51, Infrastructure Partnerships Australia, p 16

5.132 The SMART Infrastructure Facility encouraged the use of market based financing to fund rail developments, noting that part-private funding has been used for Sydney's light rail and Melbourne's railway stations. The Facility reflected that increased property values resulting from construction of transport infrastructure could be viewed as offering a mechanism for self-funding investment in infrastructure. The Facility cited the study of a project involving land and rail infrastructure development in Western Australia, which found that 'the estimated financial benefit for the state was envisaged to offset a major portion of capital cost to construct the railway.' The Facility argued that 'proximity therefore to rail corridors can give rise to value uplift which in turn can contribute to development projects of the urban fabric and the transit system.'[331]

5.133 Willoughby City Council also noted that value capture could support investment in future rail infrastructure along with improvements to stations and rail corridor development. The Council submitted that value capture mechanisms should be linked to strategic planning to assess where development should occur:

> Such a system requires a clear strategic plan for where the development should occur to create new activity centres, assessment of the economic, environmental and social implications of the new centres, addressing probity issues for the transparent use of value capture/ sale of FSR [floor space ratio] mechanisms, ensuring that the projects are delivered efficiently and ensuring that the return from the value capture is hypothecated back to public transport rather than simply transferred to consolidated revenue.[332]

5.134 Inquiry participants observed that value capture funding could be used to ensure that the principles of transit oriented development are applied to rail corridor developments in NSW. Infrastructure Partnerships Australia noted that 'by including core TOD principles in the design of joint development projects, these value capture strategies can serve as a mechanism for the NSW Government to implement the principles of TOD in the areas surrounding NSW's train stations.'[333]

5.135 Mr Norman Johnston commented that revenue generation should be a primary consideration for transit oriented development projects:

> ...it is also about policy and the application of policy at the highest levels of the government not only to look at a project from its cost and estimation principles but also to look at that project from its revenue generating principles.
>
> In China they do it constantly. The Hong Kong line is looked at first as an opportunity and a business proposition. It is looked at second as an expense proposition.[334]

5.136 Developments are likely to require an individual approach, with mechanisms being tailored to fit the specific project. Infrastructure Partnerships Australia noted that the application of value capture mechanisms 'would require detailed consideration of local and broader community needs including the viability of the

[331] Submission 40, SMART Infrastructure Facility, University of Wollongong, p 10
[332] Submission 25, Willoughby City Council, p 6
[333] Submission 51, Infrastructure Partnerships Australia, pp 8-9
[334] Mr Norman Johnston, Transcript of evidence, 28 May 2012, p 31

particular project and location.'[335] Landcom noted that funding mechanisms should be tailored to encourage development:

> You need to ask whether there is value capture and if you ask for too much money that is a disincentive for any development to happen. If you look at the special infrastructure contributions happening in the north-west and south-west area you will find that those levies were previously too high and it killed off development. Now it is at the right level there will be good encouragement of development. It is an opportunity for the Government to capture some of that value and reinvest it into necessary infrastructure.[336]

5.137 Parsons Brinckerhoff Australia advised that the best examples of value capture involve state or local government using government owned land and air space, and acquiring additional land in key locations at market value before rezoning the land. Parsons Brinckerhoff Australia also noted that establishing a specific development authority could 'allow that entity to levy charges, institute tax incremental financing and lead joint development opportunities.'[337]

Other jurisdictions

5.138 Infrastructure Partnerships Australia provided several case studies of how some of the value capture mechanisms outlined above have been used in other jurisdictions, including the Washington metro project, summarised below:

> The Washington Metropolitan Area Transportation Authority (WMATA) is a state transit agency using a suite of value capture financing mechanisms to fund infrastructure projects. Unlike many other state transit agencies, the WMATA does not have a dedicated revenue source, aside from fare box revenue; in 2007 state and Federal government funds only comprised 37 per cent of the agency's revenue base. As a result the WMATA has come to rely on a number of innovative funding mechanisms in order to maintain and expand their network.
>
> ... WMATA has utilised BADs [Benefit Assessment Districts] to help fund the Dulles Corridor Metrorail Project. The project is a 37 kilometre extension of the existing Metrorail, which will service ... Virginia's two largest employment's centres and provide a one seat connection from Dulles Airport to downtown Washington. The project, which is being completed in 2 phases ... is budgeted to cost US$5.2 billion ...
>
> ... just over 16 per cent of the entire project's funding is coming from the creation of a BAD in Fairfax County. For phase 1 of the project, the BAD, known as the Transportation Improvement District, has resulted in a tax levied on commercial and industrial properties near to stations and the land running along the corridor in the Fairfax County. The imposition of this BAD was voluntary, a petition of 51 per cent of commercial and industrial real estate property owners was required for the BAD to be approved27. Once approved the BAD resulted in all owners of commercial or industrial property, within the BAD, charged 22 cents of every $100 of assessed value increases in the real estate value of their properties.

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[335] Infrastructure Partnerships Australia, Answer to follow-up question 5, correspondence to the Chair dated 3 July 2012

[336] Mr Mick Owens, General Manager, Urban Development, Landcom, Transcript of evidence, 28 May 2012, p 22

[337] Parsons Brinckerhoff Australia, Answer to follow-up question 4, correspondence to the Chair dated 29 June 2012

> ... the use of a BAD was not sufficient to finance the entire project. Nonetheless the project emphasises that the use of these mechanisms, alongside a suite of other funding sources and mechanisms, can play an important role in generating the needed funding for a project. Given the huge size of most transport infrastructure projects, particularly rail, the use of these mechanisms represents an important opportunity to access new sources of funding and financing which largely hasn't been explored in NSW.[338]

Draft NSW Long Term Transport Master Plan

5.139 The Draft Long Term Transport Master Plan signals the Government's intention to introduce measures to capture a share of the additional value that accrues to land and property as a result of transport infrastructure.[339] According to the Draft Plan, Transport for NSW has reviewed measures introduced in other countries, and identified options with potential to be applied in NSW, including:

- Tax increment financing (TIF) in Chicago where there are presently 130 TIF districts which account for approximately 29 percent of the city's area and approximately 19 percent of the property tax base
- Developer contributions in the UK where a charge is dependent upon the scale of development
- North Sydney station upgrade where the collectable amount is linked to the amount of increased floor space approved by the North Sydney City Council and the Western Sydney Growth Area contribution
- Transit joint development (TJD) in Washington where joint development projects include revenue producing schemes (air rights leasing and station-retail connections) and costsharing arrangements. TJD is also operational in Toronto subway, and Mass Transit Railway (MTR) in Hong Kong, generating a significant revenue stream for MTR
- Transport levies are imposed in Sunshine Coast and in France to raise capital for investment in local public transport infrastructure.[340]

State Infrastructure Strategy 2012-2032

5.140 Infrastructure NSW's State Infrastructure Strategy makes recommendations for priority infrastructure investments over the next 20 years, and discusses the funding and delivery of this infrastructure. The Strategy notes that NSW Government spending on infrastructure has doubled since 2006, amounting to $15 billion per year, and that there is limited scope to further increase spending.[341]

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[338] Submission 51, Infrastructure Partnerships Australia, pp 17-18

[339] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012, p 324, http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf accessed 13 September 2012

[340] Transport for NSW, *Draft NSW Long Term Transport Master Plan*, September 2012, p 331, http://www.transport.nsw.gov.au/sites/default/files/b2b/publications/TfNSW-LTTMP-Digital-Print-version.pdf accessed 13 September 2012

[341] Infrastructure NSW, *First things first: State Infrastructure Strategy 2012-2032*, October 2012, p 198 http://www.infrastructure.nsw.gov.au/media/17009/sis_report_section16.0_print.pdf accessed 3 October 2012

5.141 In order to deliver key infrastructure in an affordable way, Infrastructure NSW recommends using several funding strategies, including: motorway tolls; asset sales; reducing transport subsidies; reprioritising capital plans; Commonwealth contributions; and value capture where feasible. In terms of funding through value capture, the Strategy states that:

> "Value capture" mechanisms have been devised which can contribute to the funding for new projects. Most of these schemes involve a charge on owners of assets whose value is enhanced by new infrastructure provision. Examples include the special business rate levy in the City of London to support Crossrail and the rates supplement on the Gold Coast to contribute towards the construction of light rail.
>
> Challenges for value capture mechanisms include identifying the beneficiaries, quantifying the gains and crystallising cashflows to Government. In the short term, value capture will not provide a substitute for the other funding strategies set out in this section.[342]

5.142 Infrastructure NSW concludes that it 'supports the use of targeted value capture mechanisms, including special purpose property levies, in situations where there is a clear link to new infrastructure.'[343]

Committee comment

5.143 The Committee heard evidence regarding the potential benefits to the state from the use of value capture mechanisms to fund developments along the rail corridor. The Committee considers that the cost of providing major transport infrastructure makes these mechanisms particularly relevant to developments along the rail corridor. Such mechanisms should be utilised where possible, to ensure that long-term value accruing from publicly funded infrastructure projects is captured and used to fund future infrastructure. As noted above, Infrastructure NSW's recently released State Infrastructure Strategy identified targeted value capture as one of the funding strategies that would contribute to sustainable funding of key infrastructure projects.

5.144 The Committee received evidence on the way in which value capture can be used to encourage transit oriented development of sites along the rail corridor. The Committee supports the integration of land use and transport through transit oriented development of suitable sites along the rail corridor, and encourages the Government to further explore these options. In this regard, the Committee notes that the Draft Long Term Transport Master Plan indicates that a review of appropriate value capture measures has been undertaken by Transport for NSW. The Committee also notes that the current review of the planning system proposed changes to the current framework whereby development contributions are levied to fund infrastructure.

5.145 The Committee notes the work that has already been undertaken and considers that NSW Treasury should investigate value capture mechanisms with the aim of generating funding for future infrastructure projects. The Committee envisages

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[342] Infrastructure NSW, *First things first: State Infrastructure Strategy 2012-2032*, October 2012, pp 198, 202 http://www.infrastructure.nsw.gov.au/media/17009/sis_report_section16.0_print.pdf accessed 3 October 2012

[343] Infrastructure NSW, *First things first: State Infrastructure Strategy 2012-2032*, October 2012, p 202 http://www.infrastructure.nsw.gov.au/media/17009/sis_report_section16.0_print.pdf accessed 3 October 2012

that UrbanGrowth NSW would work to promote and implement models for funding and financing rail corridor development, including value capture mechanisms, so that the most appropriate model is used for each development.

RECOMMENDATION 8

That NSW Treasury examine ways to implement value capture mechanisms for transit oriented development precincts, in order to generate funding for future infrastructure projects.

Appendix One – List of Submissions

1	Mr David Lemcke
2	Western Sydney Regional Organisation of Councils
3	Mr Grant Banner
4	Mr Stanley Wong
5	Wyong Shire Council
6	Mr Kevin Conolly MP
7	Mr Jonathan O'Dea MP
8	Liverpool City Council
9	Johnston Enterprises & Certain Planning
10	Fairfield City Council
11	Hunter Independent Public Transport Inquiry
12	Penrith City Council
13	Save Leamington Avenue Inc
14	Walking Volunteers
15	Central and North Miranda Precinct Residents Association
16	Newcastle Cycleways Movement Inc
17	Hunter Transport for Business Development
18	Dr James Thompson
19	National Trust of Australia (New South Wales)
20	Mr E C Sage
21	Ms Tania Mihailuk MP
22	Regional Development Australia - Illawarra
23	Mr John Watt
24	The Rail, Tram and Bus Union
25	Willoughby Council
26	Gosford City Council
27	Wollongong City Council
28	Save Our Rail NSW Inc
29	Ms Janine Kitson
30	Tourism and Transport Forum
31	Australian Institute of Architects

32	Parramatta City Council
33	Sutherland Shire Council
34	Mr Rick Banyard
35	Holroyd City Council
36	Lane Cove Council
37	Go! Alliance
38	Sydney Business Chamber
39	Ku-ring-gai Council
40	SMART Infrastructure Facility, University of Wollongong
41	Commuter Council of NSW
42	Campbelltown City Council
43	NSW Business Chamber
44	Confidential
45	Ku-ring-gai Historical Society Inc
46	Rockdale City Council
47	Lake Macquarie City Council
48	Bankstown City Council
49	Mrs Carolyne Hardwick
50	Regional Development Australia - Hunter
51	Infrastructure Partnerships Australia
52	Hunter Tomorrow Inc
53	City of Sydney
54	Bike North Inc
55	The City of Newcastle
56	Planning Institute Australia New South Wales Division
57	Ms Joan Dawson
58	Transport for NSW
59	Wollstonecraft Precinct
60	Name suppressed
61	Department of Planning and Infrastructure
62	City of Ryde
63	Mr Martin Krause
64	Ms Ann Young

Appendix Two – List of Witnesses

26 March 2012, Parliament House

Witness	Position and Organisation
Mr Les Wielinga	Director General
Mr Tim Reardon	Deputy Director General, Policy and Regulation
Ms Carolyn McNally	Deputy Director General, Planning and Programs
	Transport for NSW
Mr Rob Mason	Chief Executive
Mr Kevin Sykes	General Manager, Property
Mr David Spiteri	General Manager, Asset Planning and Performance
	RailCorp
Mr Giovanni Cirillo	Executive Director, Urban Renewal and Major Sites
	Department of Planning and Infrastructure
Mr Peter Brown	General Manager
Mr Wayne Rylands	Executive Manager, Open Space and Urban Services
Mr Brian O'Dowd	Manager, Urban Design
	Lane Cove Council
Mr Nick Tobin	General Manager
Ms Noni de Carvalho	CBD Place Manager
	Willoughby City Council
Mr Greg Woodhams	NSW Policy Convenor
Mr Ingo Koernicke	Senior Environmental Scientist
	Planning Institute of Australia (NSW Division)
Mr Andrew McCusker	Director, Rail Logistics
Ms Tania Brown	Chief Operating Officer
	SMART Infrastructure Facility, University of Wollongong

28 May 2012, Parliament House

Witness	Position and Organisation
Mr Roy Wakelin-King	Chief Executive Officer *Sydney Metropolitan Development Authority*
Mr Brendan Lyon Mr Adrian Dwyer	Chief Executive Officer National Manager, Policy *Infrastructure Partnerships Australia*
Mr Mick Owens	General Manager, Urban Development (Oran Park) *Landcom*
Mr Norman Johnston	Principal *Johnston Enterprises*
Mr Robert Senior	Director *Certain Planning*
Mr Paul Tosi Mr John Hely Mr Jeff Lawrence	General Manager Director City Works Director Planning and Environment *Campbelltown City Council*
Hon Patricia Forsythe	Executive Director *Sydney Business Chamber*
Mr David Stuart-Watt	Regional Director NSW *Parsons Brinckerhoff*

Appendix Three – Visit of inspection

Monday, 2 July 2012
Melbourne, Victoria

On 2 July 2012, a delegation of the Committee travelled to Melbourne as part of the inquiry into the utilisation of rail corridors. The purpose of the visit was to meet with stakeholders who have responsibility for planning transit oriented development projects.

Two Committee members (Mr Charles Casuscelli MP, Mr Tim Owen MP) and one staff member (Ms Helen Minnican) attended the visit.

Places Victoria

The Committee met with the following people:

- Greg Antoniadis, GM Metropolitan Development
- James Gallagher, Development Director

VicTrack

The Committee met with the following people:

- Tania Orr - VicTrack, General Manager Property
- Jim Dolkas – VicTrack, Development Director
- Peter Greenwood – Chief of Staff, Minister for Public Transport

Southern Cross Station

The Committee met with the following people:

- Daniel Blakemore, Senior Manager, Partnerships Victoria, Commercial Division, Department of Treasury and Finance
- Tony Johnson, Commercial Director, Department of Transport

Partnerships Victoria

The Committee met with Daniel Blakemore, Senior Manager, Partnerships Victoria, Commercial Division, Department of Treasury and Finance.

Appendix Four – Extracts from Minutes

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 3)

9:05 a.m., Thursday 25 August 2011
Room 1136, Parliament House

Members Present

Mr Casuscelli, Ms Mihailuk, Mr Owen, Mr Piper.

Apologies

An apology was received from Mr Toole.

*****

2. Final List of Priorities for Future Inquiries of the Committee

*****

The Committee agreed that it would focus on the following topics as major projects throughout the parliamentary session:

*****

2. The potential of redeveloping air space in rail corridors to generate revenue for infrastructure funding;

*****

3. Discussion of Reports

Committee Members noted the following reports distributed by request of the Chair prior to the meeting:

*****

- Rail Air Space Discussion Paper prepared by Johnston Enterprises Australia Pty. Ltd.

*****

The Committee adjourned at 9.36 a.m. until 9.30 a.m. on Thursday 15 September 2011.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 4)

9:34 am, Thursday 15 September 2011
Room 1136, Parliament House

Members Present

Mr Casuscelli, Ms Mihailuk, Mr Owen, Mr Piper, Mr Toole.

Also in attendance

Mr Norman Johnston, Mr Robert Senior.

1. Briefing on rail corridor air space

Mr Norman Johnston, Director, Johnston Enterprises Australia Pty Ltd, and Mr Robert Senior made a presentation to Committee members on the utilisation of rail corridor air space. The Chair thanked Mr Johnston and Mr Senior who then withdrew.

*****

The Committee adjourned at 10.20am.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 7)

9:08 am, Wednesday 23 November 2011
Room 1136, Parliament House

Members Present

Mr Casuscelli (Chair), Mr Owen (Deputy Chair), Ms Mihailuk, Mr Piper and Mr Toole.

*****

3. Consideration of draft terms of reference for inquiries

a) Inquiry into the utilisation of rail corridors

The Committee discussed the draft terms of reference for the inquiry.

Resolved, on the motion of Mr Owen, seconded by Mr Piper:

That the Committee inquire into and report on the utilisation of air space above, and the land adjacent to, the rail corridor in the Greater Metropolitan Area of Sydney.

Matters may include, but are not limited to, how rail corridors might contribute to:

- providing opportunities for mixed use property development;
- generating income for funding future infrastructure projects;
- facilitation of transit oriented development schemes around railway stations;
- connectivity of communities either side of railway lines.

Other areas of inquiry will include:

- the current planning and policy framework;
- regulatory and policy barriers to implementing rail corridor projects;

- issues relating to the financing and funding of such projects;
- methods of assessing the compatibility of projects with the local community;
- examples of best practice from other jurisdictions.

Mr Owen suggested that areas outside the Greater Metropolitan Area of Sydney also be included in the terms of reference.

Discussion ensued.

Resolved, on the motion of Mr Owen, seconded by Ms Mihailuk:

That the first paragraph of the terms of reference be amended by adding "including Newcastle and Wollongong".

Further discussion ensued.

Resolved, on the motion of Mr Owen, seconded by Mr Piper:

That the terms of reference be amended by replacing "Newcastle" with "the Hunter" and "Wollongong" with "the Illawarra".

*****

4. Planning for rail corridor inquiry: timetable, list of stakeholders and media release

The Committee discussed the indicative timetable, list of stakeholders and media release for the inquiry into the utilisation of rail corridors.

Resolved, on the motion of Mr Owen, seconded by Mr Piper:

That the Committee advertise the call for submissions to the inquiry on the Committee website by 24 November 2011, in the *Sydney Morning Herald* and write to relevant stakeholders with a closing date for submissions of 29 February 2012.

The Committee noted the draft media release.

The Committee adjourned at 9.35 am until a time and date to be fixed.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 8)

9.04 am, Thursday 23 February 2012
Room 1254, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper

Apology

An apology was received from Mr Toole

*****

3. Inquiry into rail corridor developments

a) Update on recent media coverage

The Committee noted the media articles from St George and Sutherland Shire Leader (dated 17 January 2012) and Sydney Morning Herald (dated 18 February 2012) regarding the Committee's inquiry.

b) Update on recent meetings

The Chair informed the Committee of a meeting with Lane Cove Council on 3 February 2012 regarding a proposed rail corridor development at St Leonards.

c) Acceptance of submissions

Resolved, on the motion of Mr Owen, seconded by Ms Mihailuk:

That submissions 1-12 be accepted and published on the Committee's website.

d) Correspondence

The Committee noted the correspondence from Mr David Elliot MP.

e) Newsletter for Members of Parliament

The Committee noted the draft newsletter to be distributed to Members of Parliament highlighting the role and current work of the Committee. The Committee agreed that further editions of the newsletter would be produced as needed.

*****

The Committee adjourned at 9.50 am until a time and date to be determined.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 9)

5.04 pm, Wednesday 7 March 2012
Room 1254, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper, Mr Toole

*****

2. Inquiry into the utilisation of rail corridors

a) Acceptance of submissions

Resolved, on the motion of Mr Toole, seconded by Mr Owen:

That submissions 13-58 be accepted and published on the Committee's website.

b) Potential witnesses and hearing dates

The Committee discussed potential witnesses and agreed to hear from the following:

State Government agencies: Transport for NSW (Submission No 58); RailCorp; Department Planning and Infrastructure; NSW Long Term Transport Master Plan representatives; Sydney Metropolitan Development Authority

Local Government: Willoughby City Council (Submission 25); Lane Cove Council (Submission 35); Campbelltown City Council (Submission 42); Strathfield Council; and Bankstown City Council (Submission 48), should another council not be available.

Stakeholders: Norman Johnston & Robert Senior (Submission 9); Cheung Kong (Holdings) Limited (Submission 44); Infrastructure Partnerships Australia (Submission 51); NSW Business Chamber (Submission 43); SMART Infrastructure Facility, University of Wollongong (Submission 40); Planning Institute of Australia (Submission 56).

The Committee agreed to hold the first public hearing of the inquiry on Monday 26 March 2012 from 10.30 am until 5.30 pm.

1. General Business

The Chair informed Committee members that feedback on the Committee's newsletter had been positive. He also advised that Ms Carolyn McNally, Chairperson, Long Term Transport Master Plan Advisory Group, had indicated her availability to address the Committee regarding its inquiry into the utilisation of rail corridors.

The committee adjourned at 5.38 pm until 10.30 am on Monday 26 March 2012.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 10)

10.42 am, Monday 26 March 2012

Room 814/815, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper, Mr Toole

*****

1. Inquiry into utilisation of rail corridors

Submissions

Resolved, on the motion of Ms Mihailuk, seconded by Mr Piper:

That submissions 59 and 61 be accepted and published on the Committee's website.

2. Public hearing

The Chair opened the public hearing.

Mr Les Wielinga, Director General, Ms Carolyn McNally, Deputy Director General Planning and Programs and Mr Tim Reardon, Deputy Director General Policy and Regulation of Transport for NSW were sworn and examined. Evidence completed, the witnesses withdrew.

Mr Rob Mason, Chief Executive of RailCorp was affirmed and examined. Mr Kevin Sykes, General Manager Property and Mr David Spiteri, General Manager Asset Planning and Performance of RailCorp were sworn and examined. Evidence completed, the witnesses withdrew.

Mr Giovanni Cirillo, Executive Director Urban Renewal and Major Sites of Department of Planning and Infrastructure was affirmed and examined. Evidence complete, the witness withdrew.

Mr Peter Brown, General Manager of Lane Cover Council was affirmed and examined. Mr Wayne Rylands, Executive Manager Open Space and Urban Services and Mr Brian O'Dowd Manager Urban Design of Lane Cove Council were sworn and examined. In support of his evidence, Mr Brown tabled a copy of PowerPoint slides entitled 'St Leonards Bus/Rail Interchange and Plaza'. Evidence complete, the witnesses withdrew.

Mr Nick Tobin, General Manager and Ms Noni de Carvalho, Chatswood CBD Place Manager of Willoughby City Council were sworn and examined. Evidence complete, the witnesses withdrew.

Mr Greg Woodhams, Vice-President and Mr Ingo Koernicke, Senior Environmental Scientist of the Planning Institute of Australia (NSW Division) were sworn and examined. Evidence complete, the witnesses withdrew.

Mr Andrew McCusker, Director Rail Logistics and Ms Tania Brown, Chief Operating Officer of the SMART Infrastructure Facility at the University of Wollongong were sworn and examined. Evidence complete, the witnesses withdrew.

The Chair closed the hearing.

*****

4. Inquiry into utilisation of rail corridors

a) Submissions

Resolved, on the motion of Mr Toole, seconded by Mr Owen:

That submission 60 be accepted and published on the Committee's website with the author's name suppressed.

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That submission 44 be treated as a confidential submission.

Resolved, on the motion of Mr Toole, seconded by Mr Owen:

That the amendment to submission 51 to clarify an ambiguity, as requested by Infrastructure Partnerships Australia, be accepted.

b) Update on recent media coverage

The Committee noted the media articles from the *Daily Telegraph* (dated 9 March 2012) and the *Railway Digest* (dated March 2012) regarding the Committee's inquiry.

c) Documents tendered at hearing

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That the PowerPoint presentation slides tabled by Mr Brown from Lane Cove Council be accepted as evidence of the witness and published on the Committee's website.

d) Publication of hearing transcript

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That the transcript of the hearing on 26 March 2012 is published once witnesses have had the opportunity to correct the transcript for inaccuracies.

The Committee adjourned at 4.53 pm until a time and date to be determined.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 11)

5.06 pm, Wednesday 3 April 2012
Room 1254, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Toole

Apologies

Mr Piper

*****

2. Inquiry into the utilisation of rail corridors

a) Submissions

*****

ii. Publication of Submission No. 51 on Infrastructure Partnerships Australia website
The Chair advised members that Infrastructure Partnerships Australia had sought the Committee's permission to put a copy of their submission on their own website.

Resolved on the motion of Mr Owen, seconded by Mr Toole:

That Infrastructure Partnerships Australia be allowed to publish a copy of their submission (Submission No. 51) on their website.

b) Hearings

i. Corrections to transcript
The Chair reminded members to forward any corrections to the 26 March hearing transcript to the secretariat by Thursday 5 April. He advised that after this time the corrected transcript would be published on the Committee's webpage.

ii. Proposed questions on notice
Lists of unasked questions on notice for each organisation appearing at the 26 March hearing were circulated to members at the meeting. The Chair invited members to send any additional questions on notice for the witnesses to the secretariat by Wednesday 11 April.

iii. Proposed dates for next hearing
Members discussed a date for the next hearing and agreed to hold a hearing on Monday 28 May 2012. Members reviewed the witnesses who had not yet appeared and it was agreed to invite Sydney Metropolitan Development Authority, Campbelltown City Council, Norman Johnston & Robert Senior, Infrastructure Partnerships Australia, the NSW Business Chamber and Cheung Kong (Holdings) Limited. It was also agreed that Mr Owen should approach Newcastle City Council to ascertain whether they wished to give evidence.

c) Update on recent media coverage

The members noted articles from the *Sydney Morning Herald*, dated 27 and 28 March 2012.

d) Proposed visits of inspection

Members discussed possible visits of inspection to Brisbane and Melbourne and also to Hong Kong and Oakland, California.

Resolved on the motion of Mr Owen, seconded by Mr Toole:

That the Chair seek the agreement of the House to modify the resolutions establishing the Committee to allow it to undertake visits of inspection overseas for the purposes of the inquiry into the utilisation of rail corridors.

The committee adjourned at 5.32 pm.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 12)

10.03 am, Monday 28 May 2012
Waratah Room, Parliament House

Members present

Mr Casuscelli (Chair), Mr Owen, Mr Toole

Apologies

Ms Mihailuk, Mr Piper

*****

3. Public hearing – Inquiry into the utilisation of rail corridors

The Chair opened the public hearing.

Mr Roy Wakelin-King, Chief Executive Officer, Sydney Metropolitan Development Authority was sworn and examined. Evidence completed, the witness withdrew.

Mr Brendan Lyon, Chief Executive Officer, Infrastructure Partnerships Australia, and Mr Adrian Dwyer, Director Policy, Infrastructure Partnerships Australia were affirmed and examined. Evidence completed, the witnesses withdrew.

Mr Mick Owens, General Manager, Urban Development, Landcom was sworn and examined. Evidence completed, the witness withdrew.

Mr Norman Johnston, Principal, Johnston Enterprises and Mr Robert Senior, Director Certain Planning were sworn and examined. In support of his evidence, Mr Senior tabled a document entitled Indicative policy palette for TOD air space development. Evidence completed, the witnesses withdrew.

Mr Paul Tosi, General Manager, Mr John Hely, Director City Works, and Mr Jeffrey Lawrence, Director Planning and Environment, Campbelltown City Council, were sworn and examined. Evidence completed, the witnesses withdrew.

The Hon. Patricia Forsythe, Executive Director, Sydney Business Chamber was sworn and examined. Evidence completed, the witness withdrew.

Mr David Stuart-Watt, New South Wales Regional Director, Parsons Brinckerhoff was affirmed and examined. In support of his evidence, Mr Stuart-Watt tabled three documents: a copy of PowerPoint slides entitled 'Power of TOD' and 'Opportunities for Transforming Sydney's

Integrated Transit', and two documents entitled 'Community Placemaking' and 'International TOD Lessons Learned'. Evidence completed, the witness withdrew.

The Chair closed the hearing.

*****

3. Inquiry into the utilisation of rail corridors

a) Hearing transcript

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That the transcript of the hearing on 28 May 2012 be published on the Committee's website once witnesses have had the opportunity to correct the transcript for inaccuracies.

b) Acceptance of tabled documents

Resolved, on the motion of Mr Toole, seconded by Mr Owen:

That the documents tabled by Mr Senior and Mr Stuart-Watt be published on the Committee's website.

c) Follow-up questions

Resolved, on the motion of Mr Toole, seconded by Mr Owen:

That follow-up questions are sent to each witness from the day's hearing after they have been circulated to Committee members for approval.

d) Submissions

i. New submissions

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That submissions 62-64 be accepted and published on the Committee's website.

ii. Publication of submission 2 on WSROC's website

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That the Western Sydney Regional Organisation of Councils (WSROC) be allowed to publish a copy of their submission on their website.

e) Additional questions from 26 March 2012 public hearing

Resolved, on the motion of Mr Owen, seconded by Mr Toole:

That the responses to additional questions from Willoughby City Council, the Department of Planning and Infrastructure, the Planning Institute of Australia (NSW Division), RailCorp, Lane Cove Council and Transport for NSW are published on the Committee's website.

f) Update on recent media coverage

Members noted an article from the Newcastle Herald dated 28 March 2012

g) Proposed visits of inspection

The Committee discussed sites in Perth, Melbourne and Brisbane nominated by witnesses as possible visits of inspection. The Committee agreed to discuss the matter further at its next meeting following additional information on these sites being provided by the secretariat.

h) Correspondence

Members noted correspondence from Canterbury City Council and that a response had been sent on 18 April 2012.

The Committee adjourned at 4.28 pm until 5.00 pm on Wednesday 13 June 2012.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 13)

5.03 pm, Wednesday 13 June 2012
Room 1136, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper, Mr Toole

*****

2. Inquiry into the utilisation of rail corridors

a) Follow-up questions from 28 May 2012 public hearing

Members noted the draft letters to witnesses with follow-up questions from the hearing.

b) Follow-up questions from 26 March 2012 public hearing

Resolved, on the motion of Mr Owen, seconded by Mr Piper:

That the responses to follow-up questions from the SMART Infrastructure Facility be published on the Committee's website.

c) Proposed visits of inspection

The Committee discussed possible visits of inspection to meet with agencies and inspect best practice transit-orientated developments in Perth, Melbourne and Brisbane. All Committee members were invited to participate in the visits.

Mr Piper advised the Committee that he would be unable to attend any visits during July as he was already committed to another trip. He undertook to report back to the Committee with any lessons learnt about transit-orientated developments during his trip. Ms Mihailuk also advised that she would be unavailable.

Resolved, on the motion of Mr Piper, seconded by Mr Toole:

That the Chair seek the approval of the Speaker for interested Committee members to travel to Melbourne, Brisbane and Perth in July 2012 to visit sites related to the Committee's inquiry into the utilisation of rail corridors.

The Committee adjourned at 5.28 pm until 5.00 pm on Wednesday 20 June 2012.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 14)

5.05 pm, Wednesday 21 November 2012
Room 1254, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper

Apologies

Mr Toole

*****

2. Inquiry into the utilisation of rail corridors

a) Site visit

The Committee discussed the visit of inspection to Melbourne on 2 July 2012.

The Chair and Mr Piper reported back to the Committee regarding their private visits to Seoul.

Discussion ensued.

b) Consideration and publication of answers to follow-up questions

Resolved, on the motion of Mr Piper, seconded by Mr Owen:

That the answers to follow up questions from the following witnesses at the 28 May 2012 public hearing for the Committee's inquiry into the utilisation of rail corridors be published on the Committee's website:

- Mr Robert Senior
- Infrastructure Partnerships Australia
- Mr David Stuart-Watt, Parsons Brinckerhoff
- Sydney Metropolitan Development Authority
- Landcom
- Campbelltown City Council
- Sydney Business Chamber.

c) Consideration of Chair's draft report

Consideration of the report was deferred until 9:00am, Thursday 22 November 2012.

*****

The Committee adjourned at 5.34 pm until 9.00 am on Thursday 22 November 2012.

MINUTES OF PROCEEDINGS OF THE COMMITTEE ON TRANSPORT AND INFRASTRUCTURE (NO. 15)

9:10am, Thursday 22 November 2012

Library Conference Room, Parliament House

Members present

Mr Casuscelli (Chair), Ms Mihailuk, Mr Owen, Mr Piper

Apologies

Mr Toole

1. Consideration of Chair's draft report: inquiry into the utilisation of rail corridors

Resolved, on the motion of Mr Owen: That Finding 1 be adopted.

Resolved, on the motion of Mr Owen: That Recommendation 1 be adopted.

Resolved, on the motion of Mr Piper: That the fifth dot-point in recommendation 2, which reads 'Examining ways to minimise risk for developers', be omitted.

Resolved, on the motion of Mr Piper: That Recommendation 2, as amended, be adopted.

Resolved, on the motion of Mr Piper: That Recommendation 3 be amended by inserting the words 'consistent with statutory requirements' after the word 'timeframes'.

Resolved, on the motion of Mr Piper: That Recommendation 3, as amended, be adopted.

Mr Owen moved: That Recommendation 4 be adopted.

Question put.

The Committee divided.

Ayes: Mr Casuscelli, Mr Owen, Mr Piper.

Noes: Ms Mihailuk.

Question resolved in the affirmative.

Resolved, on the motion of Mr Owen: That Recommendation 5 be adopted.

Resolved, on the motion of Mr Piper: That Recommendation 6 be amended by inserting the words 'in conjunction with local government' after the word 'developed'.

Resolved, on the motion of Mr Piper: That Recommendation 6, as amended, be adopted.

Resolved, on the motion of Mr Owen: That Recommendation 7 be adopted.

Resolved, on the motion of Mr Owen: That Recommendation 8 be adopted.

Resolved, on the motion of Mr Piper: That the report, as amended, be the report of the Committee and that it be signed by the Chair and tabled in the House.

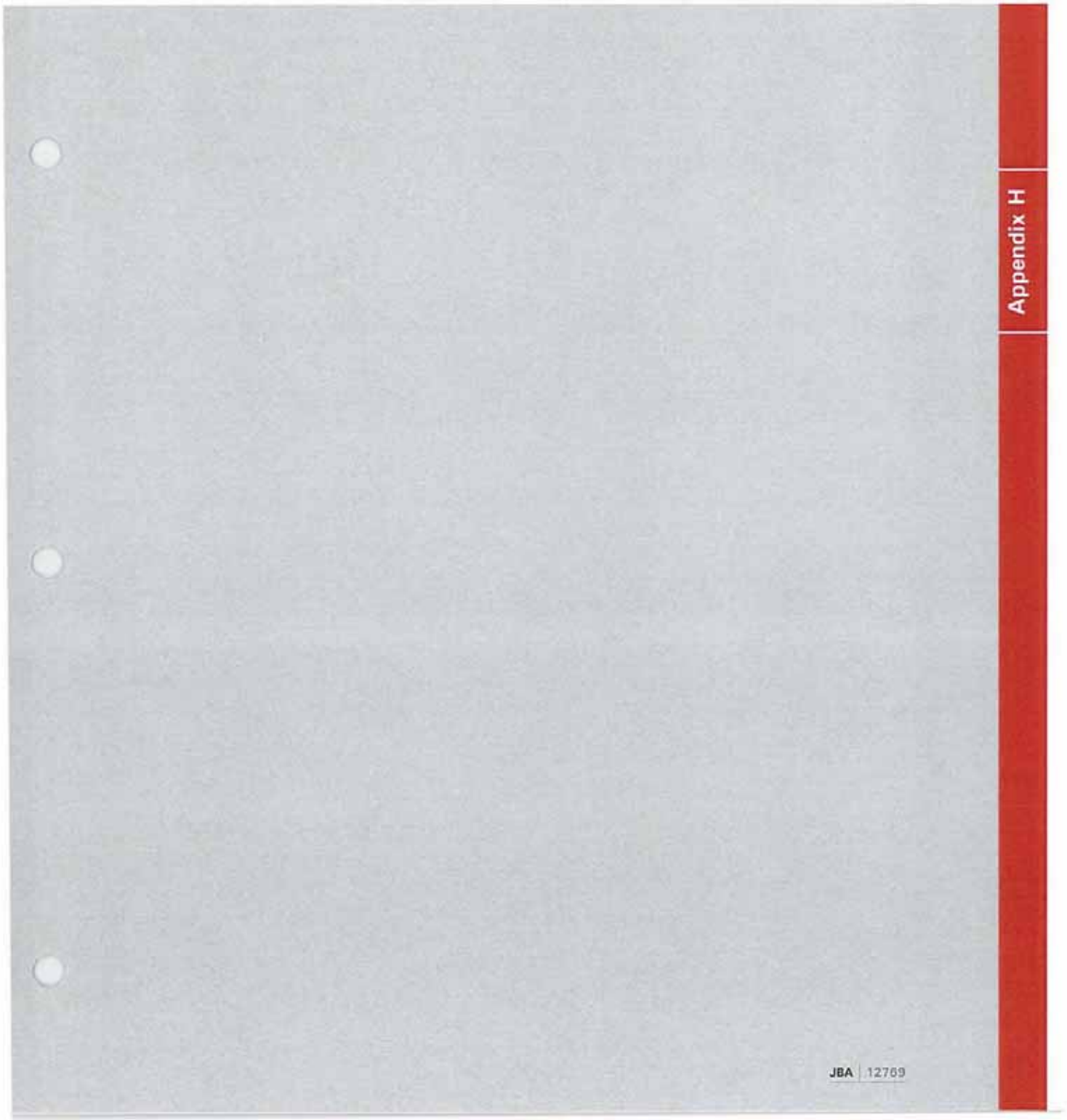
Resolved, on the motion of Mr Owen: That the Chair and Committee staff be permitted to correct any stylistic, typographical and grammatical errors.

Resolved, on the motion of Mr Owen: That, once tabled, the report be published on the Committee's website.

The Committee adjourned at 9:35am until a date to be determined.

Macquarie Park Rail Station
High Level Demand Assessment

AECOM



Macquarie Park Rail Station
High Level Demand Assessment

Prepared for Mirvac to accompany submission for 271 Lane Cove Road, Macquarie Park

11th October 2013

Final Draft

AECOM

Disclaimer

This document was prepared by AECOM, for the purpose of providing high level rail demand estimates for Macquarie Park station to accompany its submission of a planning proposal to rezone 271 Lane Cove Road, Macquarie Park. The findings herein have been prepared for the sole use of Mirvac and no other parties may rely on them.

AECOM have devoted professional efforts in the preparation of this document and the findings represent our best judgment on the information available. While reasonable effort has been made to ensure the accuracy of this document, AECOM have relied on publicly available information and is not responsible for the accuracy or completeness of this material. AECOM are unable to provide any warranties in relation to the information contained herein and provides no assurances that the information documented will be achieved to any extent and notes that actual outcomes could vary materially.

The following caveats are applicable to the analysis of the Macquarie Park rail demand described in this document:

- Demand estimates have been based on a desktop catchment analysis using latest publically available data
- No detailed demand modelling has been undertaken
- Demand estimates assume similar travel characteristics to present day

Finally, this document is confidential and intended for use by the addressee only. The confidential nature of the information contained in the document is not waived, lost or destroyed if it is sent to other than the addressee.

Introduction

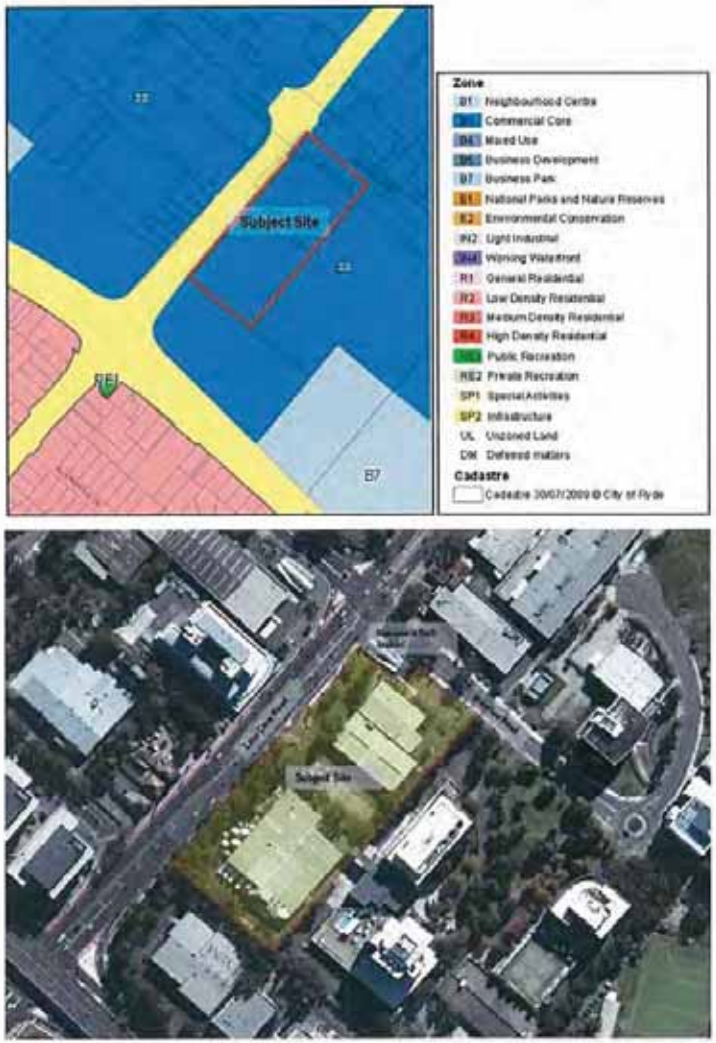
AECOM has been engaged by Mirvac to provide a high level analysis of rail passenger demand at Macquarie Park rail station to accompany its submission of a planning proposal to rezone 271 Lane Cove Road, Macquarie Park (the subject site).

Mirvac proposes to have the subject site rezoned from B3 Commercial Core to B4 Mixed Use in the City of Ryde Local Environmental Plan 2010 to provide a landmark mixed use development incorporating predominantly residential but also some commercial and retail floorspace.

This report provides an assessment of the potential of Mirvac's proposal at the subject site to increase rail patronage at Macquarie Park station to meet the objective of the State Government to fully utilise and activate its rail and other modal assets.

The Subject Site (271 Lane Cove Rd, Macquarie Park)

- Currently zoned B3 Commercial Core under the Ryde LEP 2010
- Bounded by Lane Cove Road to the west, Waterloo Road to the north and existing residential and commercial uses to the south and east
- Currently comprises two commercial buildings and occupied by:
  - WorkArena (total NLA of 4,798 m^2)
  - Foxtel (total NLA of 6,718m^2)
  - Total NLA is 11,516m^2
- Located adjacent to Macquarie Park rail station



Source: Six Maps, NSW Government and Hill PDA 2013 based on Mirvac

Macquarie Park Rail Station – Operation (Existing)

- Opened and commenced operation in February 2009 as part of the Epping-Chatswood Rail Link (ECRL)
- Currently operated as part of the Northern Line
- Serviced by four trains per hour each direction for most of the day
- Current journey time:
  - To Chatswood: 11 minutes
  - To North Sydney: ~24 minutes
  - To Wynyard: ~30 minutes
  - To Central: ~38 minutes

Source: NSW Transport Sydney Trains (2013) - see website http://www.sydneytrains.info/

Overview of Approach

A high level desktop approach has been adopted to forecast the future year rail usage impacts at Macquarie Park rail station.

1. Analysis of historical rail usage data for Macquarie Park rail station

2. Patronage analysis of a selected set of stations with existing high density residential or commercial developments and comparison with Macquarie Park station

3. Derive a high level relationship (based on trip rates) between population & employment and rail station demand within a defined station catchment area (i.e. within a 800m radius from the rail station)

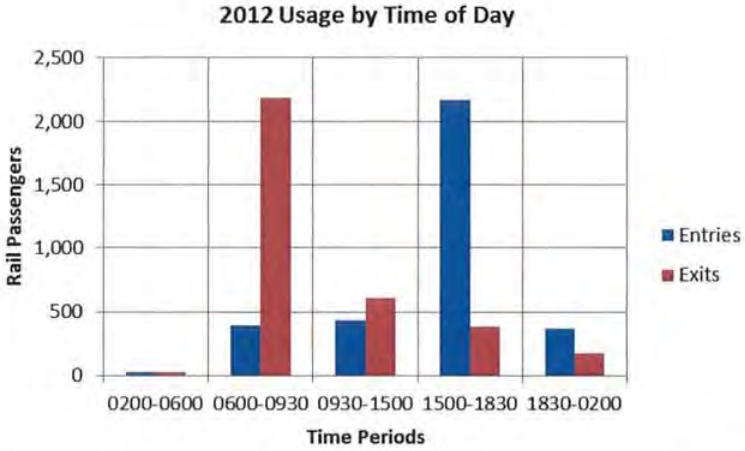
4. Define the 'base case' and the 'Mirvac proposal' future year scenarios

5. Apply the derived trip rates (from point 3) to the two scenarios and estimate future year rail demand for Macquarie Park station

6. Benchmark the future Macquarie Park station demand under the 'Mirvac proposal' scenario with a 'before-and-after development' analysis of St Leonards station

Macquarie Park Rail Station – Usage (2012)

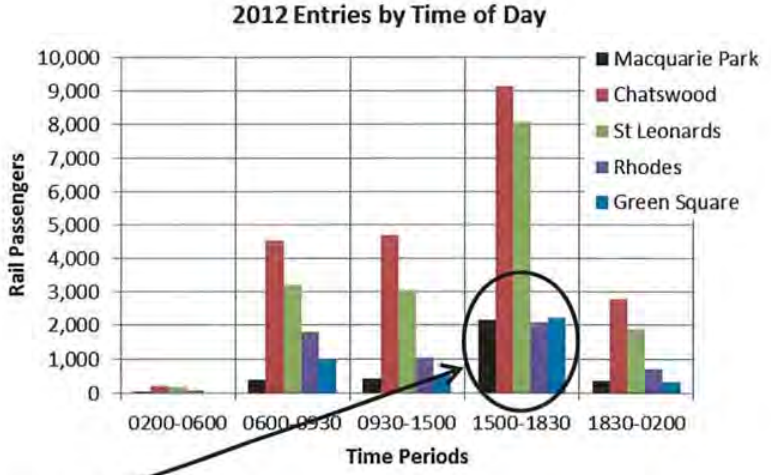
- Daily usage: approximately 7,000 i.e. combined station INs and OUTs for a working weekday
- Station usage is dominated by:
  - Exit movements ~2,200 during 6am-9:30am
  - Entry movements ~2,200 during 3pm-6:30pm
- The number of exits (6-9:30am) is similar to the number of entries (3-6:30pm), mainly driven by the employment trips
- Limited number of rail trips for other periods

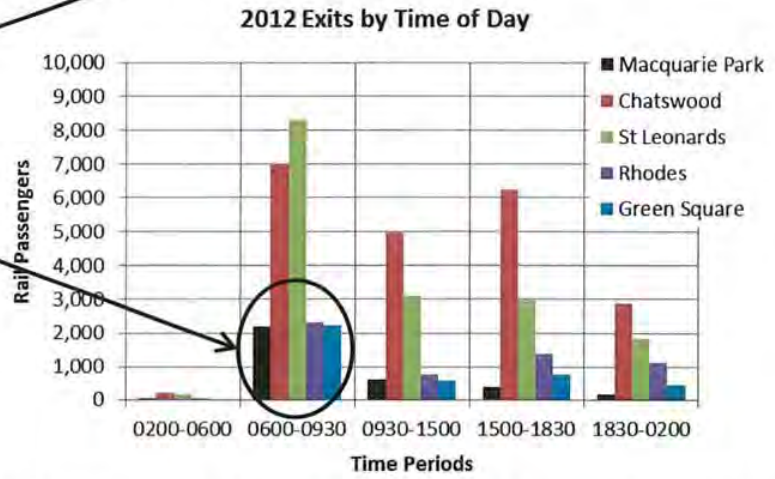


Source: Daily Station Barrier Counts on 21st September 2011 and 23rd May 2012, Bureau of Transport Statistics (2013) – see website http://www.bts.nsw.gov.au/Statistics/Train/

Rail Usage at Other Selected Stations (2012)

- Daily station usage
  - Macquarie Park: 6,780 trips
  - Chatswood: 42,730 trips
  - St Leonards: 32,780 trips
  - Rhodes: 11,480 trips
  - Green Square: 8,140 trips
- Macquarie Park, Rhodes and Green Square stations currently have a similar station demand for:
  - Station entries during 3pm-6:30pm
  - Station exits during 6am-9:30am
- *Reflecting employment trips at these stations*
- Macquarie Park station has a very low station demand for all the other segment periods





Source: 2012 Station Barrier Counts, Bureau of Transport Statistics (2013) – see website (http://www.bts.nsw.gov.au/Statistics/Train/)

Estimate Rail Trip Rates (Exits)

- Demand at selected stations with high commercial and employment activities have been reviewed: Macquarie Park, Chatswood, St Leonards, Rhodes, Green Square and Hurstville

- Using the NSW Government Bureau of Transport Statistics' 2011 employment estimates and station barrier counts, existing rail trip rates (station exits per job) have been derived for the AM period (6am-9:30am)

Chatswood

Macquarie Park

Estimation of station exits per job (2011 AM period: 6am-9:30am)

Station	No of jobs within 800m	Station Exits (6-9:30am)	Rail trip rate per job	Comment
Chatswood	24,000	7,000	0.29	High rise office buildings, retail, high parking cost
St Leonards	30,000	7,650	0.26	High rise office buildings, high parking cost
Rhodes	9,000	2,080	0.23	Mix of office and retail
Green Square	10,200	1,870	0.18	Dispersed activity centres
Hurstville	11,500	1,960	0.17	Dispersed activity centres
Macquarie Park	20,000	2,290	0.11	Highly dispersed activity centres, high car usage

Source: NSW Government BTS employment projections (August 2012 release) and Sydney Trains station barrier count data (2013)

Estimate Rail Trip Rates (Entries)

- Demand at selected stations with high density residential developments have been reviewed: Chatswood, St Leonards, Artarmon, Rhodes, Meadowbank and Edgecliff

- Using the NSW Government Bureau of Transport Statistics' 2011 residential population estimates and station barrier counts, rail trip rates (station entries per population) have been derived for the AM period (6am-9:30am)

Chatswood

St Leonards

Estimation of station entries per person (2011 AM period: 6am-9:30am)

Station	Population within 800m	Station Entries (6-9:30am)	Rail trip rate per person	Comment
Chatswood	14,000	4,530	0.32	High density residential, bus access
St Leonards	11,000	2,950	0.27	High density residential, some CBD buses
Artarmon	10,000	2,610	0.26	High density residential
Rhodes	6,500	1,630	0.25	Limited catchment (peninsula), high density residential
Edgecliff	15,000	2,930	0.20	High density residential, bus competition
Meadowbank	11,000	1,870	0.17	High density residential, ferry competition
Macquarie Park	2,200	340	0.15	No residential buildings immediately around station, some low density residential outside 400m

Source: NSW Government BTS employment projections (August 2012 release) and Sydney Trains station barrier count data (2013)

Estimate AM to Daily Expansion Factor

- Derived rail trip rates provide the basis to estimate the number of station entries and exits for the AM period 6am-9:30am based on a given set of residential population and employment assumptions
- To estimate the daily usage using the AM usage figure, an expansion factor is derived
- Expansion factors vary by station reflecting the variation in demand at non-peak times of the day; a function of different land use activity. For example: Chatswood with high retail, has a high expansion factor, Macquarie Park with limited 'other' land use activity has a low expansion factor.

Estimation of expansion factor from AM (6am-9:30am) to daily

Station	Year	Entries (6am-9:30am)	Exits (6am-9:30am)	Daily Usage	Expansion Factor
Chatswood	2012	4,550	7,040	42,730	3.7
Chatswood	2011	4,530	7,000	39,830	3.5
St Leonards	2012	3,190	8,320	32,780	2.8
St Leonards	2011	2,950	7,650	30,560	2.9
Rhodes	2012	1,810	2,340	11,480	2.8
Rhodes	2011	1,630	2,080	10,500	2.8
Green Square	2012	970	2,230	8,140	2.5
Macquarie Park	2012	390	2,190	6,780	2.6

Source: Sydney Trains station barrier counts, Bureau of Transport Statistics (2013)

Definition of the Base Case

The 'base case' scenario is based on NSW Government BTS demographic projections (August 2012 release). Defined as follows:

Demographic Assumptions

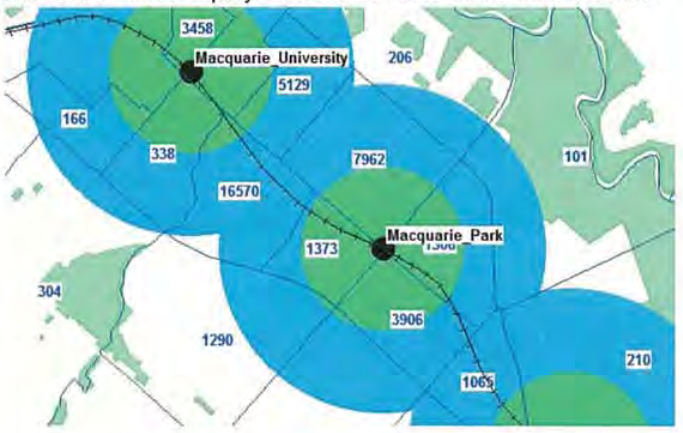
- Residential population assumptions
  - No change in population within 400m, i.e. remains at zero
  - Approx. 2,200 within 800m in 2011
  - 2,900 within 800m in 2026
  - 3,100 within 800m in 2036
- Employment assumptions
  - Approx. 20,000 jobs within 800m in 2011
  - 24,500 within 800m in 2026
  - 27,000 within 800m in 2036

Rail trip rate assumptions

- Base case (low): adopt the same trip rates as the existing Macquarie Park station
- Base case (high): adopt higher trip rate reflecting future frequency improvement at Macquarie Park station as a result of the opening of the North West Rail Link

2036 Travel Zone Population within 400m/800m station radius

2036 Travel Zone Employment within 400m/800m station radius



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Define Mirvac Proposal Case

The 'Mirvac proposal' scenario is based on details provided by Mirvac for the proposed development of the subject site, together with demographic assumptions for rest of catchment area as defined NSW Government BTS demographic projections (August 2012 release). Defined as follows:

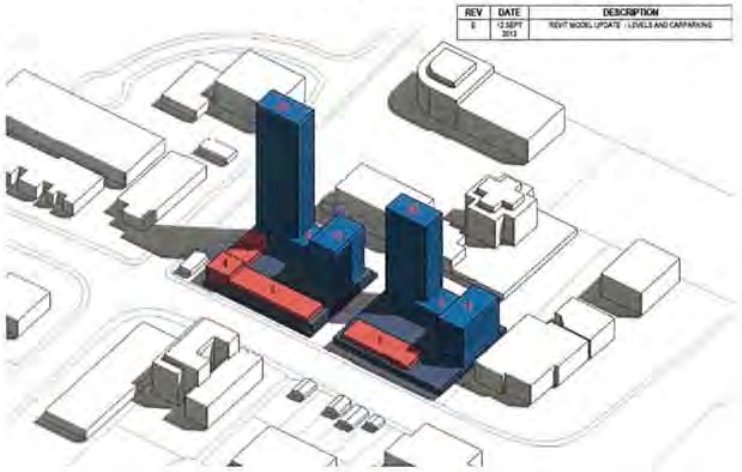
Demographic Assumptions

- Residential population assumptions
  - Approx. 2,200 within 800m in 2011 (as per base case)
  - 2,900 within 800m (as per base case) plus 1,300 within 400m (Mirvac proposal of 668 dwellings at 271 Lane Cove Road) in 2026. Total is 4,200 in 2026
  - 3,100 within 800m (as per base case) plus 1,300 within 400m (Mirvac proposal of 668 dwellings at 271 Lane Cove Road) in 2036. Total is 4,400 in 2036
- Employment assumptions
  - Approx. 20,000 within 800m in 2011 (as per base case)
  - 2026: 24,500 within 800m (as per base case) less 500 jobs as a result of a net reduction of ~6,500m^2 commercial floorspace as part of Mirvac's proposal. Total is 24,000 in 2026
  - 2036: 27,000 within 800m (as per base case) less 500 jobs as a result of a net reduction of ~6,500m^2 commercial floorspace as part of Mirvac's proposal. Total is 26,500 in 2036

Rail trip rate assumptions

- Residential: adopt trip rates similar to St Leonards station (high density residential, improved rail service)
- Employment: adopt trip rates similar to 'base case'

Mirvac's proposal at 271 Lane Cove Road



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Base Case – Macquarie Park Rail Station Estimates

Estimation of AM Station Exits for Macquarie Park Station (2026 and 2036)

Year	No of jobs within 800m	Rail trip rate per job	Station Exits (6-9:30am)
2011	20,000	0.11	2,290
2026	24,500	0.11 (low) 0.15 (high)	2,700 (low) 3,700 (high)
2036	27,000	0.11 (low) 0.15 (high)	3,000 (low) 4,100 (high)

Estimation of AM Station Entries for Macquarie Park Station (2026 and 2036)

Year	Population within 800m	Rail trip rate per Pop	Station Entries (6-9:30am)
2011	2,200	0.15	340
2026	2,900	0.15 (low) 0.17 (high)	440 (low) 490 (high)
2036	3,100	0.15 (low) 0.17 (high)	470 (low) 530 (high)

Estimation of Daily Usage for Macquarie Park Station (2026 and 2036)

Period	2011	2026	2036
AM 6-9:30am	2,630	3,140 to 4,190	3,470 to 4,630
Daily	**7,030**	**8,200 to 10,900**	**9,000 to 12,000**

Estimating Station Exits (6am-9:30am)

- Base case low: adopt existing trip rate (0.11) for Macquarie Park
- Base case high: adopt a higher trip rate (0.15) to reflect the increase in train frequency as part of the opening of NWRL

Estimating Station Entries (6am-9:30am)

- Base case low: adopt existing trip rate (0.15) for Macquarie Park
- Base case high: adopt a slightly higher trip rate (0.17) to reflect the increase in train frequency as part of the opening of NWRL

Estimating Daily Usage

- Adopt an AM to daily expansion factor from existing Macquarie Park station (2.6)

Mirvac Proposal – Macquarie Park Rail Station Estimates

Estimation of AM Station Exits for Macquarie Park Station (2026 and 2036)

Year	No of jobs within 800m	Rail trip rate per job	Station Exits (6-9:30am)
2011	20,000	0.11	2,290
2026	24,000	0.11 (low) 0.15 (high)	2,600 (low) 3,600 (high)
2036	26,500	0.11 (low) 0.15 (high)	2,900 (low) 4,000 (high)

Estimation of AM Station Entries for Macquarie Park Station (2026 and 2036)

Year	Population within 800m	Rail trip rate per Pop	Station Entries (6-9:30am)
2011	2,200	0.15	340
2026	4,200	0.27	1,100
2036	4,400	0.27	1,200

Estimation of Daily Usage for Macquarie Park Station (2026 and 2036)

Period	2011	2026	2036
AM 6-9:30am	2,630	3,700 to 4,700	4,100 to 5,200
Daily	**7,030**	**10,400 to 13,200**	**11,500 to 14,600**

Estimating Station Exits (6am-9:30am)

- Low case: adopt existing trip rate (0.11) for Macquarie Park
- High case: adopt a higher trip rate (0.15) to reflect the increase in train frequency as part of the opening of NWRL

Estimating Station Entries (6am-9:30am)

- Adopt existing trip rate from St Leonards station (0.27) to reflect the proposed high density development in close proximity to Macquarie Park station and the increase in train frequency as part of the opening of NWRL

Estimating Daily Usage

- Adopt existing AM to daily expansion factor from St Leonards station (2.8)

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Benchmark Analysis - St Leonards

- Development proposed by Mirvac is high density residential development, adjacent to Macquarie Park rail station. Similar to recent residential developments at St Leonards *(although not employment)*.

- Using St Leonards station as a benchmark, recent densification surrounding the station over the past 6 years has led to an increase of ~1,500 residents (within 800m catchment). Station entries for 6-9:30am during the same period has increased by ~550 trips.

- In this high level analysis, Mirvac's proposal at 271 Lane Cove Road is assumed to increase residential population by 1,300 persons in very close proximity to Macquarie Park station. Station entries for 6-9:30am period are estimated to increase by approx. 500-600 trips.

- Comparable to 'before-and-after' observations at St Leonards station.

Key Findings from Macquarie Park Station Analysis

Currently, Macquarie Park station has relatively low rail demand ~6,800 daily trips.

- Low density & dispersed employment within station catchment
- High car mode share
- Limited residential population within station catchment
- Limited 'other' land use activities (eg retail) that encourage non-peak period travel

Existing Government demographic projections do not indicate a move towards high density or mixed land use development

Under the 'base case' scenario (TfNSW demographic scenario), the daily usage for Macquarie Park rail station is estimated to be range from 9,000 to 12,000 passengers for a working weekday in 2036.

Under the 'Mirvac proposal' scenario (which includes high density residential redevelopment of 271 Lane Cove Road), the daily usage for Macquarie Park rail station is estimated to range from 11,500 to 14,600 passengers for a working weekday in 2036. This represents a net increase of around 2,500 passengers (+20% from the 'base case').

This is a similar trend to the continued development at St Leonards.