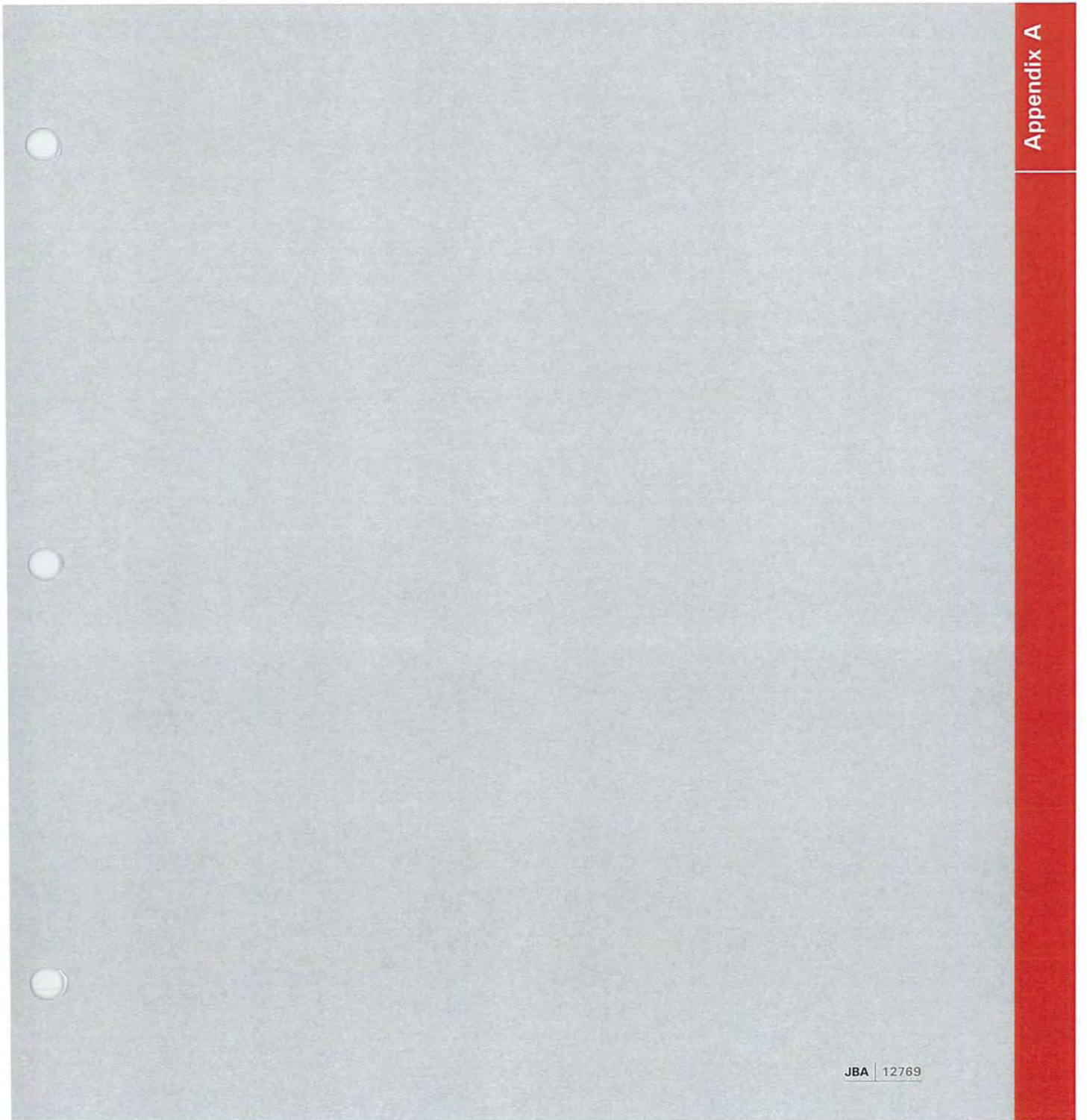


Indicative Concept Drawings

Mirvac Design Studio



Appendix A

JBA | 12769

271 Lane Cove Rd Macquarie Park

PLANNING PROPOSAL

DRAWING LIST	
SHEET NUMBER	SHEET NAME
SK - 000	TITLE SHEET
SK - 001	SITE ANALYSIS PLAN
SK - 002	MACQUARIE PARK CORRIDOR – URBAN ACTIVATION PRECINCTS
SK - 003	SITE LOCATION PLAN
SK - 004	SITE CONTEXT PLAN
SK - 005	MACQUARIE PARK CORRIDOR – PROPOSED ZONING AND HEIGHT OF BUILDINGS MAP
SK - 006	MACQUARIE PARK CORRIDOR – EXISTING ZONING MAP – FSR
SK - 007	SITE PLAN - ACTIVATION
SK - 008	SITE PLAN – HEIGHT ENVELOPES
SK - 009	ROAD ACCESS PLAN AND INDICATIVE STREET SECTIONS
SK - 010	INDICATIVE SITE SECTION – THROUGH WATERLOO ROAD
SK - 011	INDICATIVE SITE SECTIONS – THROUGH LANE COVE ROAD
SK - 012	INDICATIVE SUN SHADOW - 21 MARCH 9 AM
SK - 013	INDICATIVE SUN SHADOW - 21 MARCH 12 PM
SK - 014	INDICATIVE SUN SHADOW - 21 MARCH 3 PM
SK - 015	INDICATIVE SUN SHADOW - 21 JUNE 9 AM
SK - 016	INDICATIVE SUN SHADOW - 21 JUNE 10 AM
SK - 017	INDICATIVE SUN SHADOW - 21 JUNE 11 AM
SK - 018	INDICATIVE SUN SHADOW - 21 JUNE 12AM
SK - 019	INDICATIVE SUN SHADOW - 21 JUNE 12:30 PM
SK - 020	INDICATIVE SUN SHADOW - 21 JUNE 1 PM
SK - 021	INDICATIVE SUN SHADOW - 21 JUNE 1:30 PM
SK - 022	INDICATIVE SUN SHADOW - 21 JUNE 2 PM
SK - 023	INDICATIVE SUN SHADOW - 21 JUNE 3 PM
SK - 024	PLAZA VIEW - ARTIST IMPRESSION

rev: A date: 29/10/13 amendment: PLANNING PROPOSAL SUBMISSION

project:
271 LANE COVE ROAD
Macquarie Park, NSW



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AAB 78 953 181 150

**Mirvac
Design**
ARCHITECTS
INTERIORS
SCENERY DESIGNERS

title:
PLANNING PROPOSAL
TITLE SHEET

drawn:
approved:
job no: 7.747
lot no:

date: 29/10/13
drawing no: SK - 000

scale @ A3:
rev: A

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LEGEND	
	OPEN SPACE
	SHOPPING CENTRES
	SUPERMARKETS
	POST OFFICE
	CINEMA
	CHILD CARE
	SCHOOLS & UNIVERSITY
	NATIONAL PARK
	CEMETERY
	TRANSPORT - TRAIN

1 SITE ANALYSIS PLAN
NOT TO SCALE

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW



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Mirvac Design Pty Ltd
ABN 74 502 259 151



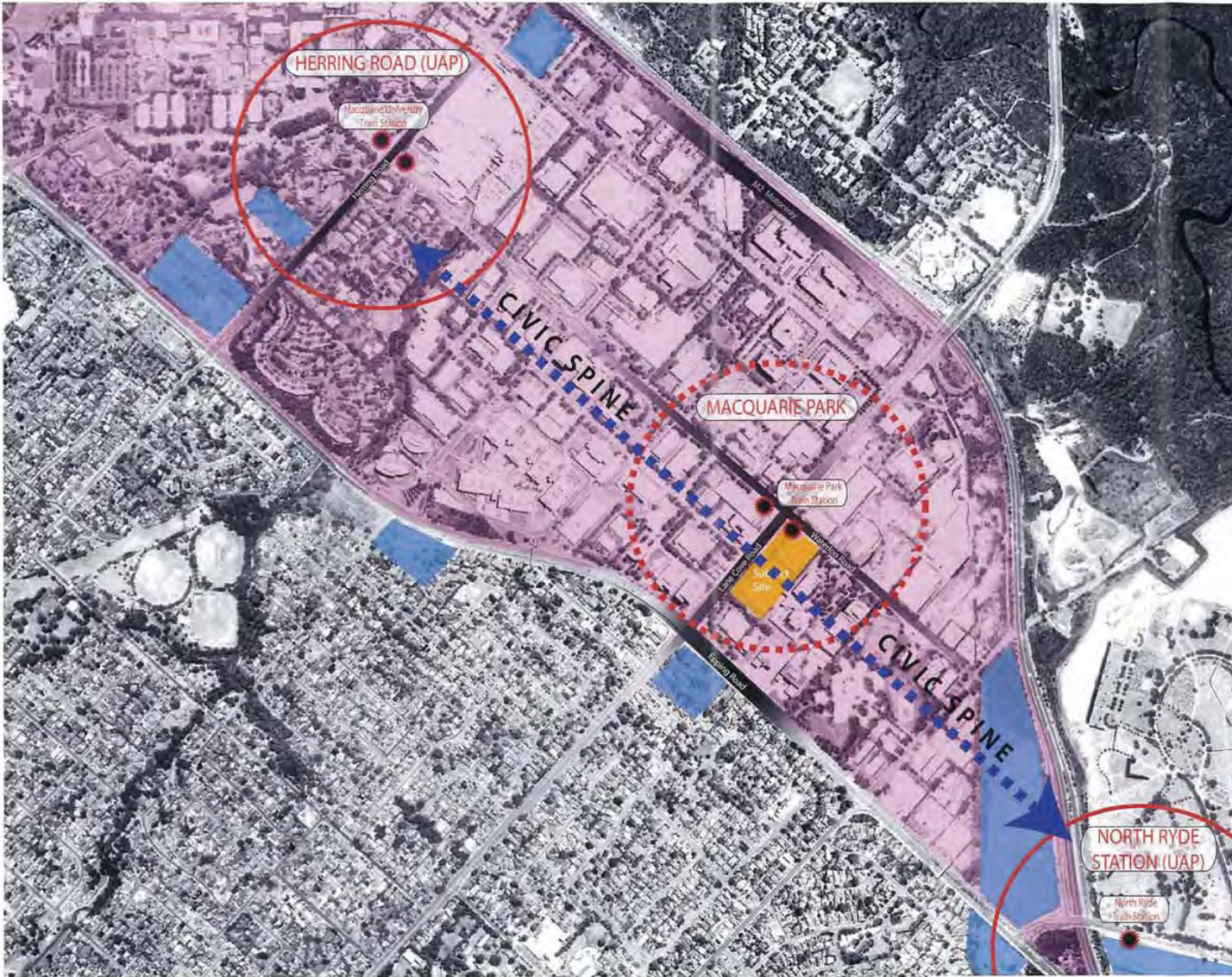
title:
PLANNING PROPOSAL
SITE ANALYSIS PLAN

drawn:
approved:
job no: 7.747
lot no:

date: 29/10/13
drawing no: SK - 001

scale @ A3:
rev: A

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LEGEND	
	URBAN ACTIVATION PRECINCT (UAP)
	MACQUARIE PARK CORRIDOR
	SUBJECT SITE
	CIVIC SPINE
	NEW DEVELOPMENT SITES
	TRANSPORT - TRAIN

1 MACQUARIE PARK CORRIDOR - URBAN ACTIVATION PRECINCTS
NOT TO SCALE

no.	date	amendment
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW

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Mirvac Design
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planning
interior designers

title:
**PLANNING PROPOSAL
MACQUARIE PARK CORRIDOR -
URBAN ACTIVATION PRECINCTS**

drawn:
approved:

job no: 7.747

lot no:

date: 29/10/13

drawing no: SK - 002

scale @ A3:

rev: A



1 SITE LOCATION PLAN
NOT TO SCALE

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW

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Mirvac Design Pty Ltd
400-19 022 033 153

**Mirvac
Design**
architects
planners
interior designers

title:
PLANNING PROPOSAL
SITE LOCATION PLAN

drawn:
approved:

job no: 7.747

date: 29/10/13

scale @ A3:

lot no:

drawing no: SK - 003

rev: A



1 SITE CONTEXT PLAN
NOT TO SCALE

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project
271 LANE COVE ROAD
Macquarie Park, NSW

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Mirvac Design
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interior designers

title:
PLANNING PROPOSAL
SITE CONTEXT PLAN

drawn:
approved:
job no: 7.747
lot no:

date: 29/10/13
drawing no: SK - 004

scale @ A3:
rev: A



1 PROPOSED ZONING MAP - LAND USE
1:2000



2 PROPOSED HEIGHT OF BUILDINGS MAP
1:2000

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW

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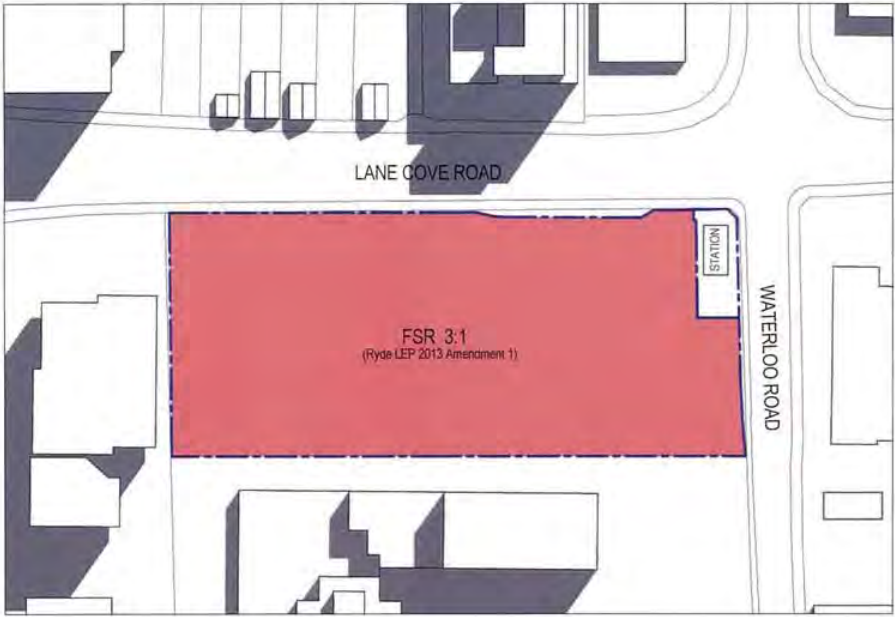


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title:
PLANNING PROPOSAL
MACQUARIE PARK CORRIDOR
PROPOSED ZONING AND
HEIGHT OF BUILDINGS MAP

drawn:	approved:	job no:	date:	scale:
		7.747	29/10/13	@ A3 1:2000
lot no:	drawing no:	SK - 005	rev:	A



1 EXISTING ZONING MAP - FSR
1:2000

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



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 Macquarie Park, NSW

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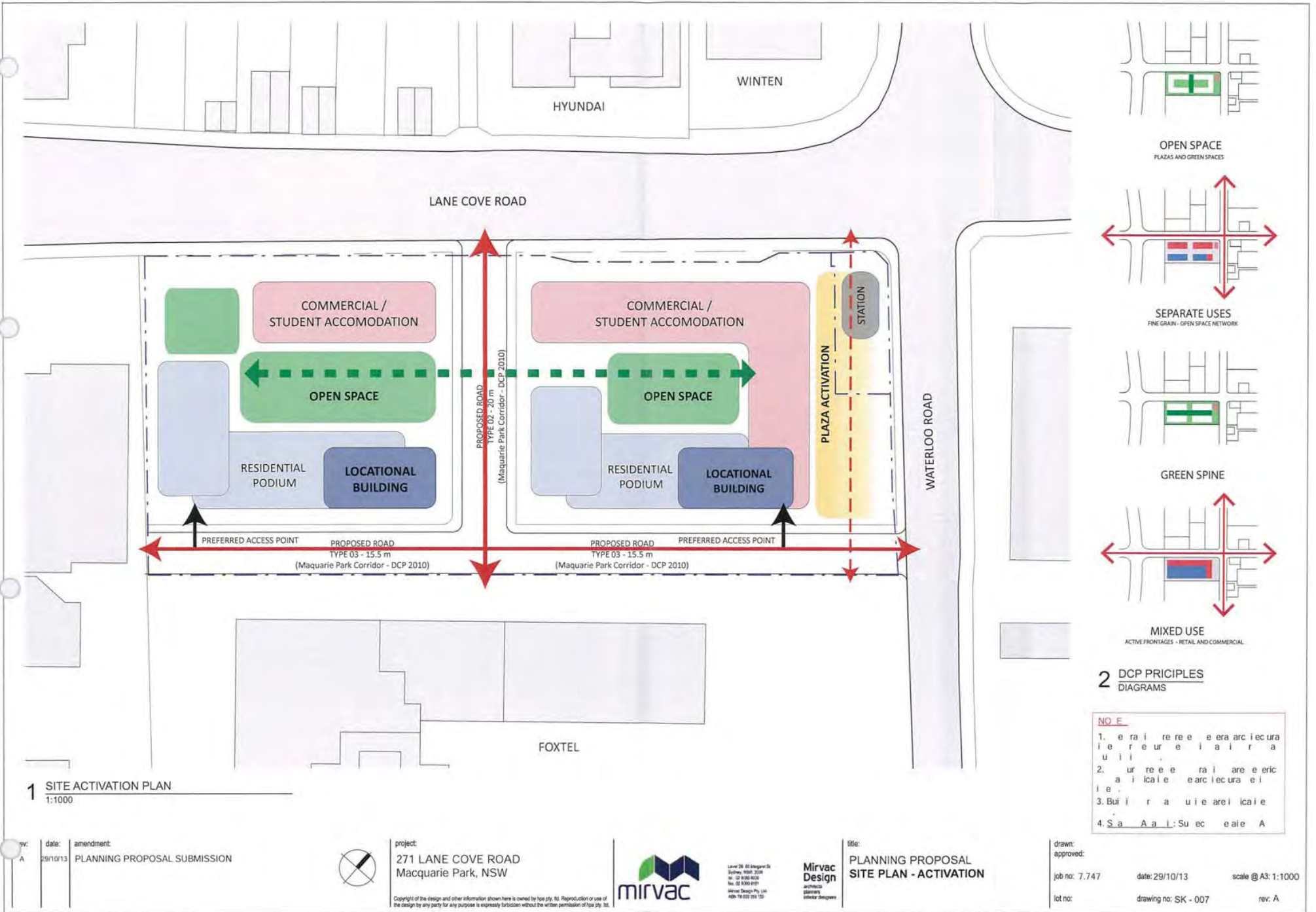


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Mirvac Design
 ARCHITECT
 PLANNERS
 INTERIOR DESIGNERS

title:
 PLANNING PROPOSAL
MACQUARIE PARK CORRIDOR
EXISTING ZONING MAP - FSR

drawn:	approved:	date:	scale @ A3:
job no:	7,747	29/10/13	1:1000
lot no:		drawing no:	SK - D06
		rev:	A



1 SITE ACTIVATION PLAN
1:1000

2 DCP PRINCIPLES DIAGRAMS

NO E

1.	e	r	a	i	r	e	r	e	e	r	a	r	c	i	e	u	r	a
2.	u	r	r	e	e	r	a	i	a	r	e	e	r	i	c	e	r	e
3.	B	u	i	r	a	u	i	e	a	r	i	c	a	e				
4.	S	a	A	a	I	S	u	e	c	e	a	i	e	A				

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW

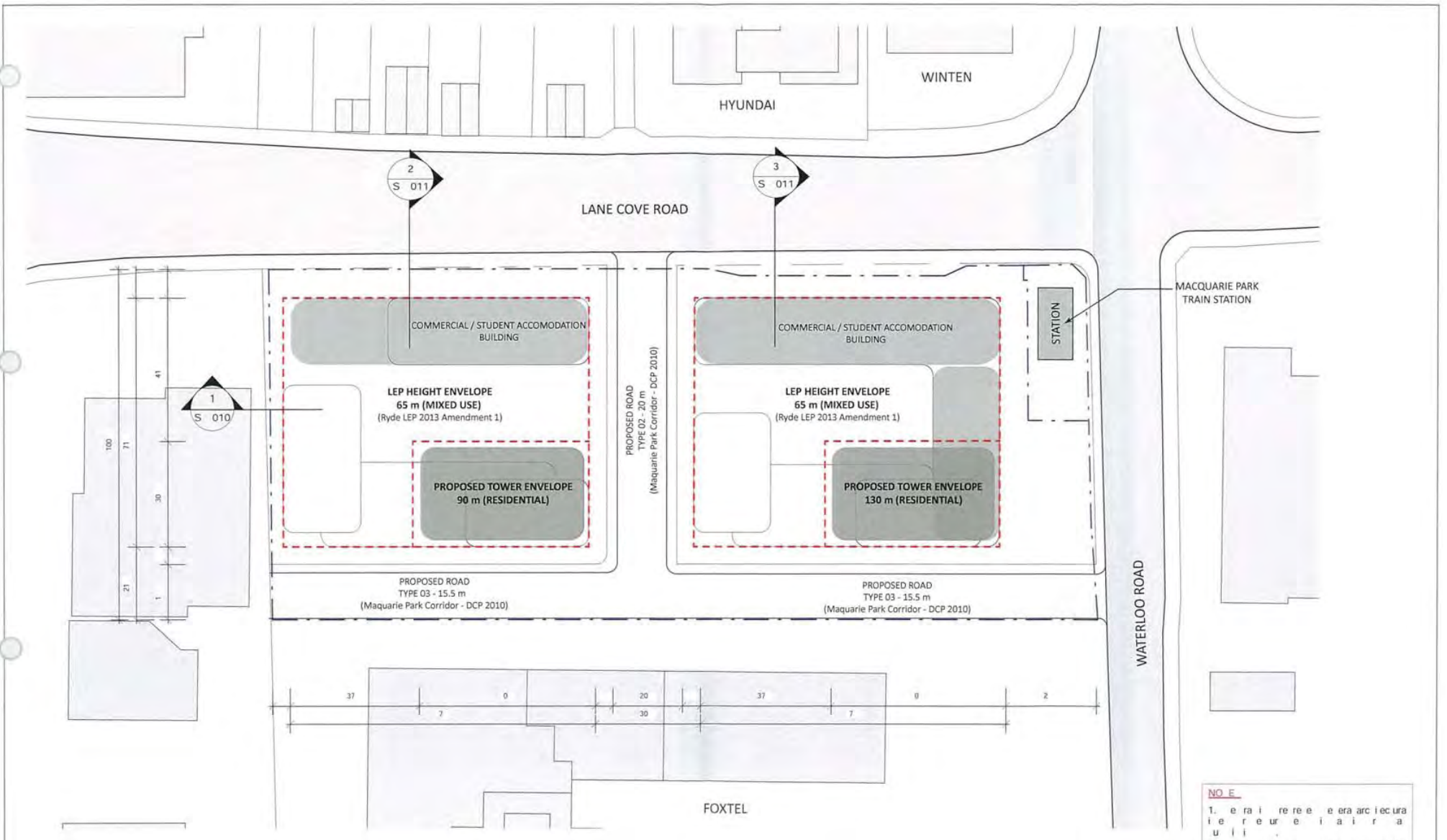


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ABN 78 023 251 152

Mirvac Design
ARCHITECTS
PLANNERS
INTERIOR DESIGNERS

title:
PLANNING PROPOSAL
SITE PLAN - ACTIVATION

drawn:	approved:
job no: 7.747	date: 29/10/13
lot no:	scale @ A3: 1:1000
drawing no: SK - 007	rev: A



NO E

1. e r a i r e r e e e r a a r c i e c u r a
 i e r e u r e i a i r a
 u i i

2. u r r e e e r a i a r e e r i c
 a i i a l e e a r c i e c u r a e i
 i e -

3. B u l i r a u i e a r e i c a i e

4. S a A a i : S u e c e a i e A

1 SITE PLAN - HEIGHT ENVELOPES
1:1000

sv:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
Macquarie Park, NSW



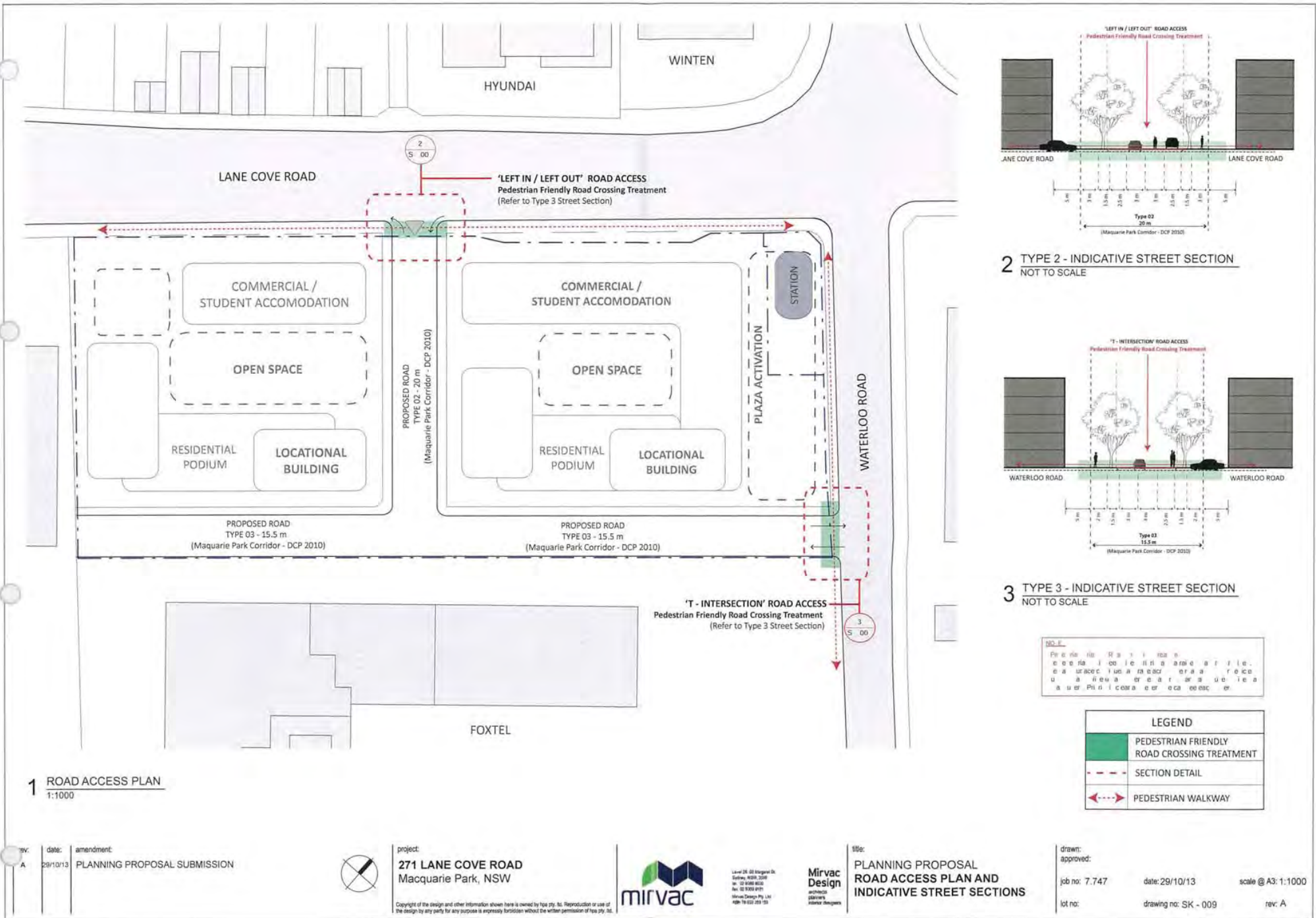
Level 28 68 Kingswell St
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 40th Fl 200 West St

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title:
PLANNING PROPOSAL
SITE PLAN - HEIGHT ENVELOPES

drawn: approved:	date:	scale @ A3:
job no: 7.747	29/10/13	1:1000
lot no:	drawing no: SK - 008	rev: A

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project:
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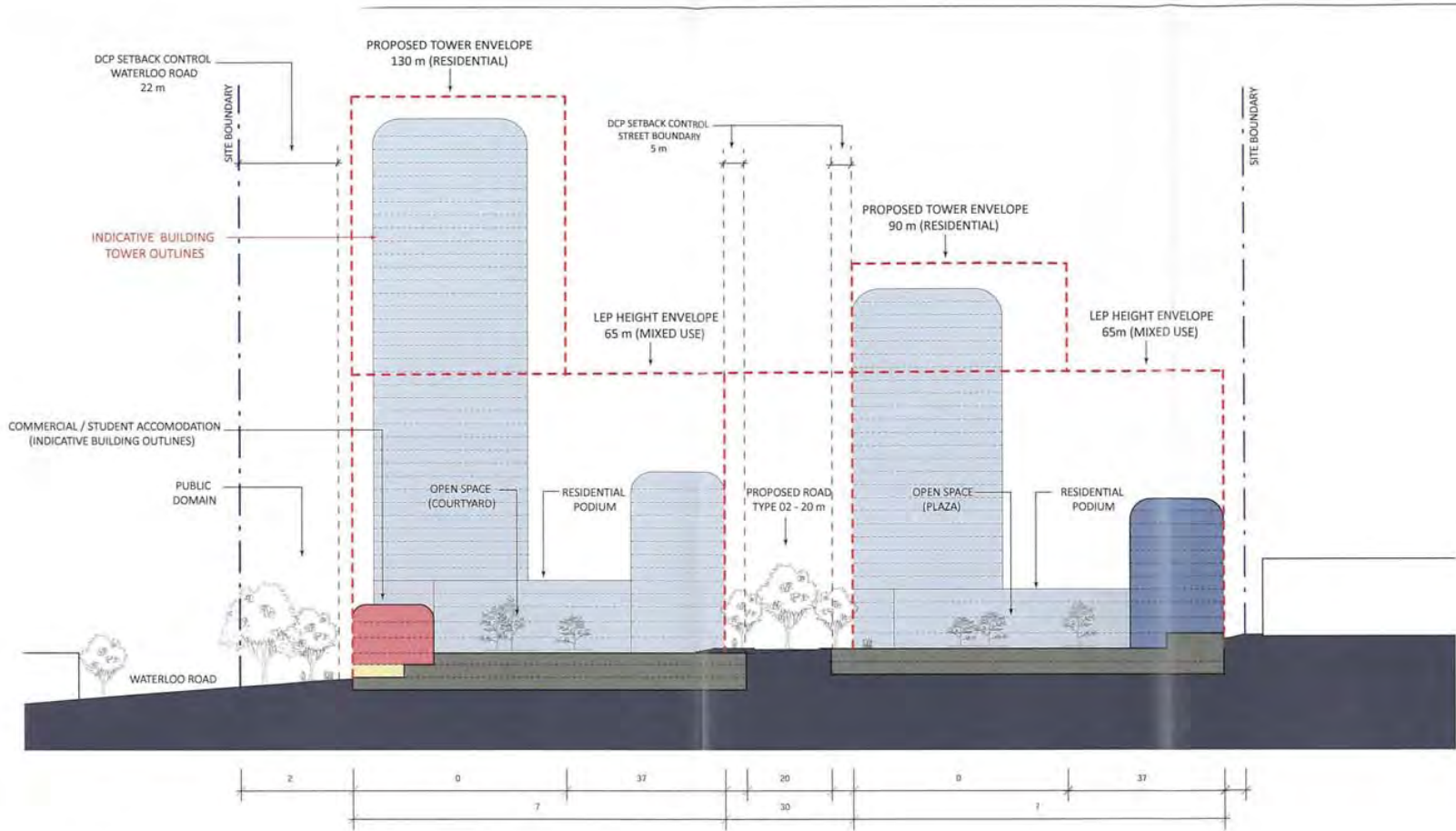
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ABN 74 622 259 153

Mirvac Design
architects
landscape architects
interior designers

title:
PLANNING PROPOSAL
ROAD ACCESS PLAN AND
INDICATIVE STREET SECTIONS

drawn: approved:	job no: 7.747	date: 29/10/13	scale @ A3: 1:1000
lot no:	drawing no: SK - 009	rev: A	

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1 INDICATIVE SITE SECTION - THROUGH WATERLOO
1:1000

LEGEND	
	RESIDENTIAL
	COMMERCIAL / STUDENT ACCOMMODATION
	RETAIL
	BASEMENT
	PROPOSED HEIGHT CONTROL

NO. E.	
1.	e r a i r e e e e r a r c i e c u r a i e r e u r e i a i r a
2.	u r r e e e r a i a r e e r i c a i l c a i e e a r c i e c u r a e i l e
3.	B u i l i r a u i e a r e i c a i e
4.	S a A a i : S u e c e a i e A



rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION

project:
271 LANE COVE ROAD
Macquarie Park, NSW



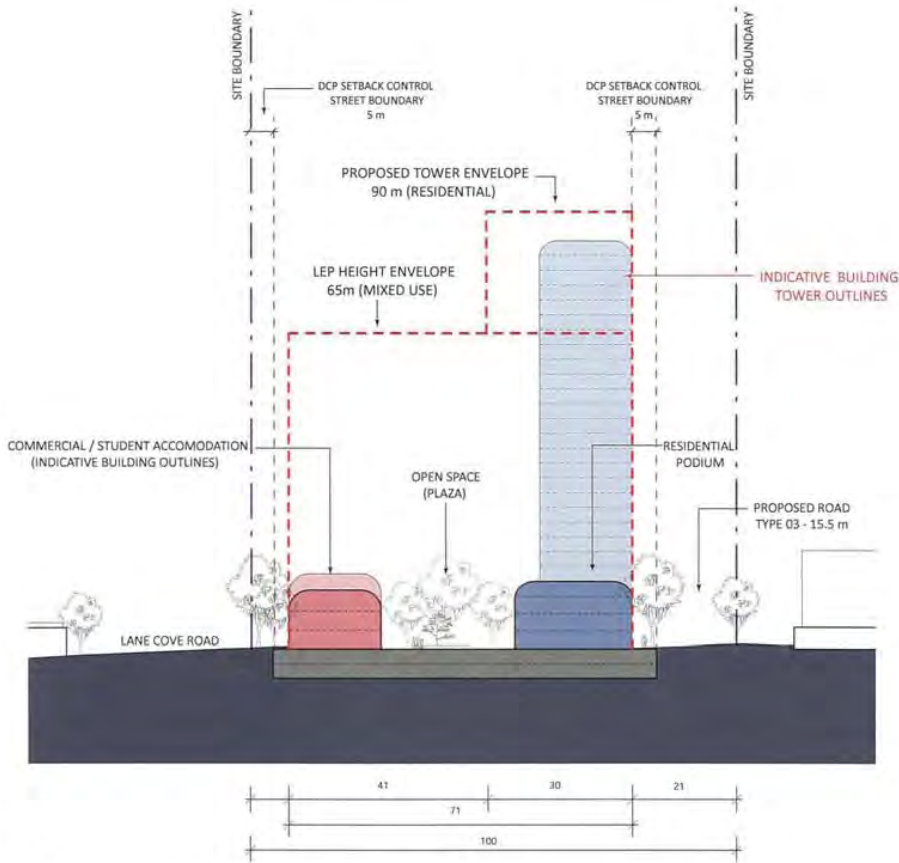
Level 20 88 Margaret St
Sydney, NSW 2000
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Mirvac Group Pty Ltd
ABN 19 623 293 130



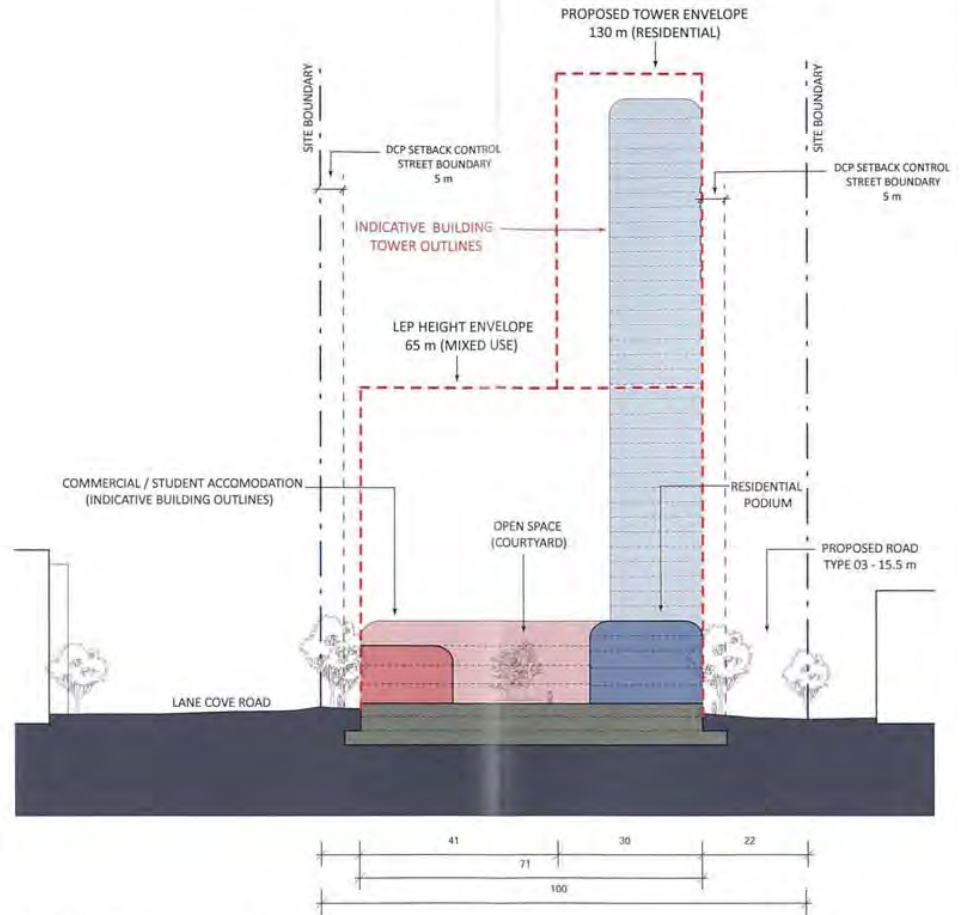
title:
PLANNING PROPOSAL
INDICATIVE SITE SECTIONS

drawn:	approved:	job no.:	date:	scale:
		7.747	29/10/13	@ A3: 1:1000
lot no.:	drawing no.:	SK - 010	rev.:	A

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2 INDICATIVE SITE SECTION - THROUGH LANE COVE ROAD
1:1000



2 INDICATIVE SITE SECTION - THROUGH LANE COVE ROAD
1:1000

LEGEND	
	RESIDENTIAL
	COMMERCIAL / STUDENT ACCOMMODATION
	RETAIL
	BASEMENT
	PROPOSED HEIGHT CONTROL

NO E	
1.	e r a i r e r e e e r a a r c i e c u r a
2.	u r r e e e r a i a r e e e r i c
3.	B u i i r a u i e a r e i c a l e
4.	S a A a l ; S u e c e a i e A

rev	date	amendment
A	29/10/13	PLANNING PROPOSAL SUBMISSION

project:
271 LANE COVE ROAD
Macquarie Park, NSW

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Mirvac
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architects
planners
interior designers

title:
PLANNING PROPOSAL
INDICATIVE SITE SECTIONS

drawn:	approved:	date:	scale:
job no: 7.747	date: 29/10/13	scale @ A3: 1:1000	
lot no:	drawing no: SK - 011	rev: A	



NO. F.
 1. e ra i re re e era arc lecura
 le re ur e i a i r a
 u i i
 2. ur re e e ra i are e eric
 a i icale e arc lecura e i
 le .
 3. Bu i r a u i e are i ca i e
 .
 4. S a A a i : Su ec e a i e A



LEGEND	
	EXISTING BUILDINGS
	SUN SHADOW
	INDICATIVE BUILDINGS
	SUN SHADOW (PROPOSED)

* BUILDING FORMS
 ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 MARCH 9AM
 1:2000

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
 Macquarie Park, NSW

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 1996 19 000 200 750

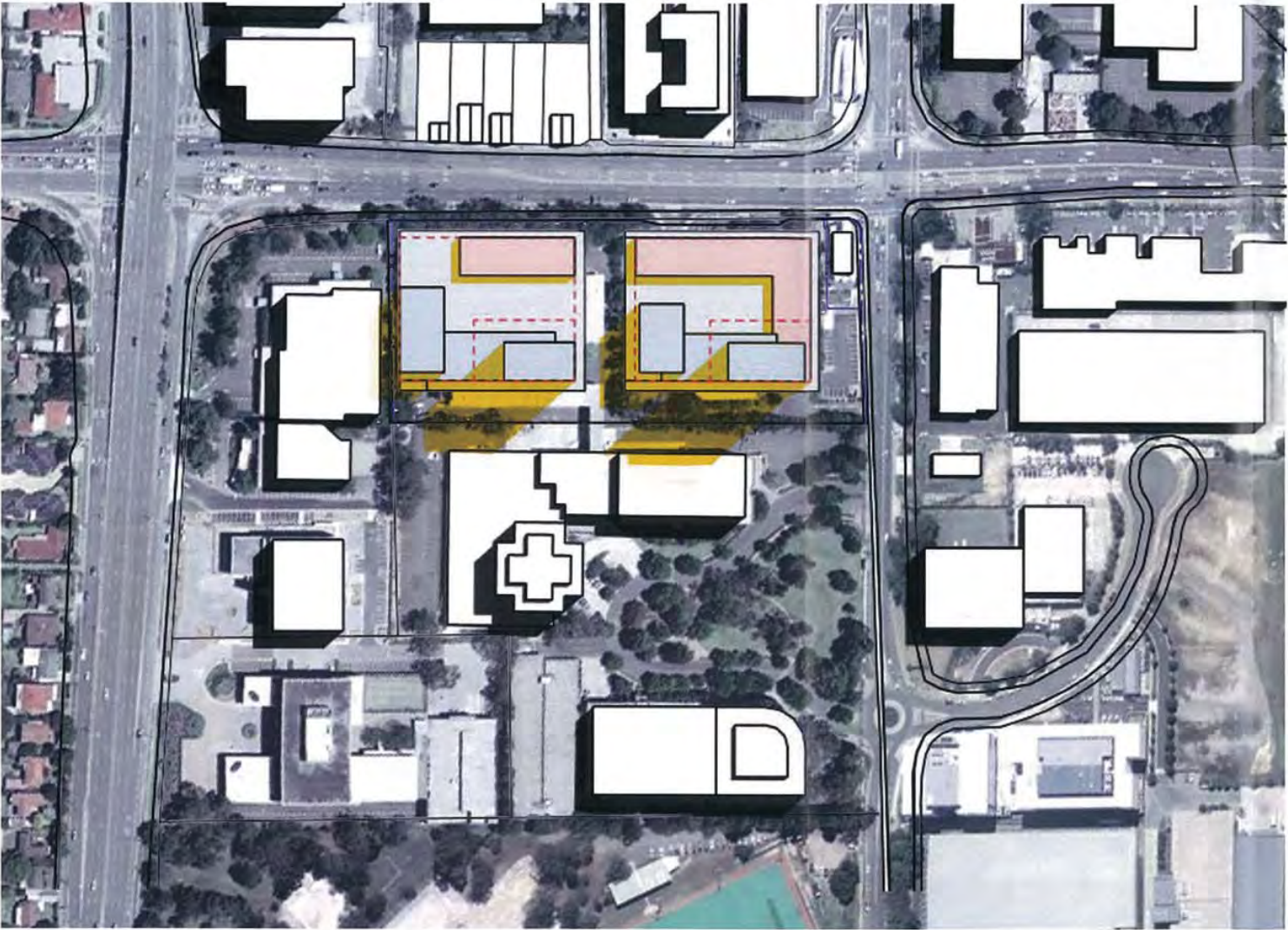
Mirvac Design
 ARCHITECTS
 PLANNERS
 INTERIORS DESIGNERS

title:
PLANNING PROPOSAL
INDICATIVE SUN SHADOW
21 MARCH 9AM

drawn:	approved:	date:	scale:
job no: 7,747	date: 29/10/13	scale @ A3 1:2000	
lot no:	drawing no: SK - 012	rev: A	

NO F

1. e r a i r e e e e r a r c i e c u r a
l e r e u r e i a i r a
u i l
2. u r r e e e r a i a r e e r i c
a i l c a i e e a r c i e c u r a e i
l e
3. B u i r a u l e a r e i c a i e
4. S a A a i : S u e c e a i e A



LEGEND	
	EXISTING BUILDINGS
	SUN SHADOW
	INDICATIVE BUILDINGS
	SUN SHADOW (PROPOSED)

* BUILDING FORMS
ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 MARCH 12PM
1:2000

no: 29/10/13
amendment: PLANNING PROPOSAL SUBMISSION

project:
271 LANE COVE ROAD
Macquarie Park NSW



Level 58, 88 Margaret St
Sydney, NSW 2000

Mirvac
Design

site:
PLANNING PROPOSAL
INDICATIVE SUN SHADOW

drawn:
approved:

job no: 7.747

date: 29/10/13

scale @ A3 1:2000

NO. E.
 1. e r a i r e r e e e r a a r c i e c u r a
 i e r e u r e i a i r a
 u i l l
 2. u r r e e e r a i a r e e r i c
 a i i c a i e e a r c i e c u r a e i
 i e
 3. B u i l r a u i e a r e i c a i e
 .
 4. S a A a i : S u e c e a i e A



LEGEND	
	EXISTING BUILDINGS SUN SHADOW
	INDICATIVE BUILDINGS SUN SHADOW (PROPOSED)

* BUILDING FORMS
 ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 MARCH 3PM
 1:2000

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
 Macquarie Park, NSW

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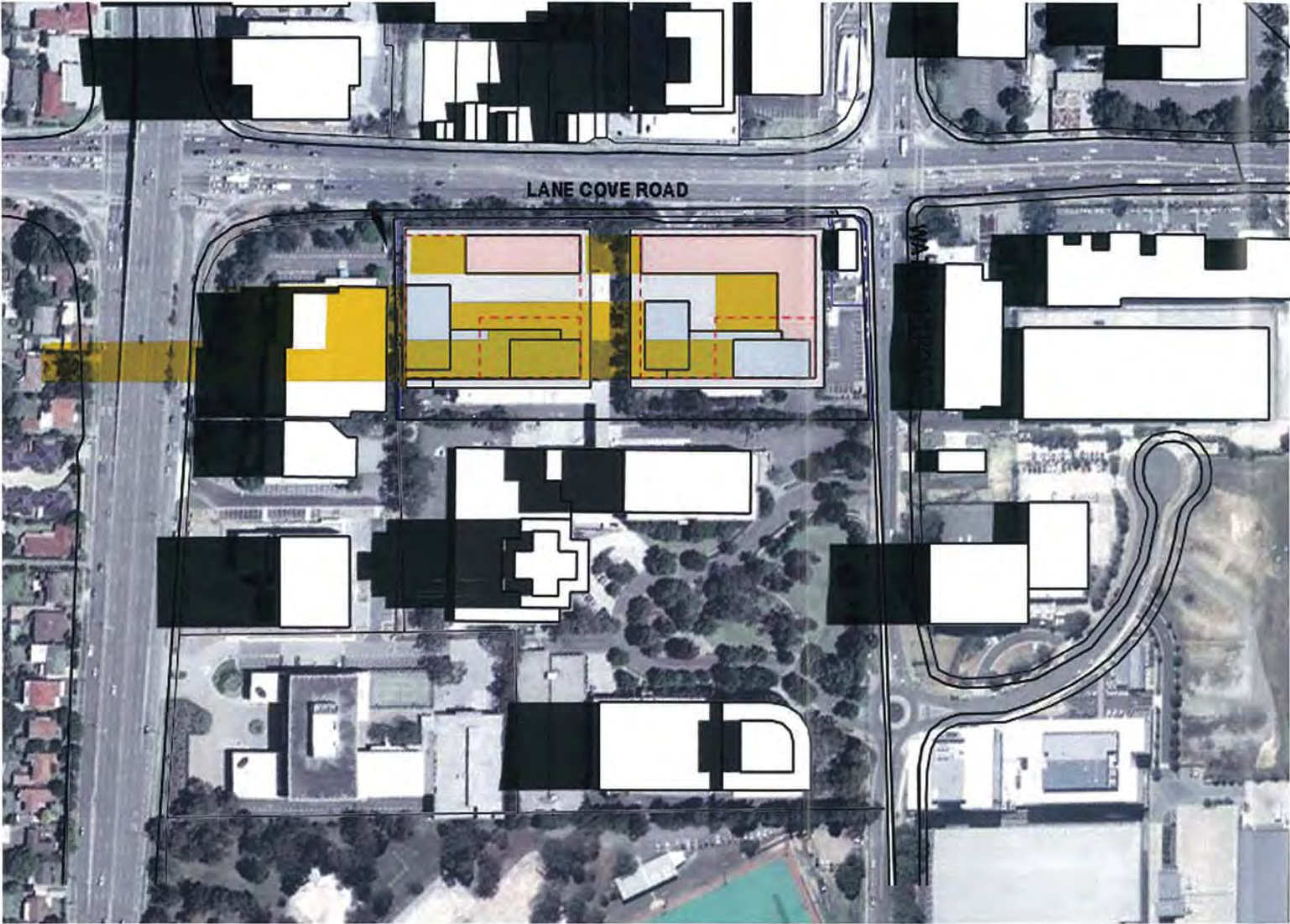
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 ABN 78 021 283 153

Mirvac Design
 architects
 planners
 interior designers

title:
**PLANNING PROPOSAL
 INDICATIVE SUN SHADOW
 21 MARCH 3PM**

drawn: approved:	date: 29/10/13	scale @ A3 1:2000
job no: 7.747	drawing no: SK - 014	rev: A

NO. E
 1. e r a i r e r e e e r a r c i e c u r a
 i e r e u r e i a i r a
 u i i
 2. u r r e e e r a i a r e e r i c
 a i i c a i e e a r c i e c u r a e i
 i e
 3. B u i r a u i e a r e i c a i e
 4. S a A a i : S u e c e a i e A



LEGEND	
	EXISTING BUILDINGS
	SUN SHADOW
	INDICATIVE BUILDINGS
	SUN SHADOW (PROPOSED)

* BUILDING FORMS
 ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 JUNE 9AM
 1:2000

rev:	date:	amendment:
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
 Macquarie Park, NSW

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 Mirvac Design Pty. Ltd.
 ABN: 76 633 393 154

Mirvac Design
 architects
 planners
 interior designers

title:
PLANNING PROPOSAL
INDICATIVE SUN SHADOW
21 JUNE 9AM

drawn: approved:	date: 29/10/13	scale @ A3 1:2000
job no: 7.747	drawing no: SK - 015	rev: A



NO. E.	
1.	e r a i r e e e e r a a r c i e c u r a i e r e u r e i a t r a u i l i .
2.	u r r e e e r a i a r e e r i c i e . a i c a i e e a r c i e c u r a e i i e .
3.	B u i l r a u i e a r e i c a i e .
4.	S a A a i : S u e c e a i e A

LEGEND	
	EXISTING BUILDINGS
	SUN SHADOW
	INDICATIVE BUILDINGS
	SUN SHADOW (PROPOSED)

* BUILDING FORMS
ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 JUNE 10AM
1:2000

rev: A date: 29/10/13 amendment: PLANNING PROPOSAL SUBMISSION

project: 271 LANE COVE ROAD
Macquarie Park, NSW



Level 28, 65 Wingard St,
Sydney, NSW, 2000
Tel: (61) 02 9550 3000

Mirvac
Pacific

title: PLANNING PROPOSAL
INDICATIVE SUN SHADOW

drawn:
approved:

job no: 7.747

date: 29/10/13

scale @ A3: 1:1000

NO. E
 1. e ra i re re e era arc iec ura
 i e r e u r e i a i r a
 u l i
 2. ur re e e ra i are e eric
 a i lca i e e arc iec ura e i
 l e .
 3. Bui i r a uie are i lca i e
 4. S a A a i : Su ec e aie A



LEGEND	
	EXISTING BUILDINGS SUN SHADOW
	INDICATIVE BUILDINGS SUN SHADOW (PROPOSED)

* BUILDING FORMS
 ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 JUNE 11AM
 1:2000

rev	date	amendment
A	29/10/13	PLANNING PROPOSAL SUBMISSION



project:
271 LANE COVE ROAD
 Macquarie Park, NSW

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architects
 planners
 interior designers

title:
**PLANNING PROPOSAL
 INDICATIVE SUN SHADOW
 21 JUNE 11AM**

drawn: approved:	date: 29/10/13	scale @ A3: 1:1000
job no: 7.747	drawing no: SK - 017	rev: A

NO. E
 1. e ra i re re e e era arc iec ura
 i e r e u r e l a i r a
 u i i
 2. ur re e e ra i are e eric
 a i ca i e e arc iec ura e i
 i e
 3. Bui i r a u i e are i ca i e
 .
 4. S a A a i : Su ec e a i e A



LEGEND	
	EXISTING BUILDINGS
	SUN SHADOW
	INDICATIVE BUILDINGS
	SUN SHADOW (PROPOSED)

* BUILDING FORMS
 ARE INDICATIVE ONLY

1 INDICATIVE SUN SHADOW - 21 JUNE 12PM
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



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21 JUNE 2PM

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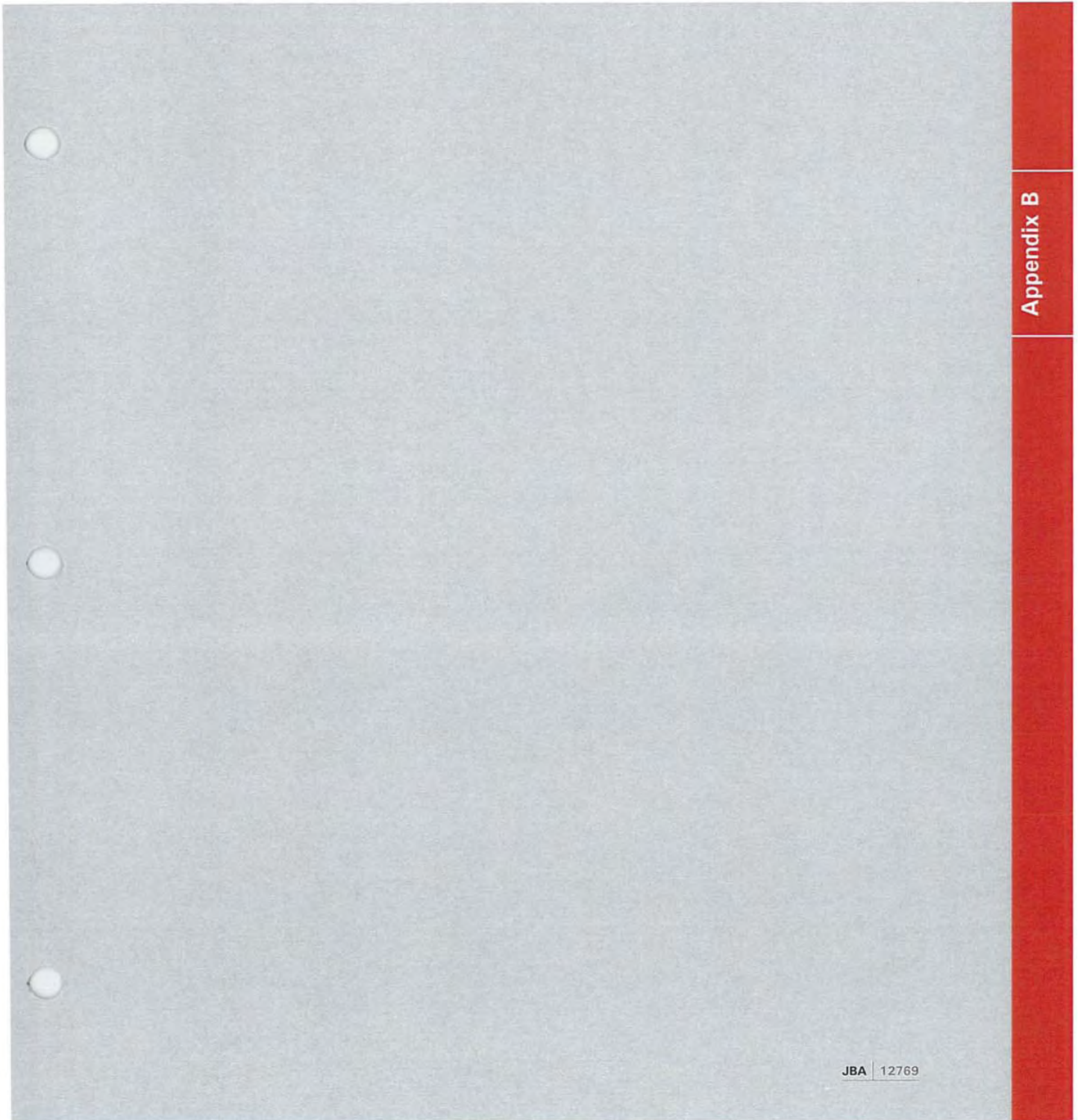
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Landscape Principles

Aspect



Appendix B

JBA | 12769

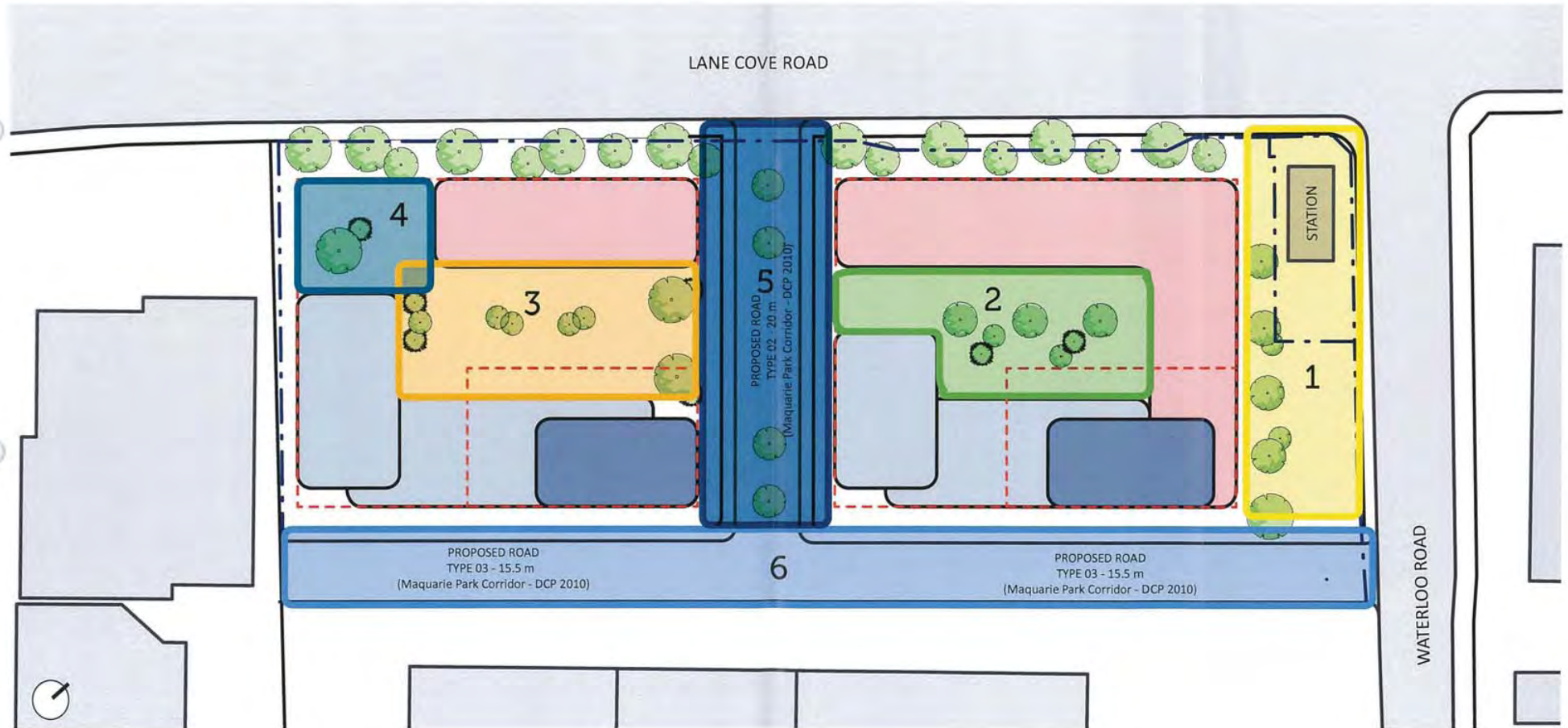
271 Lane Cove Road Public Domain Principles

Disclaimer

The work in this document is conceptual only and is subject to further detailed design.

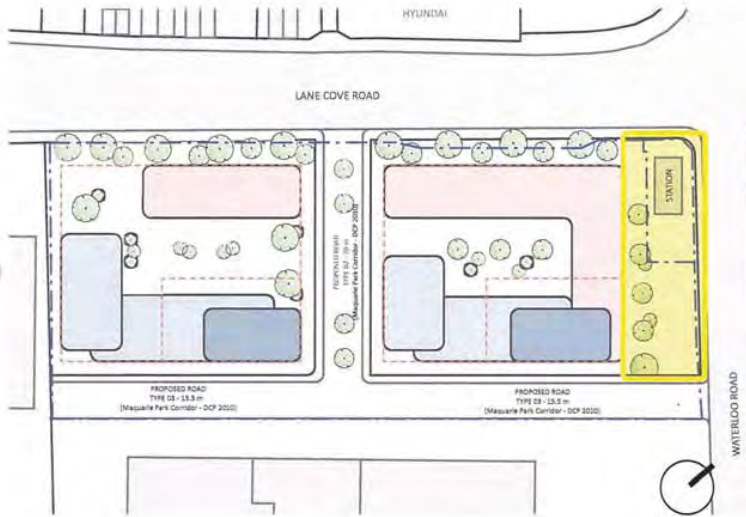
Overall Site Strategy

- 1. The Station Plaza - 0.21ha
 - 2. The Green - 0.16ha
 - 3. The Village Square - 0.18ha
 - 4. The Entry Plaza - 0.07ha
 - 5. The Green Street - 0.21ha
 - 6. The Access Road - 0.47ha
- 1.3ha
Dedicated 24/7
accessible public open
space



The Station Plaza

0.21ha



Mathildeplein, Eindhoven Netherlands

Principles

The station plaza is a new proposed public space adjacent to the existing Maquarie Park Station by Waterloo Road. The plaza provides just over 2000m² of North facing public space.

The plaza will be designed to leverage its northern orientation and access to sunlight. It will mainly be a hard paved surface providing clear circulation to and from the station with activation through retail and building addresses. The design will be a cycle and pedestrian friendly environment and include public seating, deciduous trees and understory planting to Waterloo Road.

Public lighting and public art will be integrated into the plaza design.



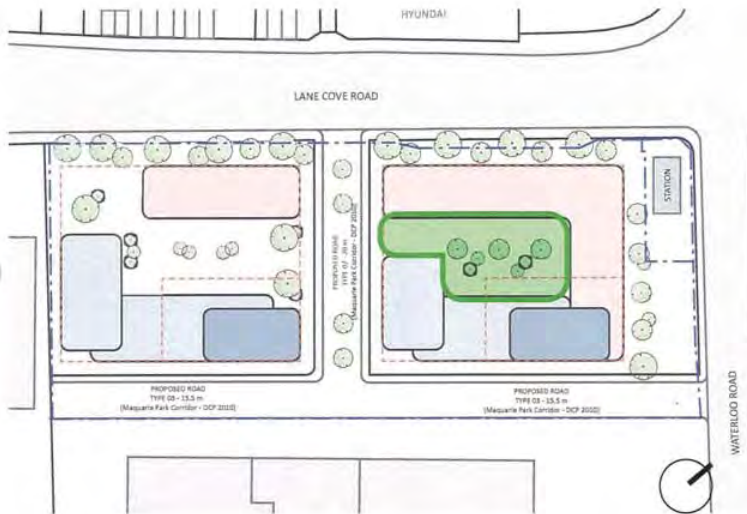
New Road, Brighton UK



Guldberg Byplads, Copenhagen Denmark

The Green

0.16ha



Shoemaker Green, Philadelphia USA

Principles

The Green provides an opportunity of respite within a lush, quieter setting. It will play a role in bringing amenity and social infrastructure for the residents of 271 Lane Cove Road. The green is the partner to the village square and provides 1600m² of communal space.

It will include a lawn in the sunniest end and various seating opportunities for both groups and individuals with tables and chairs. As well as providing additional green infrastructure and diversity through the collection of water there is also an opportunity to incorporate a children's incidental play area within the space.



Rice University, Houston USA

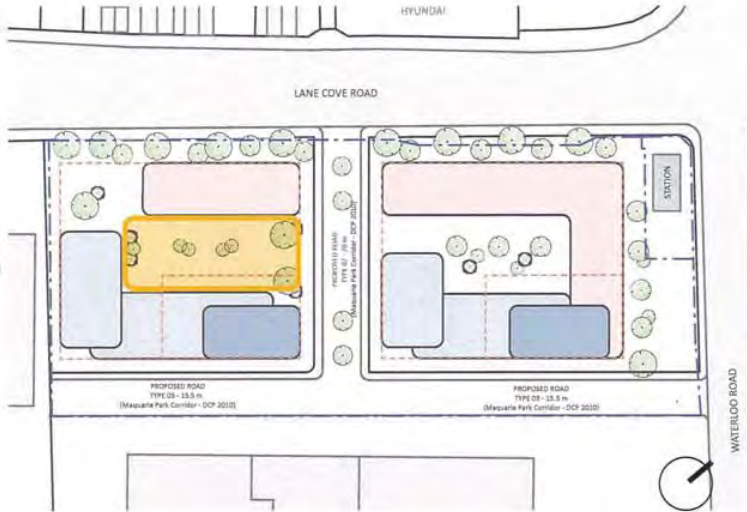


Avenida de Portugal, Madrid Spain

The Village Square

0.18ha

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



St Margarets on Bourke Street, Surry Hills Sydney

Principles

The Village Square is the heart to the development and provides 1800m² of public domain. In contrast to The Green it is mainly a paved space, which offers opportunities for community gatherings, everyday events and cultural displays. The Village Square will be a highly activated public space with retail aligning along the North West end.



Korenmark Square, Belgium



Piazza XXIV Maggio, Reggio Emilia Italy

The Entry Plaza

0.07ha



More London, London UK

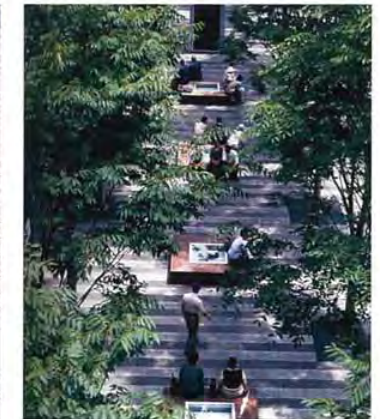
Principles

The Entry Plaza is a public space connection to Lane Cove Road. At 700m², the plaza is proposed as a paved space with trees, understory planting and seating. The planting will act as a buffer to the road noise as well as directing the visitor in to the heart of the development of the Village square.

The Plaza provides a good opportunity to incorporate public art as a landmark for the development.



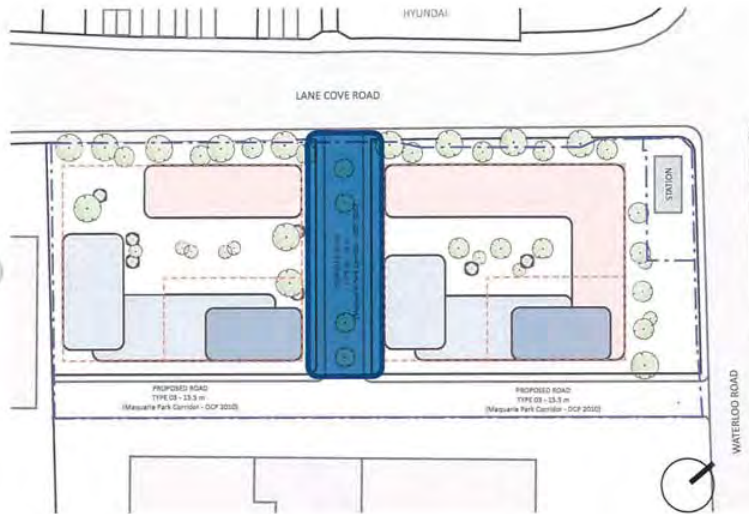
Toyota motor sales Campus, California USA



Saitama Plaza, Tokyo Japan

The Green Street

0.21ha



AAUPC, Boulogne France

Principles

This tree lined street is the site access street from Lane Cove Road. It is designed with centre medians to capture and treat on-site water.

Public street furniture and lighting will be designed and integrated into the streets, creating highly sustainable environmental and social streets.



WSUD, Zetland Sydney



Streetscape, San Francisco USA,

The Access Road

0.47ha

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



Principles

This road is proposed as a grand tree lined street which provides a clear street address to the residential towers as well as the main access to the development from Waterloo Road.

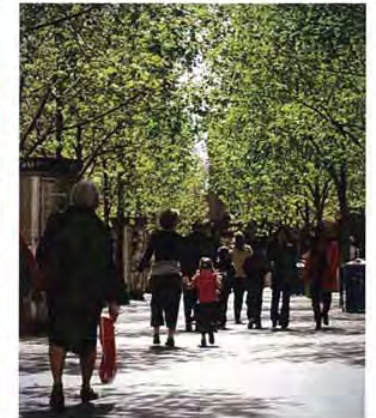
The South East edge will be largely planted playing a strong ecological role in water sensitive urban design by capturing and treating site water.



Lonsdale Street, Dandenong Victoria



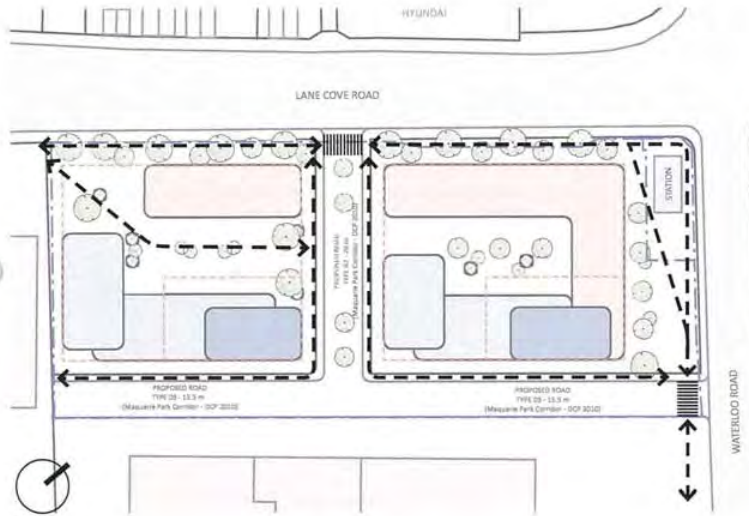
Lygon Street, Melbourne



Swanston Street, Melbourne

Pedestrian Crossings and Cycle ways

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



- ← - - - - -> Main pedestrian circulation paths
- ▨ Raised pedestrian crossings

Principles

The overall strategy for the landscape design will promote a bicycle and pedestrian friendly environment. Two raised pedestrian crossings have been proposed, prioritising the pedestrian movement across the intersection of the new streets. The diagram above highlights the pedestrian circulation and crossing points.



Devonshire Street, Surry Hills Sydney



Crown Street, Surry Hills Sydney



Street Crossing, Melbourne

Scale Comparisons of Key Spaces

The Station Plaza
0.21ha



City Square, Melbourne
0.23ha



The Green
0.16ha



Taylor Square, Sydney
0.12ha



City Square, Melbourne



Taylor Square, Sydney

Scale Comparisons of Key Spaces

The Village Square
0.18ha



Australia Square, Sydney
0.17ha



The Entry Plaza
0.07ha



QV Square, Melbourne
0.11ha



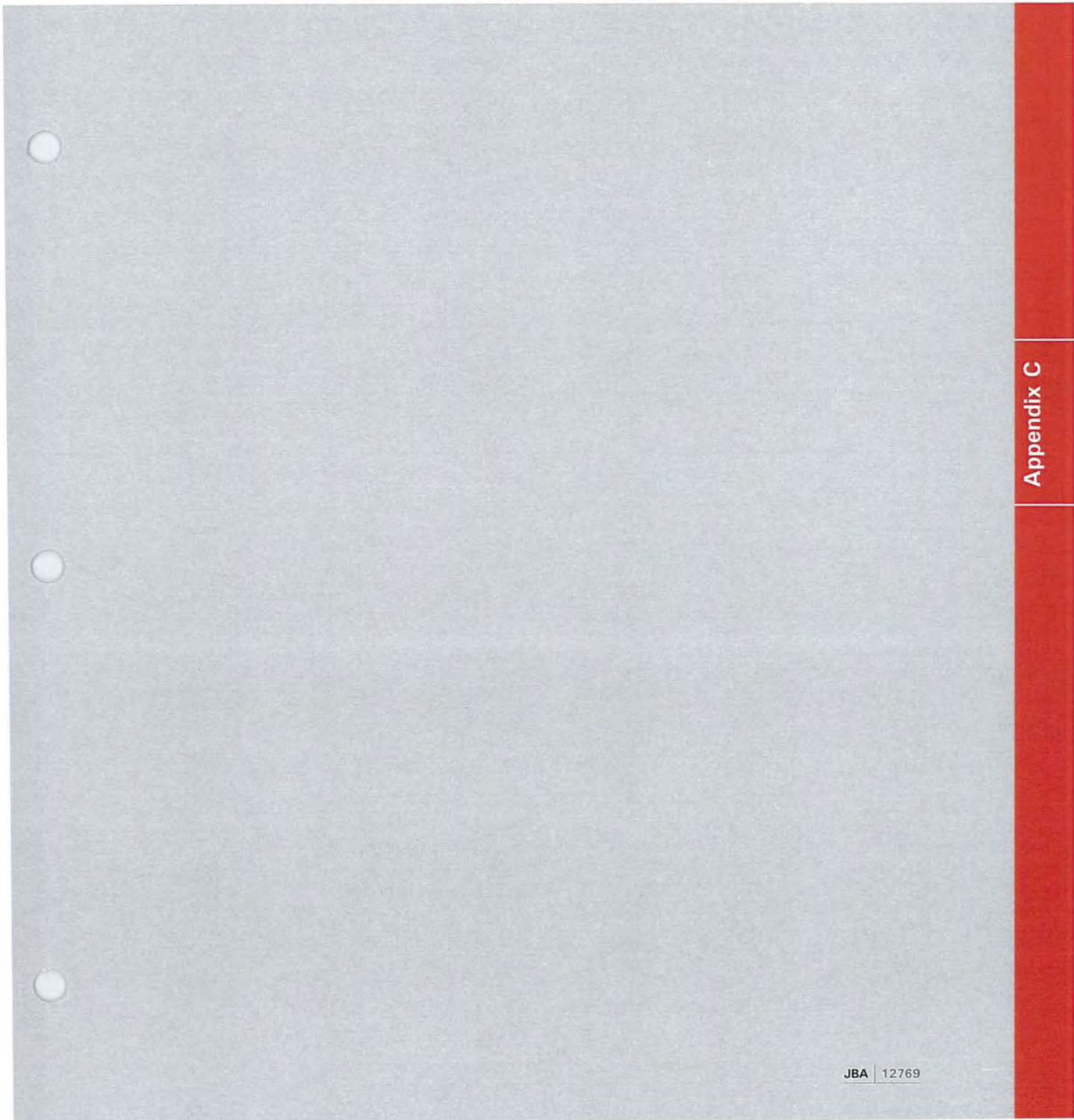
Australia Square, Sydney



QV Square, Melbourne

Economic Impact Assessment

HillPDA



Appendix C

JBA | 12769

271 Lane Cove Road, Macquarie Park Economic Impact Assessment

PREPARED FOR

Mirvac

22 October, 2013



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Front Cover Images

1. www.australiandesignreview.com
2. www.googlemaps.com



271 Lane Cove Road, Macquarie Park Economic Impact Assessment

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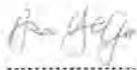
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BUPD
MPIA MVPELA

QUALITY CONTROL:

This document is for discussion purposes only unless signed and dated by a Principal of Hill PDA.

REVIEWED BY:

FINALREPORT Dated 22 October 2013



Alex Hrelja
Principal
Mbus (Property), MUP, BPD (Hons)
MPIA MEDA

REPORT DETAILS:

Job Ref No: C14022
Version: Final Draft
Date Printed: 10/10/2013
File Name: C14022 - Final - Macquarie Park Mixed Use Development Economic Assessment

271 Lane Cove Road, Macquarie Park Economic Impact Assessment

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271 Lane Cove Road, Macquarie Park Economic Impact Assessment

ABBREVIATIONS

Australian Building Greenstar Rating	ABGR
Australian Bureau of Statistics	ABS
Bureau of Transport Statistics	BTS
Department of Planning and Infrastructure	DPI
Development Control Plan	DCP
Estimated Resident Population	ERP
Floor Space Ratio	FSR
Gross Floor Area	GFA
Local Environmental Plan	LEP
Local Government Area	LGA
Net Lettable Area	NLA
Net Strata Area	NSA
Statistical Area 2	SA2
Urban Activation Precinct	UAP

EXECUTIVE SUMMARY

Mirvac proposes to have 271 Lane Cove Road, Macquarie Park (the Subject Site), rezoned from B3 Commercial Core to B4 Mixed Use in the City of Ryde Local Environmental Plan 2010 (LEP) to provide a transit oriented mixed use development incorporating predominantly residential but also some commercial and retail floorspace.

It is understood that in order to proceed to Local Environmental Plan (LEP) Gateway, the City of Ryde may require an independent assessment of the potential economic implications of the proposed development to the Macquarie Park Specialised Centre / Corridor. Accordingly, Hill PDA has been commissioned to undertake independent research to assess the economic implications of the proposal, the key findings of which are summarised below. It should be noted that this report considers matters related to economic impacts only.

KEY FINDINGS

The key economic findings relating to the proposed rezoning and subsequent development are:

- The generation of approximately 700 job years directly in construction and a further 1,870 job years in the broader economy over the construction period, equivalent to a total of 734 – 857 jobs per year over the course of the construction period;
- Direct investment of \$245m and a further flow-on economic benefit of \$566m from multiplier effects.
- Significant additional retail expenditure in the local area from construction workers and residents, including:
 - \$1.75m during the 36 – 42 month construction phase; and
 - \$18.5m per annum from residents at the completion of the project assuming the development is fully occupied.
- Market indicators show that demand for commercial floorspace in the North Ryde / Macquarie Park area is at historic lows at under half the long-term average (just 25,000sqm likely to be absorbed in 2013). This has resulted in a number of approved commercial developments not proceeding, with alternative uses sought for some sites.
- This lack of demand is reflected in rapidly climbing vacancy rates (7.3% at January 2013, to an estimated 8.9% in the latter stages of 2013).
- Forecast demand for commercial space in the Macquarie Park Specialised Centre / Corridor is around 245,000sqm based on the application of job ratios to BTS employment projections for the Centre / Corridor. Commercial floorspace which has already been approved but not yet developed accounts for 276,000sqm and will satisfy demand over the long-term.
- That there would be no discernible impact on commercial floorspace supply and demand factors within the Macquarie Park Specialised Centre / Corridor given that existing approvals for commercial floorspace are likely to outstrip long-term demand.

271 Lane Cove Road, Macquarie Park Economic Impact Assessment

- The proposed development represents the highest and best use for the Subject Site given historic low levels of demand for commercial space, its transit oriented nature and its ability to complement existing office functions through social and urban design benefits with more active use of the precinct after business hours.
- Potential exists for a significant contribution to infrastructure provision in the Macquarie Park Specialised Centre / Corridor through bonus FSR and height limit concessions as part of a VPA, should agreement be reached with the developer.
- The proposed development would bring about improvements in the range of available dwelling types in the City of Ryde and potential opportunities for lower income earners to rent and buy property.
- Provision of housing in a location that makes efficient use of land and resources and encourages walking and public transport patronage. This reduces pressure for people to locate in urban fringe locations that have poor access to jobs, services and public transport.
- The creation of employment opportunities within a location that has excellent public transport services;
- The improvement of retail offer and enhanced price competition for consumers in the Macquarie Park Specialised Centre / Corridor.
- An impetus for investment in the locality over competing areas.
- The marginal loss of some commercial floorspace on the Subject Site (potentially around -6,446sqm) leading to a net decline in operational employment (potentially up to -450 jobs per annum) and retail spend (\$-1.1m per annum). However, this assumes a worst-case scenario where existing commercial office tenants on the Subject Site relocate beyond the Macquarie Park Corridor.
- It is possible that existing tenants on the subject site will relocate within the area and thus there would be net gain in ongoing employment in Macquarie Park as a result of the development.
- The visual and overall amenity impact of development occurring next to a major public transport hub and community plaza space.

Our analysis has identified the above referenced adverse impacts would either be negligible, confined to the anticipated 36-42 month construction period or may not occur at all in the case of the loss of commercial floorspace.

Their short term implications are also considered likely to be significantly outweighed by the longer term economic merits of the proposed development relating to the contribution to notable construction job generation, economic multipliers, substantial additional retail expenditure and the longer term enhancement of one of Sydney's major employment and business centres.

The proposal also represents a policy evolution that recognises the importance of facilitating mixed use hubs around transit nodes. This is a more efficient use of land and resources and will contribute to more sustainable economic outcomes for the Macquarie Park Specialised Centre / Corridor as a whole.

1. INTRODUCTION AND CONTEXT

Mirvac proposes a mixed use development at 271 Lane Cove Road, Macquarie Park ("the Subject Site") (refer to Figure 1). The Subject Site is located within the City of Ryde and it is understood that as part of the planning proposal prepared by Mirvac, an Economic Impact Assessment is required to identify the potential economic implications of the proposed development.

Accordingly, Hill PDA has been commissioned by Mirvac to assess the likely economic impacts of the proposal including (but not limited to), the effect on commercial and retail activity in the locality, employment and economic multipliers generated by the proposed development as well as the project's contribution to the City of Ryde's housing targets.

1.1 THE SUBJECT SITE

The Subject Site is located within Macquarie Park, a major employment and business precinct within metropolitan Sydney and is bounded by Lane Cove Road to the west, Waterloo Road to the north and existing residential and commercial uses to the south and east. The Subject Site enjoys excellent public transport connections being located adjacent to Macquarie Park Station and a strategic bus service running down Lane Cove Road.

The Subject Site currently comprises two commercial buildings which are utilised by WorkArena (total NLA of 4,798sqm) and Foxtel (total NLA of 6,718sqm) and combine to provide 11,516sqm NLA of commercial floorspace across the 22,540sqm site.¹

Figure 1 - Subject Site Local Context



Source: Six Maps, NSW Government and Hill PDA 2013

¹ Mirvac (2013)

As can be seen in Figure 2, the Subject Site is currently zoned B3 Commercial Core under the Ryde LEP (2010). A review of planning controls across the Macquarie Park area is currently underway (Planning Proposal for the Ryde LEP 2013 Draft (Amendment 1) Macquarie Park Corridor) which allows for a maximum achievable potential height of 65m and FSR of 3:1 across the Subject Site.

Figure 2 - Subject Site Zoning



Source: Six Maps, NSW Government and Hill PDA 2013

1.2 PROJECT DESCRIPTION AND ASSUMPTIONS

It is understood that Mirvac seeks a rezoning of the Subject Site from its current B3 Zoning to B4 Mixed Use in order to progress a mixed use development that includes residential and non-residential activity (refer to Figures 3, 4 and 5). The final configuration is to be confirmed.

The Planning Scheme Proposal and Masterplan for the Subject Site identifies that the proposed development is to be completed across two stages. It should be noted that the Scheme is indicative only and is subject to a more detailed development application (DA) process.

Stage 1 comprises:

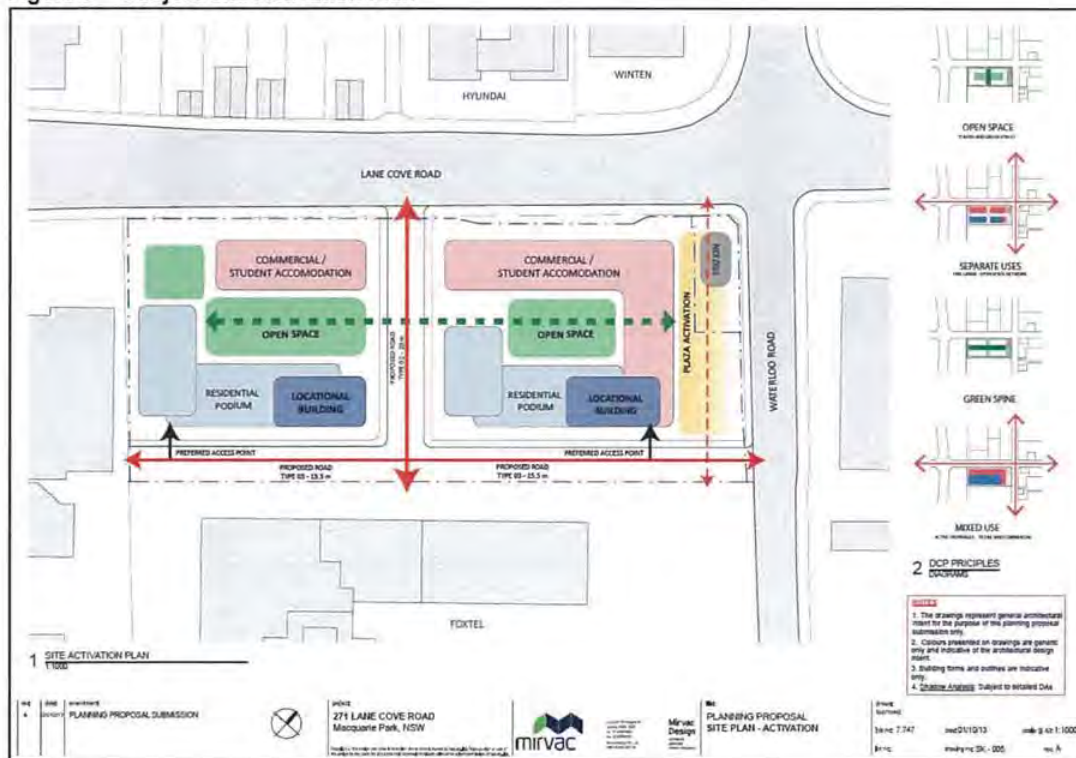
- 875sqm of commercial floorspace; and
- Approximately 294 dwellings.

Stage 2 comprises:

- 3,509sqm of commercial floorspace;
- 686sqm of retail floorspace; and
- Approximately 374 dwellings.

In total, the proposed development would comprise 5,070sqm NLA of non-residential floor space including potential provision of approximately 668 dwellings.

Figure 3 - Subject Site Activation Plan

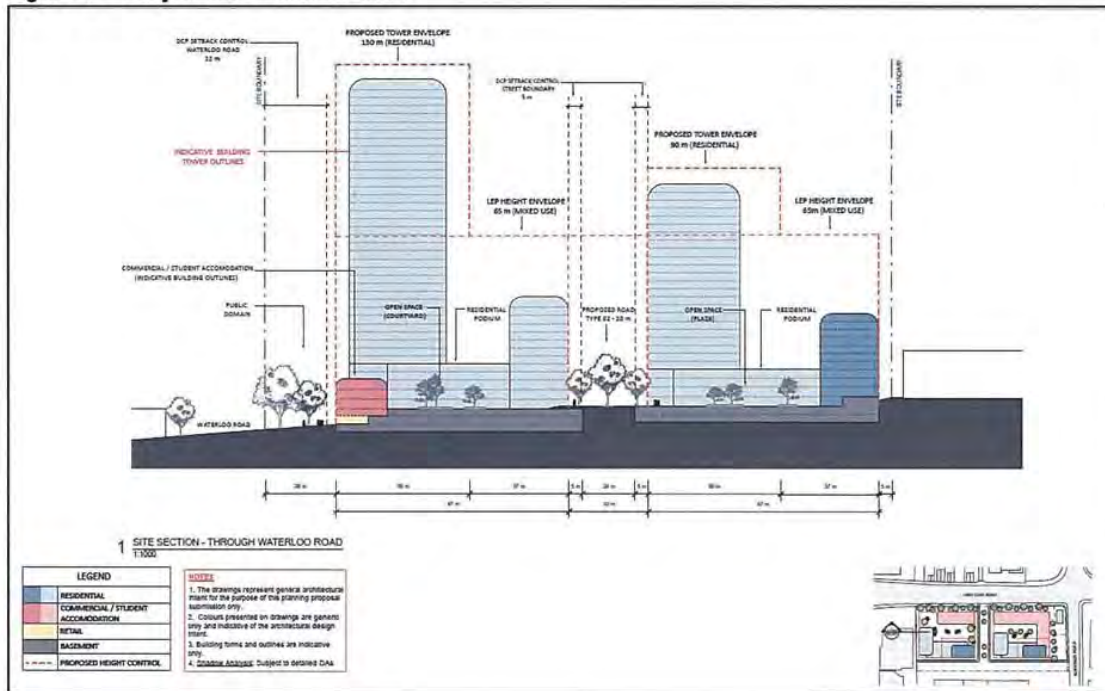


Source: Mirvac 2013

Ref: C14022

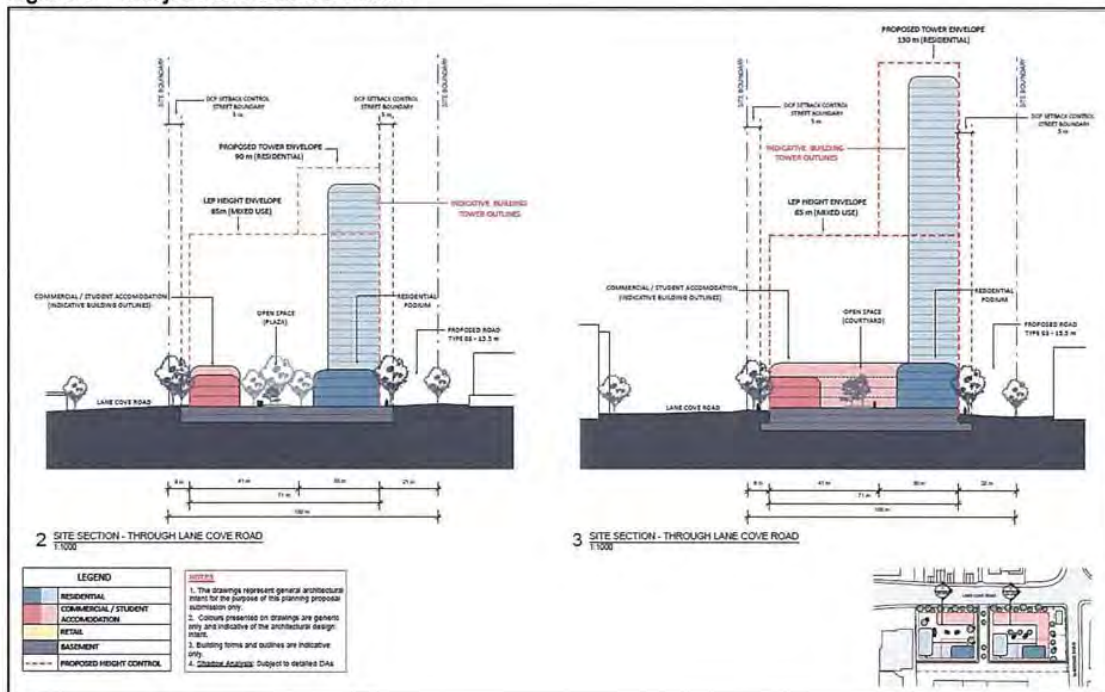
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Figure 4 - Subject Site Section Plan 1



Source: Mirvac 2013

Figure 5 - Subject Site Section Plan 2



Source: Mirvac 2013

The following information provided by Mirvac regarding the proposed development's construction and operational characteristics was used to inform the economic assessment:

- Estimated construction costs of approximately \$245m excluding associated development costs;
- Project commencement is planned for late 2018 and is anticipated to take 3 – 3.5 years to complete; and
- Retail floorspace will be ground level activated fronting the station plaza and will likely include cafes/restaurants and convenience and specialty stores.

1.3 METHODOLOGY AND STUDY STRUCTURE

To prepare the assessment, Hill PDA undertook the following tasks:

- Chapter 1: Provided an overview of the existing conditions and proposed development on the Subject Site including key assumptions utilised in the analysis.
- Chapter 2: Completed a detailed review of state, regional and local policy that has implications for the rezoning of land on the Subject Site and subsequent potential development.
- Chapter 3: Analysed demographic trends in the Macquarie Park – Marsfield SA2, Ryde LGA and Greater Sydney area to understand how population, dwelling and income characteristics may influence demand for proposed land uses on the Subject Site;
- Chapter 4: Investigated the extent of development in the pipeline in Macquarie Park;
- Chapter 5: Provided an overview of the role and characteristics of the Macquarie Park Specialised Centre / Corridor, along with existing supply and forecast demand factors for commercial space including likely absorption and how this may be affected by the proposed development. The extent of additional retail expenditure generated by the proposed development was also investigated and extent of additional retail expenditure.
- Chapter 6: Determined the direct and indirect economic multipliers of the capital investment of the proposed development and the subsequent construction and operational employment effects on the Subject Site;
- Chapter 7: Assessed additional short and long-term impacts of the development, including enhancement and invigorating of the Business Park, improved retail choice and competition, impetus for investment and construction effects.
- Chapter 8: Assessed the contribution of the proposed development to housing targets, choice and affordability and housing in the right locations in the City of Ryde;
- Chapter 9: Provides a succinct summary of the key findings.

2. PLANNING & POLICY REVIEW

This Chapter undertakes an appraisal of the planning and legislative context that is relevant to the Study. Note that it considers matters relating to economic impacts only.

2.1 STATE AND REGIONAL PLANNING POLICIES AND STRATEGIES

2.1.1 DRAFT METROPOLITAN STRATEGY FOR SYDNEY (2013)

The Draft Metropolitan Strategy for Sydney aims to provide a new plan for Sydney's future growth over the coming decades. The Strategy essentially updates the Metropolitan Plan for Sydney 2036 to integrate land use and transport planning, including revised resident, housing and jobs targets.

The Strategy highlights the need to accommodate an additional:

- 1.3m residents;
- 545,000 homes; and
- 625,000 jobs.

Translating this growth down to the sub-regional level, the Department of Planning & Infrastructure (DoP&I) forecasts that an additional 242,000 people will be living in the central sub-region of Sydney by 2031.² Accordingly, to meet this growth in population, the Strategy has estimated a target of 138,000 additional dwellings for the central sub-region of Sydney between 2011 and 2031.

The importance of the Macquarie Park Specialised Centre / Corridor is recognised through its identification as part of the Global Economic Corridor. The Global Economic Corridor "extends from the national gateways of Port Botany and Sydney Airport through to Global Sydney and north to St Leonards, Chatswood and Macquarie Park."³ The Strategy notes that the Global Corridor will be developed as the most important cluster of professional and service industry jobs across all of Australia. An additional 213,000 jobs are forecast to be accommodated in the Global Corridor over the period to 2031.

² Source: Draft Metropolitan Strategy for Sydney to 2031 (March 2013)

³ Draft Metropolitan Plan for Sydney, Department of Planning & Infrastructure (2013)

2.1.2 METROPOLITAN PLAN FOR SYDNEY 2036 (2010)

The NSW Department of Planning and Infrastructure's (DP&I's) Metropolitan Plan for Sydney 2036 was released in December 2010. The Plan aims to shape the future growth of Sydney to 2036 ensuring a more resilient, compact, connected, multi-centred and sustainable city. The Metropolitan Plan integrates land use and transport planning by integrating the Metropolitan Transport Plan, which was published for consultation earlier in 2010.



The Plan aims to address key challenges facing Sydney which includes managing a growing and changing population, providing more jobs closer to home, more efficient transport delivery, climate change and maintaining our global competitiveness. These challenges are addressed through strategic directions.

The Plan anticipates Sydney's population will reach close to 6 million by 2036. To accommodate this population growth, land use service provision and infrastructure capacity must be planned to provide for +769,000 additional homes and +760,000 additional jobs.

Table 1 - Sydney Metropolitan Dwelling and Job Targets to 2036 (2010)

Subregion	New Dwelling Additions Target 2006 to 2036	% Share	New Employment Growth Target 2006 to 2036	% Share
Sydney City	+ 61,000	7.9%	+114,000	15.0%
East	+ 23,000	3.0%	+31,000	4.1%
South	+ 58,000	7.5%	+52,000	6.8%
Inner West	+ 35,000	4.6%	+25,000	3.3%
Inner North	+ 44,000	5.7%	+62,000	8.2%
North	+ 29,000	3.8%	+15,000	2.0%
North East	+ 29,000	3.8%	+23,000	3.0%
West Central	+ 96,000	12.5%	+98,000	12.9%
North West	+169,000	22.0%	+145,000	19.1%
South West	+155,000	20.2%	+141,000	18.6%
Central Coast	+ 70,000	9.1%	+54,000	7.1%
Total	+769,000	100.0%	+760,000	100.0%

Source: Metropolitan Plan for Sydney 2036, NSW Department of Planning and Infrastructure. Note: the Subject Site is located in the Inner North Subregion

The Plan also forecasts that an additional 10 million sqm of additional commercial floorspace and 5 million sqm of additional retail floorspace will be required across Sydney by 2036 in order to cater for employment growth and increasing demand.

The Subject Site is located within the Inner North Region of metropolitan Sydney. The Inner North is forecast to accommodate an additional 62,000 jobs from 2006 to 2036. The proposed development will assist in meeting these targets by generating construction and operational employment in the Macquarie Park Specialised Centre / Corridor.

2.1.3 DRAFT INNER NORTH SUBREGIONAL STRATEGY (2007)

The draft Inner North Subregional Strategy, completed in 2007, seeks to guide land use planning to 2031 in the Hunters Hill, Lane Cove, Mosman, North Sydney, Ryde and Willoughby LGAs.

The Subregional Strategy sets out key directions for housing in the Inner North and includes the following⁴:

- More housing opportunities to support a diverse workforce and population;
- Increase housing choice as part of the housing target;
- Plan for 30,000 new dwellings; and
- Enable communities to age 'in place'.

Within the Inner North Subregion, dwelling stock is forecast to increase from approximately 129,000 at 2004 to 159,000 at 2031.⁵ This represents an additional requirement for 30,000 dwellings. Of these 30,000 dwellings, the City of Ryde was designated to accommodate 40% or 12,000 dwellings.

The Subregional Strategy also sets out a hierarchy of centres. The Subject Site is located within the Macquarie Park Specialised Centre / Corridor as designated under the Subregional Strategy, Specialised Centres are intended to contain "*major airports, ports, hospitals, universities, research and business activities. These perform a vital economic and employment role which generate metropolitan-wide benefits.*"⁶

It is noted that the Macquarie Park Specialised Centre / Corridor is a highly important economic and employment node comprising a cluster of high technology businesses and key research and employment institutions including Macquarie University, Macquarie University Research Park, Macquarie Centre, Macquarie Park and Riverside Corporate Park. This document suggests the Centre provides around 32,200 jobs across 800,000sqm of existing commercial floorspace.

When fully developed the Macquarie Park Specialised Centre / Corridor could contain close to 2 million square metres of commercial floorspace, however the take-up of commercial space in the Corridor will ultimately depend on the market. At the present time, a significant amount of approved floorspace will satisfy demand over the long-term (refer Chapters 4 and 5) and there does not appear to be any need for additional commercial space in the Corridor.

As shown later in this report, both state government job projections and independent property market research indicate that full build out of the Corridor is not likely in the foreseeable future.

2.1.4 URBAN ACTIVATION PRECINCTS

The Urban Activation Precincts Program was announced in March 2013 as an "*important component of a package of wider housing delivery and jobs initiatives. Through consultation with local communities and*

⁴ Draft Inner North Subregional Strategy, NSW Department of Planning & Infrastructure (2007)

⁵ Draft Inner North Subregional Strategy, NSW Department of Planning & Infrastructure (2007)

⁶ Ibid

*councils, Urban Activation Precincts aim to deliver more homes in places with access to infrastructure, transport and services and jobs.*⁷

Two of the initial 8 UAPs announced are located in the City of Ryde:

- North Ryde Station; and
- Herring Road, Macquarie Park.

It is understood that Council's preferred direction is to achieve their housing targets by accommodating the majority of additional residential growth at these two UAPs.

2.2 LOCAL PLANNING INSTRUMENTS

2.2.1 RYDE LOCAL ENVIRONMENTAL PLAN (2010)

The Ryde LEP seeks to guide land use controls in order to encourage the management and development of land that *"provides a range of land uses, employment activities and housing types that respond to the welfare of the citizens of Ryde."*⁸

The Subject Site is located on land zoned B3 Commercial Core. The objectives of the B3 Zone are essentially to provide a wide range of retail, business, office, entertainment and community uses that encourage employment opportunities and maximise public transport patronage whilst providing high-quality built form and a safe pedestrian environment⁹.

The proposed rezoning of the Subject Site would see it become B4 Mixed Use. The objectives of this zone are outlined in the LEP and include the following¹⁰:

- To provide a mixture of compatible land uses;
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling;
- To create vibrant, active and safe communities and economically sound employment centres; and
- To recognise topography, landscape setting and unique location in design and land-use.

Clause 6.6 of the LEP applies to land within the Macquarie Park Corridor. The objectives for land within Macquarie Park include the following¹¹:

- To promote the corridor as a premium location for globally competitive businesses with strong links to the Macquarie University and research institutions and an enhanced sense of identity;

⁷ <http://www.planning.nsw.gov.au/HousingDelivery/UrbanActivation/tabid/593/language/en-US/Default.aspx>

⁸ Ryde LEP, Ryde City Council (2010)

⁹ Ibid

¹⁰ Ibid

¹¹ Ryde Local Environmental Plan, City of Ryde (2010)

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- To implement the State Government's strategic objectives of integrating land use and transport, reducing car dependency and creating opportunities for employment in areas supported by public transport;
- To guide the quality of future development in the corridor;
- To ensure that the corridor is characterised by a high-quality, well-designed and safe environment that reflects its natural setting, with three accessible and vibrant railway station areas providing focal points;
- To ensure that residential and business areas are better integrated and an improved lifestyle is created for all those who live, work and study in the area.

2.2.2 RYDE DEVELOPMENT CONTROL PLAN (2010)

The Ryde Development Control Plan (DCP) provides "*guidelines, objectives and controls for people who wish to carry out development in the City of Ryde.*"

The Ryde DCP provides a set of economic principles for the Macquarie Park Specialised Centre, including the need to¹²:

- Provide flexible buildings that are adaptable to the changing floor plate and layout needs of commercial and high-tech industries over time;
- Provide a variety of floor plate sizes to suit a range of businesses;
- Promote a central location for civic and government activities;
- Facilitate the continuance of existing or 'non-conforming' uses in the short-term;
- Permit limited residential uses in appropriate identified areas provided they do not undermine the economic viability of the planned commercial and high-tech industrial function of the Corridor.

Under the DCP, the Subject Site is currently controlled by a Maximum Floors Space Ratio of 2:1 and 3:1, with the higher FSR provided closer to the train station. Maximum height controls limit development to between 37m – 44.5m.

2.2.3 MACQUARIE PARK CORRIDOR PLANNING PROPOSAL (2013)

The Macquarie Park Corridor Planning Proposal "*outlines proposed changes to the Ryde LEP 2013 and the justification for making the changes. The effect of the proposed changes is to amend the floor space ratio and height controls applying to the Macquarie Park Corridor to encourage development that implements roads and parks.*"¹³

The context of the review is that there is significant traffic congestion and lack of walkability due to poor permeability and few route options on the existing road network within the Macquarie Park Centre / Corridor.

¹² Ryde Development Control Plan (DCP), City of Ryde (2010)

¹³ <http://www.ryde.nsw.gov.au/Council/Have+Your+Say/Macquarie+Park+Corridor+Planning+Proposal>. Accessed 20.09.2013

Council's aim for the review of planning controls in Macquarie Park is to "guide evolution of the area from Business Park to urban centre, making it more attractive to workers and Ryde residents"¹⁴.

The Planning Proposal seeks to introduce an incentive scheme that "defers an availability of additional Floor Space Ratio (FSR) and height until the developer negotiates with Council to deliver roads and/or parks or contribute towards these."¹⁵

Under the Planning Proposal FSRs across the whole of the Subject Site would be 3:1 and building height would be increased from 37m-44.5m to 65m.

2.2.4 MACQUARIE PARK CORRIDOR MASTER PLAN (2004)

The Macquarie Park Corridor Master Plan was developed in 2004 with the view to guide future development and implement strategic objectives for the Corridor. The Master Plan recognised the importance of encouraging of intensifying development around train stations to foster their development as activity nodes.

As part of the preparation of the Master Plan, development controls were set out for different 'character areas' in the Corridor. Land around each of the train stations had distinct character statements and objectives, under the title of Station Squares. Station Squares were intended to¹⁶:

- Create vibrant urban centres around each of the train centres;
- Provide safe and stimulating focal points for the whole Corridor;
- Promote a range of activities that provide an active pedestrian environment;
- Accommodate shops, cafes, restaurants, bars, leisure and recreational facilities, along with professional, business and personal services, and permanent and visitor accommodation;
- Provide for a range of out-of-hours activities and enhance the quality of the wider working neighbourhood;
- Capitalise on high level public transport accessibility; and
- Focus each station area on one or more public plazas, centred around the station entries.

The development of high density residential on the Subject Site will contribute to these objectives and will provide complementary activity to the large quantum of commercial land in the Macquarie Park Corridor.

2.2.5 CITY OF RYDE LOCAL PLANNING STUDY (2012)

In response to the Sydney Metropolitan Strategy and draft Inner North Subregional Strategy, the City of Ryde has produced a Local Planning Study that "aims to guide the preparation of a new comprehensive local environmental plan (LEP) for the City of Ryde."¹⁷ The Study has provided background on centres and

¹⁴ Planning Proposal for Macquarie Park Corridor, City of Ryde (2013)

¹⁵ Planning Proposal for Macquarie Park Corridor, City of Ryde (2013)

¹⁶ Macquarie Park Corridor Master Plan, Scott Carver, David Lock & Associates, PBAI, Hill PDA and Sinclair Knight Merz (2004)

¹⁷ City of Ryde Local Planning Study, City of Ryde (2012)

corridors, residential, environment and open space, heritage, employment and transport and has also delivered a set of key strategic directions.

With particular relevance to this Assessment, the Local Planning Study found that there is a need to:

- Provide for alternative housing types for ageing households as they downsize;
- Provide housing for young lone persons and young couples within and around centres;
- Continue to provide for small to medium sized dwellings in centres;
- Provide a diversity of dwelling stock; and
- Concentrate housing provision in appropriate centres.

The Housing Study conducted as part of the Local Planning Study found that with respect to Macquarie Park, there would be additional dwellings to be delivered, usually in the form of apartments near Macquarie University and North Ryde train stations and student housing at Macquarie University.

The Housing Study noted that these *"dwellings will be delivered where there is good access to public transport, jobs, University, shops and places of recreation."*¹⁸

¹⁸ City of Ryde Local Planning Study, City of Ryde (2012)

3. DEMOGRAPHIC PROFILE

As part of this Study, Hill PDA has undertaken a review of the demographic profile of the Macquarie Park – Marsfield Statistical Area 2 (SA2) over the period 2001 to 2011. Comparisons with the Ryde LGA and Greater Sydney have been provided for context.

The demographic analysis highlights a number of trends which are likely to impact demand for high density residential development in the Macquarie Park area, including the following (refer to Appendix 1 for detailed tables):

- A significantly lower proportion of family households in the Macquarie Park – Marsfield SA2 at 2011 (55.2%) compared to Ryde LGA (66.8%) and Greater Sydney (69.5%).
- Significant growth in median household and personal incomes across all areas over the 2001 to 2011 period. This growth is reflected in the proportion of households in the Macquarie Park – Marsfield SA2 which earn in the highest two weekly income brackets (9.8% at 2001 to 24.6% at 2011).
- A higher proportion of flats, units and apartments in the Macquarie Park – Marsfield SA2 at 2011 (44.9%) compared to Ryde LGA (32.5%) and Greater Sydney (26.9%). The proportion of flats, units and apartments has increased consistently in all areas between 2001 and 2011.
- A higher proportion of home ownership (47.1% at 2001 to 49.2% at 2011) within the Macquarie Park – Marsfield SA2. This trend has not been reflected in the broader Ryde LGA or Greater Sydney.
- An increase in unemployment in the Macquarie Park – Marsfield SA2 from 5.3% to 8.3% at 2001 and 2011. Unemployment is higher in the Macquarie Park – Marsfield SA2 when assessed against comparison areas.

The proposed development would cater to increasing demand for higher density residential development in the Macquarie Park – Marsfield SA2 as well as providing a source of investment for those with higher disposable incomes.

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4. DEVELOPMENT ACTIVITY

Hill PDA has investigated development in the pipeline in order to understand demand for various types of uses in Macquarie Park.

Table 2 - Macquarie Park: Development in the Pipeline

Project / Owner	Address	Approved Floorspace (sqm NLA)	Type	Value
Stockland Triniti	39 Delhi Road, 10 Julius Avenue, & 2 Richardson Place	30,098	Commercial/Retail - Stage 2	\$85,000,000
One Rivett Road	1 (lot 17) Rivett Road (DP1003588)	11,380	Office - 8 storey - Stage 2	\$40,385,000
ISPT - Epicentre	6-8 Julius Avenue	34,190	Office - 6 storey	\$50,000,000
Oracle	4 Julius Avenue	10,000	Commercial	
Mirvac	34 Waterloo Road	34,033	Commercial	
Goodman	27-37 Delhi Road	34,000	Commercial	
Dexus AVER 112	112 Talavera Road	0	Office - 6 storeys	
Dexus	144 Wicks Road	27,340	Office	
Capital Corporation	63-71 Waterloo Road	11,822	Office and Serviced Apartments	\$55,500,000
Winten and Australand	396 Lane Cove Road	83,368	Office	
Total		276,231		

Source: PCA Office Market Report, Urbis (2012)

The analysis highlights that there is approximately 276,000sqm of approved office floorspace in the Macquarie Park Corridor.

As can be seen from the above, there is a large quantum of additional commercial floorspace in the development pipeline. It appears that the loss of 7,130sqm of office floorspace as part of the proposed development would be insignificant in terms of potential commercial office space additions.

It should also be noted that the Subject Site previously had 37,799sqm of commercial floorspace (GFA) approved in 2007 which ultimately did not proceed due to a lack of tenant demand and lack of commercial viability due to existing and likely market conditions.

5. MACQUARIE PARK SPECIALISED CENTRE / CORRIDOR EFFECTS

5.1 REGIONAL SIGNIFICANCE

The Macquarie Park Specialised Centre *"is a nationally significant research and business centre, specialising in communications, medical research, pharmaceutical and IT&T sectors."*¹⁹ As identified in the Local Planning Study – Centres and Corridors Study (2012), the Macquarie Park Specialised Centre is recognised as forming part of the Global Economic Arc which links Macquarie Park with North Sydney, the Sydney CBD and Sydney Airport.²⁰ Over the past 30 years the area has developed from a semi-rural area to the major employment centre it is today. The Centre / Corridor is located on the Chatswood Epping railway line which connects it with Epping in the north-west, Olympic Park and Rhodes to the south-west, Sydney CBD and North Sydney to the south-east and Sydney Airport to the south.²¹

The Macquarie Park Specialised Centre / Corridor is third largest hub of commercial floorspace in the Greater Sydney metropolitan area with an existing quantum of over 800,000sqm.²²

Key institutions and land uses in the Macquarie Park Specialised Centre / Corridor include CSIRO, cemetery and crematorium, Macquarie Shopping Centre, Macquarie University and Macquarie University Hospital. The Centre is also home to the headquarters of some of Australia's leading companies including Foxtel, Optus, Siemens and Microsoft.²⁴

5.2 OFFICE FLOORSPACE SUPPLY AND DEMAND

The Macquarie Park Specialised Centre / Corridor is estimated (by a 2012 study) to have approximately 820,000sqm of commercial floorspace.²⁵ Based on existing zonings, the Corridor has capacity to eventually accommodate around 2 million square metres of commercial floorspace²⁶, however this is contingent on market factors and demand led employment growth.

¹⁹ <http://www.ryde.nsw.gov.au/Development/Town+Centres/Macquarie+Park+Corridor>. Accessed 20.09.2013

²⁰ City of Ryde Local Planning Study: Centres and Corridors Study, City of Ryde (2012)

²¹ Ryde Development Control Plan, City of Ryde (2010)

²² <http://www.ryde.nsw.gov.au/Development/Town+Centres/Macquarie+Park+Corridor>. Accessed 20.09.2013

²⁴ City of Ryde Local Planning Study: Centres and Corridors Study, City of Ryde (2012)

²⁵ North Ryde Station Precinct Project: Economic Impact Assessment, Urbis (2012)

²⁶ City of Ryde Local Planning Study: Centres and Corridors Study, City of Ryde (2012)

5.2.1 MARKET INDICATORS

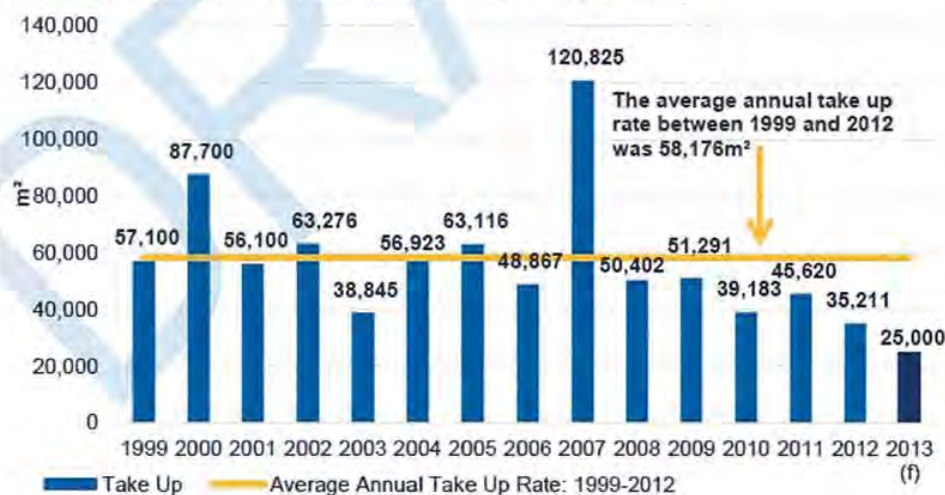
Colliers International recently completed a study titled Demand / Supply Analysis of the North Ryde / Macquarie Park Commercial and Residential Markets in October 2013. The analysis found that the commercial market is experiencing rising vacancies, increasing from 7.3% at January 2013 to 7.8% in July. Vacancy rates are anticipated to increase to 8.9% over the course of the second half of 2013, indicating lack of demand and softness in the market.²⁷

This continuing lack of demand for office space in the North Ryde / Macquarie Park Corridor is emphasised in weak leasing demand, driven by a lack of confidence in the domestic outlook and concerns regarding future business growth. As can be seen in the following figure, Colliers International are forecasting that just 25,000sqm of lease transactions will take place in 2013, the lowest level recorded since data collection commenced in 1999.²⁸

The Commercial Market report also notes that given the existing lack of demand, a number of commercial towers with development approval have become unviable or are looking at alternative highest and best uses for the sites, including 144 Wicks Road, Macquarie Park (former Peter Board High School site). The site was granted development approval in 2011 for a four stage project with a commercial floorspace GFA of over 100,000sqm. Due to a lack of demand and low take-up rates, the site has subsequently been on-sold to Masters who believe that the highest and best use of the site is an alternative use (i.e. bulky goods).²⁹

Clearly market factors are contributing to a lack of demand and take-up of commercial floorspace in the North Ryde / Macquarie Park area. The loss of a small component of commercial space will therefore make a negligible impact on the broader market and will contribute to vacant floorspace being absorbed faster than it otherwise would have been.

Figure 6 - North Ryde/Macquarie Park Historical Leasing Activity (Colliers International)
North Ryde/Macquarie Park Historical Leasing Activity



²⁷ Demand / Supply Analysis of the North Ryde / Macquarie Park Commercial and Residential Markets, Colliers International (2013)

²⁸ Ibid

²⁹ Ibid

5.2.2 EMPLOYMENT BASED OFFICE SUPPLY AND DEMAND

Over the long-term (to 2036), the Corridor can potentially accommodate up to another 1.18 million square metres of commercial floorspace based on existing zonings. However, BTS employment forecasts that utilise Transport Data Centre analysis, show that employment in the Macquarie Park Corridor is projected to increase from approximately 39,100 at 2011 to 53,530 at 2036. Assuming that 85% of these jobs are office based given the extent of commercial floorspace in the Corridor and applying a ratio of 20sqm per 1 job, there would be an additional demand for around 245,240sqm of commercial office floorspace over the period to 2036. If the job ratio was a more dense 15sqm per 1 job, there would be a need for around 183,930sqm of commercial floorspace in the area over the long term.

Based on the employment projections it is more likely the Corridor will accommodate in the order of 1,065,240sqm of commercial floorspace over the long-term (2036), particularly in light of recent market conditions which have seen take-up rates at well below the historic average.

It will therefore be seen that the current quantum of approved commercial floorspace (+276,000sqm) in the Corridor exceeds the estimated long-term demand (245,240sqm), satisfying the need for additional commercial space over the period to 2036. Additional commercial floorspace development on the Subject Site would therefore only serve to further contribute to an existing glut.

The implication with regard to the proposed development on the Subject Site is therefore that a minor loss of commercial office floorspace would make no discernible impact on the broader Macquarie Park Specialised Centre / Corridor given the existing quantum of approved, and potential demand for, commercial office space. Indeed, the net loss of 7,132sqm of commercial floorspace on the Subject Site represents just 0.9% of total existing supply and 0.7% of likely future supply (1.07 million square metres) at the Macquarie Park Corridor.

Should demand significantly exceed that identified above and the capacity of commercial floorspace at the Corridor be fully realised (2 million square metres), the net loss in commercial space (-7,132sqm) would represent just 0.4% of potential capacity.

Furthermore, this scenario assumes that the existing commercial uses on the Subject Site would relocate beyond the Macquarie Park Corridor. This is unlikely given that they presumably set up within the Macquarie Park Corridor as it suited their business and locational needs. It is very possible that the existing tenants would seek commercial space within the Macquarie Park Corridor should a rezoning and subsequent development be approved. As such, it may be that there is no loss of commercial office space within the Corridor at all as a result of the proposed rezoning and development.

Table 3 - Macquarie Park Corridor Commercial Floorspace: Existing Supply and Forecast Demand

	Existing (sqm)	Forecast Demand (sqm) ³¹	Existing Approvals (sqm)	Future Supply to Demand (sqm)	Net Additional Requirement (sqm)
Macquarie Park Specialised Centre	820,000	245,240	276,230	+30,990	-

Source: City of Ryde, Mirvac, Urbis and Hill PDA (2013)

³¹ Based on applying employment ratios to BTS employment forecasts in the Macquarie Park Corridor.

5.3 CONTRIBUTION TO INFRASTRUCTURE DEVELOPMENT

One of the key issues affecting the Macquarie Park Specialised Centre / Corridor is traffic congestion and a lack of public transport patronage. As identified in the Planning Proposal for Macquarie Park Corridor, the existing road network has poor permeability, few route options and issues with traffic congestion in the morning and evening peak periods.

As a result, the Planning Proposal for Macquarie Park Corridor outlines proposed changes to the Ryde LEP 2013. The changes essentially seek to encourage developers to enter into Voluntary Planning Agreements (VPA) by Council providing bonus FSR and height limits on land within the Macquarie Park Specialised Centre / Corridor. As part of a VPA, developers would contribute wholly or in part to necessary infrastructure provision in the Centre / Corridor including roads and parks.

Given the scale of the proposed development (including 40 and 33 storey towers), the proposed development may therefore significantly contribute to necessary infrastructure in the Centre / Corridor including additional road provision and open space and recreation development. This would ultimately benefit the Centre / Corridor by³²:

- Enhancing economic viability through increased walking trips and public transport patronage;
- Reducing traffic congestion and queuing through greater permeability and route options; and
- Providing new streets which enhance development opportunities through subdivision and new street addresses.

5.4 RETAIL EXPENDITURE IN THE LOCALITY

Another benefit of the proposed development is the increase in retail expenditure in the locality that additional workers and residents would bring. It is likely that much of this additional retail spend in the locality would be directed to the Macquarie Park Shopping Centre given its close proximity to the Subject Site. In order to determine the quantum of additional retail expenditure generated from the proposed development, Hill PDA has estimated spend from a number of different sources, including:

- Construction workers;
- Operational employees including office and retail workers; and
- Residents on the Subject Site.

There is very little available data concerning the level of expenditure generated by workers close to their place of employment. There is anecdotal evidence suggesting that around 15% of total household expenditure is spent close to the place of work but the true figure is influenced by a number of factors – the main one being the level of retail offer close to the place of work. For the purpose of this Assessment we have assumed that

³² Planning Proposal for Macquarie Park Corridor, City of Ryde (2013)

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expenditure per worker is \$2,500 per annum.³³ Based on the assumptions, the potential for additional retail expenditure is as follows:

- \$0.5m - \$0.6m per annum or \$1.75m from construction workers on site between late 2018 and mid-late 2021; and
- -\$1.1m from operational workers annually.

When assessing the additional retail expenditure generated from residents on the Subject Site, the following assumptions were made:

- There would be an average of 2 persons per dwelling³⁴;
- All residents would be new residents to the locality; and
- Real retail growth would average 1.1% between 2011 and the completion of construction at 2022.³⁵

The proposed development would therefore accommodate an additional 1,336 residents that are likely to spend in the order of \$18.5m at 2022 on retail goods and services in the locality. This represents retail expenditure per capita of \$13,978.³⁶

As the analysis attests, there would be a significant injection of expenditure on retail goods and services in the locality should the proposed rezoning and subsequent development proceed, even accounting for a marginal decline in operational expenditure. Given that only a small portion of this spend will be captured by retail facilities on the Subject Site, the most significant portion of this spend is likely to be directed to retail facilities in the Macquarie Park Specialised Centre ./ Corridor, particularly the Macquarie Park Shopping Centre.

³³ Hill PDA (2013). Based on the assumption that around 20-25% of personal retail expenditure is outlaid close to peoples place of work.

³⁴ ABS Macquarie Park – Marsfield SA2 Community Profile (2011)

³⁵ Hill PDA, based on historic real retail growth analysis

³⁶ MarketInfo (2009)

6. ECONOMIC AND EMPLOYMENT IMPACTS

6.1 ECONOMIC MULTIPLIERS

The construction industry is a significant component of the economy accounting for 7.3% of Gross Domestic Product (GDP) and employing almost one million workers across Australia⁴⁴. The industry has strong linkages with other sectors, so its impacts on the economy go further than the direct contribution of construction. Multipliers refer to the level of additional economic activity generated by a source industry.

There are two types of multipliers:

- **production induced:** which is made up of:
 - first round effect: which is all outputs and employment required to produce the inputs for construction; and
 - an industrial support effect: which is the induced extra output and employment from all industries to support the production of the first round effect; and
- **consumption induced:** which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment.

The source of the multipliers adopted in this report is ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0). These tables identify first round effects, industrial support effects and consumption induced multiplier effects at rates of \$0.6463, \$0.6734 and \$0.9891 respectively to every dollar of construction.

The proposed development is expected to be completed over a 36-42 month period with a capital investment of approximately \$245m, with construction expected to commence in August 2018.

On this basis it is estimated that the proposed development would generate in the order of **\$811m of output from direct and indirect sources**. Each component of the total economic multiplier effect of the proposed development is outlined below (refer to the following table):

- \$245m of investment directly outlaid over the course of the construction period;
- A further \$158m generated in first round effects from production induced sources;
- Approximately \$165m of output generated from production induced industrial support effects; and
- An additional \$242m from consumption induced effects.

⁴⁴ Source: IBIS World Construction Industry Report 2011

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Table 4 - Economic Multipliers

	Direct Effects	Production Induced Effects First Round	Industrial Support	Consumption Induced Effects	Total
Output Multipliers	1	0.6463	0.6734	0.9891	3.3088
Output (\$ million)	\$245	\$158.3	\$165.0	\$242.3	\$810.7

Source: ABS Australian National Accounts: Input-Output Tables 1996-1997 (ABS Pub: 5209.0)

The proposed development would provide a high level of output for the regional and national economy and would directly and indirectly benefit a range of industry sectors. The extent of these economic multipliers being dependent on the extent of the inputs including raw materials, jobs and investment is also acknowledged.

6.2 EMPLOYMENT EFFECTS

Over 50,000sqm (NSA / NLA) of commercial, retail and residential floorspace would make a notable contribution to the local economy through the generation of employment. Employment generation would be derived in two separate phases being:

- The construction phase; and
- Upon the operation and occupation of the proposed floorspace.

The following section estimates the degree of employment likely to be generated in each phase.

6.2.1 CONSTRUCTION PHASE EMPLOYMENT

It is estimated that the equivalent of 2.85 construction positions over 12 months are created for every one million dollars of construction work undertaken⁴⁵. Employment generated through the construction phase would largely relate to jobs for construction workers and others employed directly on the construction of the building.

In addition to the direct generation of jobs, the construction industry creates a flow on, or additional economic benefit (such as wages and salaries) through the multiplier effect.

To calculate the potential scale of the flow-on employment benefits, production and consumption induced employment multipliers have been utilised. The 1996-97 ANA Input-Output Tables identified employment multipliers for first round, industrial support and consumption induced effects of 0.64, 0.70 and 1.34 respectively for every job year in direct construction (refer to the following table).

⁴⁵ Source: ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0)

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Table 5 - Employment Generated by Construction (Job Years)

	Direct Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support Effects		
Multipliers	1	0.64	0.70	1.34	3.68
Employment No. per \$million	2.85	1.83	1.98	3.81	10.48
Total job years created	698	449	486	935	2,568

Source: Hill PDA and ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0)

Direct and indirect construction employment effects are measured in this scenario as 'job years'⁴⁶. In this respect it is estimated that the proposed development could generate **2,568 job years** during the construction phase, comprising of:

- 698 job years from direct effects or 199 - 233 jobs per year over the course of the period of construction;
- 449 job years from first round production induced effects or 128 – 150 jobs per year;
- 486 job years from production induced industrial support services or 139 – 162 jobs per year; and
- 935 job years from consumption induced effects or 267 – 312 jobs per year.⁴⁷

When discussing economic multipliers, it is important to note the caution applied by Australian Bureau of statistics in that *"Care is needed in interpreting multiplier effects; their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction activity to the rest of the economy. Clearly, through its multipliers, construction activity has a high impact on the economy."*

6.2.2 OPERATIONAL PHASE EMPLOYMENT

Operational phase employment refers to the number of jobs created from the various tenancies to be accommodated by the proposed development, including commercial office and retail space. It is noted however that there may be a net loss of approximately 6,450sqm of non-residential floorspace as part of the proposed development. This potential loss of floorspace will result in a decline in annual operational employment on the Subject Site. The significance of this loss has been estimated as part of this analysis.

Operational employment generation is based on a worker to floorspace ratio for each of the existing and proposed land use tenancies. Employment density ratios have been applied based on Hill PDA's experience in this area and recent international research which has been adapted to Australian conditions.

As shown in the following table, there could potentially be a net loss of 450 operational jobs per annum as part of the proposed rezoning and subsequent development on the Subject Site. BTS data suggests that there are currently around 40,430⁴⁸ operational jobs in the Macquarie Park Corridor data area. On that basis a net loss of 450 jobs represents just 1.1% of total employment.

⁴⁶ 1 job year equates to one full time equivalent job for a one year period

⁴⁷ IBIS World Report on Construction Industry in Australia 2012 and ABS Australian National Accounts: Input-Output Tables 1996-1997 (ABS Pub: 5209.0).

⁴⁸ Small Area Employment Projections, BTS (2012)

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Furthermore, the loss of employment is insignificant given the scale of employment generated from the construction phase of the project and commercial development pipeline in the Macquarie Park Specialised Centre / Corridor.⁴⁹ Moreover, the loss of operational employment assumes a worst-case scenario in which existing tenants decide to not seek a new location in the Macquarie Park Corridor.

Table 6 - Employment Density Ratios and Existing and Estimated Operational Employment

Land Use Type	NLA per FTE* Worker	Total Floorspace** (sqm GLA)	Estimated Annual FTE Employment
Existing			
Office Space	15sqm	11,516	768
Proposed			
Office Space	15sqm	4,384	292
Cafes and Restaurants	25sqm	383	14
Other Retail (specialty & convenience stores)	30sqm	383	11
Total Proposed	16sqm	5,070	317
TOTAL		-6,446	-450

Source: Hill PDA 2013

* Full Time Equivalent ** Cafes and restaurants are assumed to account for half of all retail floorspace proposed

Note that the above table applies a relatively dense 15sqm per office job ratio. If a 20sqm per job ratio is applied to office uses, which is typical in many settings, the net result would be as follows:

- Loss of 576 jobs from existing floorspace;
- Gain of 219 office jobs plus 25 other jobs equals 244 total jobs in new floorspace; and
- A net change of -332 jobs on-site as a result of the development as shown in this report.

Other scenarios are possible based on the job density of the site and final concept plan that is used.

⁴⁹ Draft Metropolitan Plan for Sydney, NSW Department of Planning & Infrastructure (2013)

7. ADDITIONAL SHORT & LONG-TERM IMPACTS

In addition to the economic matters already identified, there would be a range of additional short and long-term implications likely to result from the proposed rezoning and subsequent development, including:

- Enhancement of role and function of the Macquarie Park Corridor;
- An improved range of retail and enhanced price competition;
- Acting as an impetus for investment in the local area; and
- Improvements to the public realm and passive surveillance in the Macquarie Park Specialised Centre / Corridor;
- Construction impacts.

Each of the matters is discussed further below.

7.1 ENHANCEMENT OF MACQUARIE PARK'S ROLE AND FUNCTION

It is recognised that the core function and role of the Macquarie Park Corridor is to act as a higher order specialised centre with the primary purpose of providing for employment lands. It is acknowledged and supported that this role and function should remain for the Corridor over the long-term.

However it is important to note that some other forms of development can lead to complementary outcomes within the Corridor. This is recognised through the need to provide for housing, education, retail and community facilities. The location of these other activities and land uses within the Corridor is the key factor however in ensuring they are complementary rather than competing, with the potential for ad-hoc development to impinge on the viability and function of Macquarie Park. An evolution in planning policy which has been adopted by the state government and City of Ryde is the recognition of the need for higher density, transit oriented mixed use development around transport hubs. This is reflected in the designation of land around the North Ryde Station as a UAP, with plans in progress to rezone land surrounding the Station in order to intensify mixed-use development.

Whilst the Macquarie Park Station is currently located within a cluster of employment uses, there is significant potential to provide for some other uses around the Station that will complement the existing office activities, particularly residential and retail. The proposed development would be a transit oriented project that would enhance the public realm and amenity of the Subject Site and its surrounds. It is understood that the proposed development would aim to enhance the amenity and public domain interface at the northern boundary of the Subject Site, linking in with the proposed plaza development at the Macquarie Park Station and contributing to an improved community space.

The Macquarie Park Corridor near the Subject Site is currently devoid of pedestrian activity after business hours which reduces passive surveillance and increases concerns regarding safety. The proposed development would contribute to alleviating these issues.

Rather than detract from the role and function of the Corridor and specifically the area around Macquarie Park Station, the proposed rezoning and development on the Subject Site would invigorate and complement the existing cluster of office uses in the local area. This is particularly the case given that there are historically low levels of demand for commercial floorspace in the Corridor, with approved floorspace alone satisfying likely demand over long-term. Unmet commercial floorspace capacity through existing zoning controls could potentially jeopardise vibrancy and threaten the role and function of the Macquarie Park Corridor.

Given market factors, a mixed-use development on the Subject Site would represent the highest and best use for the Subject Site.

7.2 IMPROVED RETAILING AND PRICE COMPETITION

Retailing in the Macquarie Park Specialised Centre / Corridor is focused on the Macquarie Park Shopping Centre which provides retail provision to a broad regional catchment. The proposed development proposes around 700sqm of retail floorspace provision which is likely to include cafes / restaurants and specialty stores. These may be considered complementary to the Macquarie Park Shopping Centre given their limited scale and are well positioned to take advantage of passing trade given they will be ground floor activated fronting the Macquarie Park Station. This potential mix of retail uses would enhance the eating and drinking options for workers and visitors to the Macquarie Park Specialised Centre / Corridor.

The retail facilities proposed on the Subject Site would also act as competition to other establishments, thereby improving price and retail choice to the benefit of consumers.

Any potential trading impacts incurred on existing and proposed centres in the locality from the proposed development would be far outweighed by growth in retail expenditure from additional residents on the Subject Site. Thus there would be no adverse impacts on existing centres to the extent that their role and function is threatened and in all likelihood it would improve the trading performance compared to the base case.

7.3 IMPETUS FOR DEVELOPMENT

A rezoning of the Subject Site from B3 Commercial Core to B4 Mixed Use may encourage additional investment in the Macquarie Park Specialised Centre / Corridor as the range of permissible uses are expanded. Developers that would otherwise have been directed to other locations beyond the locality may instead be prompted to invest in the local area following an uplift in the zoning and / or investment in the area.

7.4 CONSTRUCTION IMPACTS

Whilst impacts from the proposed development are likely to be overwhelmingly positive, there are likely to be some short-term negative impacts incurred during the construction phase of the project.

These impacts include the temporary loss of employment on the Subject Site as buildings are demolished and the reduction in visitor and worker amenity around the Site given the construction phase would include the erection of hoardings and fencing and the use of heavy machinery.

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It should be noted however that these impacts would be confined to the short-term, extending for the duration of the construction phase only. Furthermore, negative impacts are likely to be far outweighed by the range of economic, employment and long-term public realm improvements that the proposed development would facilitate, as discussed in preceding sections of this Assessment.

8. HOUSING PROVISION EFFECTS

8.1 HOUSING APPROVALS AND DEVELOPMENT

Industry sources report that Sydney is experiencing its lowest rate of housing growth in 50 years⁵¹ with the gap between housing demand and supply worsening. According to Access Economics, NSW has slumped from contributing more than one third of new housing in Australia to less than a fifth in a single decade, with little indication that this trend will change in the short term. To exemplify this point, between 2007 and 2008 only 15,000 additional dwellings were built in the Sydney Statistical Division in comparison to 32,000 between 1999 and 2000⁵².

Housing completions in NSW peaked in 1999-2000 and have since fallen by 47%⁵³. Over the same period, private completions across Australia increased by 26%, this suggests that NSW is not keeping pace with other States in terms of housing developments. This adversely impacts upon the economic competitiveness of NSW.

This trend has further been identified within the Inner North and Northern Subregions. Dwelling targets for both regions are 44,000 and 29,000 dwellings respectively over the 2006 and 2036. When compared against DP&I population projections over the same period, as outlined in the North Ryde Station Precinct Project: Economic Impact Assessment (Urbis, 2012), it is clear that there is an undersupply of around 20,000 dwellings. The proposed development could contribute to addressing some of this undersupply.

At a more local level, analysis undertaken as part of a Housing Study conducted as part of the Local Planning Study (2012) shows that there were 4,964 new dwellings approved between 2004 and 2009 in the City of Ryde. Some 1,499 or 30% of all approvals were located at Macquarie Park.⁵⁴ Primarily, residential development in the Macquarie Park Specialised Centre / Corridor is located within Macquarie University, along Herring Road or at Ivanhoe Place.

The Local Planning Study - Housing Study identified that there was potential for an additional 10,787 dwellings in the City of Ryde. Macquarie Park was forecast to accommodate a further 3,260 dwellings or 30% over the long-term.

8.2 HOUSING TARGETS

The NSW Government's Draft Metropolitan Strategy for Sydney (2013) acknowledges the implications of population growth as the need to ensure an adequate of land and mix of housing that meets housing demand.

Translating this growth down to the sub-regional level, the Department of Planning & Infrastructure (DoP&I) forecasts that an additional 242,000 people will be living in the central sub-region of Sydney by 2031.⁵⁵

⁵¹ Rents to soar as housing crisis worsens, Daily Telegraph 25 March 2009

⁵² Metropolitan Strategy Review, Sydney Towards 2036, NSW Government

⁵³ NSW Treasury

⁵⁴ City of Ryde Local Planning Study, City of Ryde (2012)

⁵⁵ Source: Draft Metropolitan Strategy for Sydney to 2031 (March 2013)

Accordingly, to meet this growth in population, the Strategy has estimated a minimum target of 138,000 additional dwellings for the central sub-region of Sydney between 2011 and 2031.

In accordance with the draft Inner North Subregional Strategy, the City of Ryde is required to contribute 12,000 new dwellings by 2031.

Since the completion of the Housing Study, in which Macquarie Park was forecast to accommodate 3,260 additional dwellings, the UAP program was initiated by DP&I. Within the City of Ryde, the North Ryde Station precinct and Herring Road, Macquarie Park have both been nominated as UAP precincts. It is understood that that Council intends to achieve housing targets through residential development in the UAP precincts.

The Macquarie Park Corridor, and particularly the area around the Subject Site has many of the attributes that would make it suitable for more intensive residential development including excellent proximity to retail stores and services (Macquarie Park Shopping Centre), jobs (within one of the largest clusters of business activity in the State), excellent public transport connections and a high proportion of large single ownership lots. Indeed, as identified in the North Ryde Station Precinct Project: Economic Impact Assessment (Urbis, 2012), with *"anticipated limitations throughout the broader region, the Macquarie Park Corridor is considered to be a prime location to support supply driven growth. Preliminary indications from new release residential developments suggest strong pent up demand and the potential for the market to absorb quality appropriately priced product."*⁵⁶

Within the Macquarie Park Corridor, those areas around key transport hubs such as the Macquarie Park Station would be the most suitable for high density residential development, notwithstanding the fact that it is Council's preference to accommodate growth in the UAPs.

The proposed development would provide 668 dwellings which would contribute around 5.5% of all dwelling targets in the City (12,000 dwellings) and 20% of the significant additional targets designated to the Macquarie Park Corridor (3,260 dwellings).

8.3 HOUSING CHOICE

In addition to population growth, demand for housing is driven by demographic and lifestyle trends including the ageing of the population, declining family sizes and fertility rates. In recent decades, Greater Sydney has experienced an overall net decline in dwelling occupancy rates and an ageing of its population (although occupancy rates appear to have plateaued since 2006). These factors have contributed to increasing demand for smaller dwellings in close proximity to shops, services and transport. The implications of these trends are such that even if Sydney did not experience any population growth, additional dwellings would be needed over time.

At a more local level, within the City of Ryde Local Planning Study – Housing Study one of the key principles is to provide a diversity of housing types. Key directions generated from these principles include the need to:

- Provide for housing types that meet the needs of an ageing population;

⁵⁶ North Ryde Station Precinct Project: Economic Impact Assessment, Urbis (2012)

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- Provide for smaller dwelling types which are attractive to a range of household types; and
- Provide for housing which is more affordable.

The proposed development is planned to provide for an additional 668 apartments. The development will predominantly contain 1 and 2 bedroom dwellings, suiting new entrants to the housing market (including young couples) and more elderly residents downsizing. However, the proposal also includes provision of other dwelling types including studio apartments, which may suit lone person households (a growing demographic in the City) and 3 bedroom apartments which would suit couple families with children.

The proposed development therefore significantly contributes to expanding the diversity of housing stock in the City of Ryde and responds to prevailing demographic trends and influences.

8.4 HOUSING IN THE RIGHT LOCATION

8.4.1 ACCESS TO EMPLOYMENT AND SERVICES

Locating new and higher density housing in appropriate areas can generate economic benefits for the locality. Studies indicate that providing jobs and services close to the home has a positive influence on mental health by reducing the stress associated with traffic congestion and other travel⁵⁷. Reduced traffic congestion and the need to travel in turn reduces travel times, which provides an economic benefit in that the time which would otherwise be spent travelling can be put to alternative productive use. It also lowers travel costs for households, workers and businesses and the associated externalities (cost, travel time, congestion and pollution).

The proposed development will therefore provide an economic benefit by alleviating demand for housing in less suitable locations, including at urban fringe locations which have poor access to jobs, services and public transport.

8.4.2 HOUSING NEAR PUBLIC TRANSPORT

Furthermore, the proposed development responds to one of the key actions set out in the draft Inner North Subregional Strategy which identifies the need to "*ensure that at least 80% of new dwellings are located within 30 minutes by public transport of a Strategic Centre.*"⁵⁸

The proposed development will also act as a transit oriented development (TOD). The definition of a TOD varies and is often defined as higher-density mixed-use development within walking distance – of transit stations. However, a performance-based definition may be more appropriate, whereby TOD projects provide higher density development and also:

- Increase the "location efficiency" so people can walk, bike and take transit;

⁵⁷ Woodcock, J, Edwards P, Tonne C et.al. Public Health Benefits of Strategies to Reduced Greenhouse Gas Emissions: Urban Land Transport. Lancet 2009

⁵⁸ Ibid

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- Boost transit participation and minimise traffic;
- Provide a rich mix of housing, shopping and transportation choices;
- Generate revenue for the public and private sectors and provide value for both new and existing residents; and
- Create a sense of place.

The Subject Site therefore provides housing in the right location and TOD through:

- Close proximity to a key employment precinct;
- Excellent public transport connections being adjacent to a train station and located on a high frequency bus route;
- Close proximity to education institutions (Macquarie University);
- Close proximity to health facilities (Macquarie University Hospital and Macquarie Hospital);
- Close proximity to regional level shopping facilities at Macquarie Shopping Centre. The Centre has a wide range of retail goods and services and serves a regional catchment. The Centre is anchored by a Myer department store; and
- Provision of a variety of non-residential floorspace i.e. cafes, take-away food and small offices).

9. KEY FINDINGS

The key economic findings relating to the proposed rezoning and subsequent development are:

- The generation of approximately 700 job years directly in construction and a further 1,870 job years in the broader economy over the construction period, equivalent to a total of 734 – 857 jobs per year over the course of the construction period.
- Direct investment of \$245m and a further flow-on economic benefit of \$566m from multiplier effects.
- Significant additional retail expenditure in the local area from construction workers and residents, including:
 - \$1.75m during the 36 – 42 month construction phase; and
 - \$18.5m per annum from residents at the completion of the project assuming the development is fully occupied.
- Market indicators show that demand for commercial floorspace in the North Ryde / Macquarie Park area is at historic lows at under half the long-term average (just 25,000sqm likely to be absorbed in 2013). This has resulted in a number of approved commercial developments not proceeding, with alternative uses sought for some sites.
- This lack of demand is reflected in rapidly climbing vacancy rates (7.3% at January 2013, to an estimated 8.9% in the latter stages of 2013).
- Forecast demand for commercial space in the Macquarie Park Specialised Centre / Corridor is around 245,000sqm based on the application of job ratios to BTS employment projections for the Centre / Corridor. Commercial floorspace which has already been approved but not yet developed accounts for 276,000sqm and will satisfy demand over the long-term.
- That there would be no discernible impact on commercial floorspace supply and demand factors within the Macquarie Park Specialised Centre / Corridor given that existing approvals for commercial floorspace are likely to outstrip long-term demand.
- The proposed development represents the highest and best use for the Subject Site given historic low levels of demand for commercial space, its transit oriented nature and its ability to complement existing office functions through social and urban design benefits with more active use of the precinct after business hours.
- Potential exists for a significant contribution to infrastructure provision in the Macquarie Park Specialised Centre / Corridor through bonus FSR and height limit concessions as part of a VPA, should agreement be reached with the developer.
- The proposed development would bring about improvements in the range of available dwelling types in the City of Ryde and potential opportunities for lower income earners to rent and buy property.
- Provision of housing in a location that makes efficient use of land and resources and encourages walking and public transport patronage. This reduces pressure for people to locate in urban fringe locations that have poor access to jobs, services and public transport.

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- The creation of employment opportunities within a location that has excellent public transport services;
- The improvement of retail offer and enhanced price competition for consumers in the Macquarie Park Specialised Centre / Corridor.
- An impetus for investment in the locality over competing areas.
- The marginal loss of some commercial floorspace on the Subject Site (potentially around -6,446sqm) leading to a net decline in operational employment (potentially up to -450 jobs per annum) and retail spend (\$-1.1m per annum). However, this assumes a worst-case scenario where existing commercial office tenants on the Subject Site relocate beyond the Macquarie Park Corridor.
- It is possible that existing tenants on the subject site will relocate within the area and thus there would be net gain in ongoing employment in Macquarie Park as a result of the development.
- The visual and overall amenity impact of development occurring next to a major public transport hub and community plaza space.

Our analysis has identified the above referenced adverse impacts would either be negligible, confined to the anticipated 36-42 month construction period or may not occur at all in the case of the loss of commercial floorspace.

Their short term implications are also considered likely to be significantly outweighed by the longer term economic merits of the proposed development relating to the contribution to notable construction job generation, economic multipliers, substantial additional retail expenditure and the longer term enhancement of one of Sydney's major employment and business centres.

The proposal also represents a policy evolution that recognises the importance of facilitating mixed use hubs around transit nodes. This is a more efficient use of land and resources and will contribute to more sustainable economic outcomes for the Macquarie Park Specialised Centre / Corridor as a whole.

APPENDIX 1 – DEMOGRAPHIC PROFILE

2011 POPULATION & AGE DISTRIBUTION	Macquarie Park - Marsfield SA2			Ryde LGA			Greater Sydney		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
Population and Dwellings									
Total Population	17,837	18,838	20,165	95,744	98,520	105,049	3,997,321	4,148,574	4,429,035
Median total household income (\$/weekly)	\$ 1,043	\$ 1,126	\$ 1,351	\$ 1,023	\$ 1,180	\$ 1,462	\$ 988	\$ 1,173	\$ 1,444
Median mortgage repayment (\$/monthly)	\$ 1,309	\$ 1,808	\$ 2,167	\$ 1,400	\$ 1,915	\$ 2,329	\$ 1,217	\$ 1,800	\$ 2,167
Median rent (\$/weekly)	\$ 250	\$ 275	\$ 385	\$ 220	\$ 255	\$ 370	\$ 210	\$ 250	\$ 355
Median total personal income (\$/weekly)	\$ 511	\$ 485	\$ 567	\$ 470	\$ 527	\$ 635	\$ 444	\$ 516	\$ 617
Average household size	2.3	2.3	2.3	2.5	2.5	2.6	2.7	2.7	2.7
Median age of persons	33	33	33	36	37	36	34	35	36
Age Distribution									
0-14	12.2%	10.4%	10.5%	16.9%	16.3%	16.1%	20.0%	19.3%	19.0%
15-29	28.4%	30.1%	30.8%	21.4%	21.6%	22.0%	21.6%	21.0%	20.8%
30-44	24.8%	21.9%	21.9%	24.5%	23.1%	22.5%	23.5%	23.0%	22.3%
45-59	15.8%	16.2%	14.8%	17.6%	19.0%	18.7%	18.1%	19.1%	19.0%
60-74	8.3%	8.6%	9.6%	11.0%	10.6%	11.4%	10.0%	10.4%	11.7%
75+	10.4%	12.7%	12.5%	8.6%	9.4%	9.2%	6.8%	7.1%	7.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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	Macquarie Park - Marsfield SA2			Ryde LGA			Greater Sydney		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
Home Ownership									
Owned or Being Purchased	47.1%	47.4%	49.2%	61.9%	60.4%	60.9%	62.7%	61.1%	62.3%
Rented	43.8%	40.4%	43.4%	32.0%	31.4%	33.3%	29.9%	29.7%	30.4%
Other/Not Stated	9.1%	12.2%	7.4%	6.1%	8.2%	5.8%	7.4%	9.1%	7.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Household Structure									
Family Households	54.6%	52.3%	55.2%	65.8%	64.5%	66.8%	69.6%	68.1%	69.5%
Lone Person Households	30.1%	29.8%	29.6%	25.3%	25.1%	24.3%	21.3%	21.6%	21.5%
Group Households	8.7%	9.4%	10.1%	4.8%	4.7%	5.1%	4.1%	3.9%	4.1%
Other Households	6.7%	8.5%	5.1%	4.1%	5.8%	3.8%	5.0%	6.4%	5.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Family Type									
Couple family w. children	41.4%	39.6%	41.5%	49.8%	49.2%	50.1%	51.3%	50.1%	50.0%
Couple family w/o children	41.2%	42.9%	42.0%	34.1%	34.5%	34.3%	31.7%	32.4%	32.5%
One parent family	13.5%	13.4%	12.8%	13.2%	13.6%	13.2%	14.9%	15.5%	15.6%
Other family	4.0%	4.1%	3.6%	2.9%	2.7%	2.3%	2.1%	2.0%	2.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Dwelling Type									
Separate house	22.8%	23.6%	21.8%	56.2%	54.5%	52.1%	63.1%	61.7%	59.6%
Townhouse	32.7%	33.1%	32.1%	13.0%	15.0%	15.0%	11.3%	11.8%	12.7%
Flat-Unit-Apartment	43.1%	43.2%	44.9%	29.5%	30.0%	32.5%	23.9%	25.7%	26.9%
Other dwelling	0.1%	0.1%	1.1%	0.5%	0.4%	0.3%	0.8%	0.7%	0.6%
Not stated	1.2%	0.1%	0.0%	0.8%	0.0%	0.1%	0.9%	0.1%	0.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

271 Lane Cove Road, Macquarie Park Economic Impact Assessment

MORTGAGE REPAYMENT (MONTHLY)									
\$0-\$449	3.9%	3.7%	4.7%	5.9%	4.0%	5.1%	5.9%	3.9%	4.6%
\$450-\$799	7.5%	4.6%	3.2%	1.2%	5.0%	3.1%	12.5%	6.1%	3.4%
\$800-\$1,399	30.0%	18.1%	10.1%	31.3%	17.1%	11.2%	36.6%	19.7%	12.2%
\$1,400-\$2,399	45.0%	39.7%	30.7%	41.5%	32.8%	25.8%	29.0%	35.0%	31.9%
\$2,400-\$3,999	7.0%	23.6%	36.7%	11.7%	26.1%	32.3%	8.1%	20.9%	29.7%
\$4,000+	1.7%	4.5%	10.3%	2.8%	7.3%	17.8%	2.7%	6.9%	13.1%
Not Stated	4.9%	5.7%	4.2%	5.5%	7.6%	4.7%	5.2%	7.6%	5.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rent (Weekly)									
\$0-99	12.5%	10.3%	8.9%	12.4%	10.7%	8.3%	16.8%	11.4%	8.9%
\$100-\$199	12.4%	8.4%	7.6%	24.0%	14.5%	7.3%	25.7%	18.1%	8.9%
\$200-\$274	36.2%	28.4%	5.8%	30.4%	30.0%	7.4%	25.1%	27.8%	10.6%
\$275-\$449	30.9%	42.5%	49.4%	26.4%	34.9%	46.0%	21.9%	29.4%	38.7%
\$450-\$649	2.3%	4.7%	19.8%	2.3%	5.1%	22.2%	4.6%	7.0%	20.3%
\$650+	1.8%	1.4%	4.3%	1.2%	1.6%	5.4%	2.2%	3.0%	9.0%
Rent not stated	3.8%	4.3%	4.1%	3.3%	3.3%	3.6%	3.7%	3.2%	3.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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	Macquarie Park - Marsfield SA2			Ryde LGA			Greater Sydney		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
Labour Force									
% Unemployment(d)	5.3	6.4	8.3	4.5	4.8	5.8	6.1	5.3	5.8
% Labour force participation(e)	63.4	57.1	56.9	62.7	60.8	62.1	61.4	60.7	61.7
% Employment to population(f)	60	53.5	52.1	59.9	57.9	58.6	57.7	57.4	58.1
Managers	12.7%	12.4%	11.4%	12.6%	13.1%	13.0%	11.9%	12.5%	12.5%
Professionals	30.2%	31.0%	33.3%	26.0%	27.9%	30.0%	20.7%	22.4%	24.0%
Technicians and trades workers(b)	10.0%	8.9%	8.2%	12.0%	10.8%	10.0%	12.7%	12.0%	11.5%
Community and personal service workers	6.2%	6.6%	7.3%	6.3%	6.9%	7.4%	6.9%	7.6%	8.3%
Clerical and administrative workers	17.4%	16.6%	15.4%	17.8%	16.8%	16.0%	16.8%	15.8%	15.3%
Sales workers	9.4%	8.7%	7.8%	9.2%	8.6%	8.0%	9.1%	9.0%	8.5%
Machinery operators and drivers	2.7%	2.2%	2.3%	3.9%	3.2%	2.9%	6.4%	5.7%	5.4%
Labourers	4.8%	5.5%	4.2%	6.1%	6.3%	5.2%	7.6%	7.6%	6.9%
Unemployment	5.2%	6.4%	8.3%	4.5%	4.8%	5.8%	6.1%	5.3%	5.8%
Inadequately described/Not stated	1.3%	1.8%	1.8%	1.6%	1.7%	1.8%	1.9%	2.0%	1.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Weekly Household Income									
\$0-\$399	18.2%	23.5%	20.3%	18.2%	19.4%	16.2%	21.2%	18.1%	14.5%
\$400-\$799	17.8%	16.1%	12.2%	22.4%	18.9%	14.6%	23.5%	20.9%	17.4%
\$800-\$1,249	23.4%	18.8%	13.7%	21.9%	19.8%	16.4%	19.3%	19.1%	16.2%
\$1,250-\$1,999	19.8%	17.8%	20.7%	18.2%	17.6%	20.2%	16.2%	16.1%	18.5%
\$2,000-\$2,999	8.8%	11.0%	18.3%	7.8%	11.5%	16.6%	7.1%	11.0%	15.3%
\$3,000+	1.0%	3.1%	6.4%	1.2%	3.6%	8.0%	1.6%	4.4%	8.6%
Partial Stated / Not Stated	11.0%	9.7%	8.4%	10.2%	9.2%	7.8%	11.1%	10.4%	9.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Industry									
Agriculture, forestry and fishing	0%	0%	0%	0%	0%	0%	0.6%	0.5%	0.4%
Mining	0%	0%	0%	0%	0%	0%	0.1%	0.2%	0.2%
Manufacturing	9%	8%	6%	9%	8%	7%	11.4%	9.7%	8.5%
Electricity, gas, water and waste services	1%	1%	1%	1%	1%	1%	0.8%	0.8%	0.9%
Construction	4%	4%	4%	5%	6%	6%	6.7%	7.1%	7.0%
Wholesale trade	8%	8%	9%	6%	7%	6%	5.8%	5.5%	5.2%
Retail trade	11%	10%	9%	10%	10%	9%	10.2%	10.5%	9.9%
Accommodation and food services	6%	7%	6%	6%	6%	6%	6.1%	6.1%	6.2%
Transport, postal and warehousing	3%	3%	3%	4%	4%	3%	5.3%	5.4%	5.3%
Information media and telecommunications	6%	4%	6%	5%	4%	4%	3.8%	3.0%	3.0%
Financial and insurance services	7%	7%	7%	6%	7%	7%	6.1%	6.4%	6.6%
Rental, hiring and real estate services	1%	1%	1%	2%	2%	2%	1.9%	1.8%	1.8%
Professional, scientific and technical services	13%	12%	14%	11%	11%	12%	9.1%	8.9%	9.6%
Administrative and support services	4%	3%	3%	4%	4%	4%	3.7%	3.4%	3.5%
Public administration and safety	4%	4%	4%	4%	5%	5%	4.8%	5.6%	5.6%
Education and training	9%	10%	11%	8%	8%	9%	6.7%	7.2%	7.6%
Health care and social assistance	8%	10%	10%	10%	11%	11%	8.8%	9.9%	10.9%
Arts and recreation services	1%	1%	1%	1%	1%	1%	1.4%	1.4%	1.6%
Other services	4%	4%	3%	5%	4%	4%	4.1%	3.8%	3.7%
Inadequately described/Not stated	2%	2%	2%	2%	3%	2%	2.4%	2.8%	2.6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

271 Lane Cove Road, Macquarie Park Economic Impact Assessment

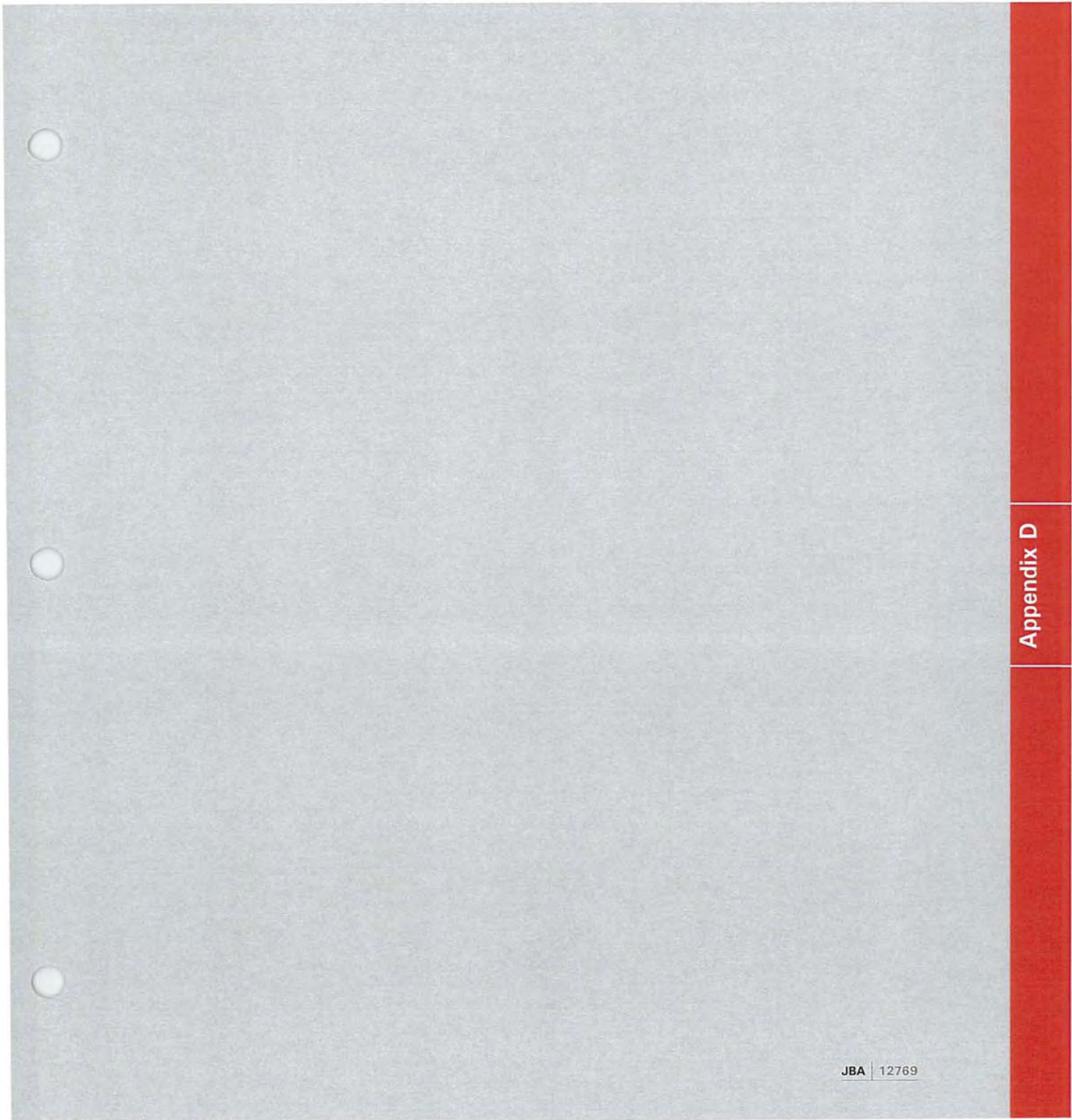
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Demand/Supply Analysis

Colliers International



Appendix D

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DEMAND/SUPPLY ANALYSIS OF THE NORTH RYDE/MACQUARIE PARK COMMERCIAL & RESIDENTIAL MARKETS

MIRVAC, OCTOBER 2013





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Appendices

- A. Colliers International Valuation & Advisory Services Pty Limited Terms and Conditions

Prepared by:	Ariel Pollard	Director - Research
Reviewed by:	Robert Fischer	Director - Valuation
	Brian Hickey	Manager - Valuation



1 INTRODUCTION & BACKGROUND

Colliers International Valuation & Advisory Services Pty Limited has been notified by Mirvac that they do not intend on proceeding with the activated Development Consent (D/845/2006) for 271 Lane Cove Road, North Ryde. The Development Consent permits the construction of an office/retail development over three buildings (part 8/9 storeys, part 8/10 storeys and 6 storeys) plus basement parking for 560 vehicles.

Mirvac has engaged Colliers International Valuation & Advisory Services Pty Limited to undertake a research report on the demand/supply status of the North Ryde/Macquarie Park commercial and residential markets. The objective is to determine the historical, current and potential state of the commercial market based on demand and supply fundamentals.



2 THE NORTH RYDE/MACQUARIE PARK COMMERCIAL MARKET

This Section of the report covers the current and future demand/supply fundamentals of the North Ryde/Macquarie Park commercial market.

2.1 DEMAND

The Demand section specifically covers the following:-

- North Ryde/Macquarie Park commercial demand drivers;
- Vacancy rates;
- Rents;
- Leasing demand; and
- Tenant requirements.

NORTH RYDE/MACQUARIE PARK COMMERCIAL DEMAND DRIVERS

Historically the Macquarie University was the major demand driver for commercial development within North Ryde/Macquarie Park. More recently, the area has benefited from improved transport links and amenity as discussed in further detail herein.

Infrastructure

A number of infrastructure projects have vastly improved the connectivity to North Ryde/Macquarie Park. During 2013 the expansion of the M2 Motorway, from four to six lanes, and additional access ramps at Herring and Christie Roads were completed. Prior to this, the Lane Cove Tunnel, which links the Gore Hill/Warringah Freeway and Sydney CBD, opened in March 2007. By January 2010 the operator of the tollway was in receivership suggesting usage levels were well below forecasts.

The opening of the Epping to Chatswood rail line in 2009 also provides a significant public transport link to the area, a key infrastructure component absent in most business parks. Access will continue to be improved via the North West Rail Link which is anticipated to be open by the end of 2019. The North West Rail Link will form an extension to the Chatswood to Epping line and will not only be a benefit to residents within The Hills district but provide a direct link to Norwest. The rail connection to Norwest is anticipated to be a major demand driver for the business park and potentially may have a negative impact on commercial demand within the North Ryde/Macquarie Park precinct due to increased competition.

Macquarie University Hospital

The North Ryde/Macquarie Park tenancy profile is also heavily influenced by the Macquarie University Hospital, Australia's first campus based university hospital, which opened in June 2010. The Hospital forms part of an integrated medical community including the Australian Hearing Hub.



The Macquarie Centre

AMP is currently refurbishing and expanding the Macquarie Centre at the corner of Herring, Talavera and Waterloo Roads over three stages. An additional 31,800m² will be added to the regional shopping centre including a second department store - David Jones, another major supermarket, 130 additional specialty stores and 1,420 extra car spaces. Stages two and three will form part of the future long term vision for the centre and will include construction of a town square, plus high rise commercial and residential uses. This long term development falls under the "Herring Road, Macquarie Park" Urban Activation Precinct. Long term, the expansion and additional tenancies will be seen as a positive attribute to the local workforce and the growing resident population.

Whether these commercial drivers are enough to assist the North Ryde/Macquarie Park market in the short or medium term remains to be seen given the Precinct:-

- Has the second largest amount of space available for lease, as compared to the rest of Sydney's Metro markets;
- Has the lowest A Grade average rents of all Sydney Metro markets;
- Is forecast to record its worst performing year, in terms of to take up rates, since 1999;
- Has no demand for commercial towers. Tenants are seeking campus style development only;
- Cannot attract external tenants i.e. new leases are only being made to tenants who already have premises within North Ryde/Macquarie Park;
- Has in excess of 500,000m² of potential development space, equivalent to over 20 years of demand.

VACANCY RATES ON THE RISE

The latest Property Council of Australia (PCA) Office Market Report revealed the total market vacancy rate for North Ryde/Macquarie Park rose from 7.3% in January 2013 to 7.8% in July 2013. This increase occurred due to soft leasing demand with absorption turning negative (-9,078m²) for the first time since January 2007. The softness is most apparent in the B Grade market with its vacancy rate rising to 12.8%. We note the subject site's current improvements are classified as B Grade.

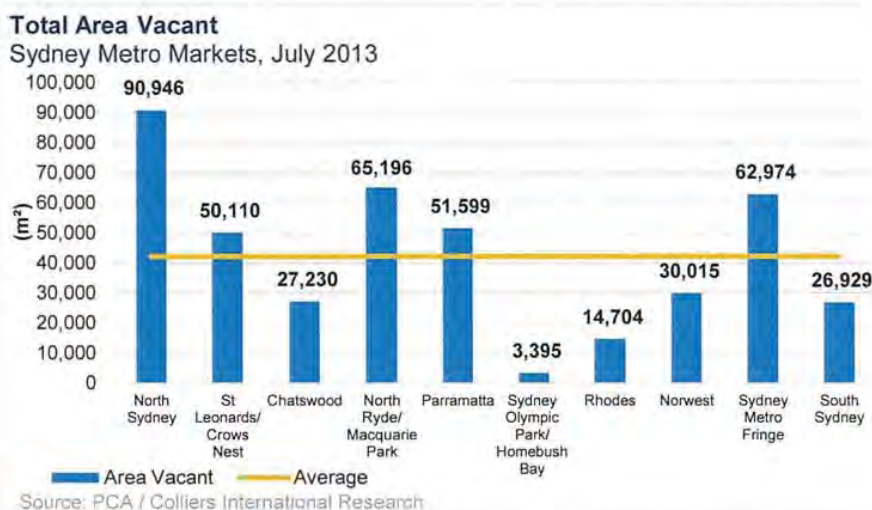
The A Grade market continues to remain quite tight with a vacancy rate of 5.2% as of July 2013. However, this does not include the sublease space at 22 Giffnock Avenue, Macquarie Park which is due to come on line in the second half of 2013. The lack of new A Grade development in recent years has ensured the vacancy rate remains artificially low.

Colliers International has forecast this additional space will result in the total market vacancy rate for North Ryde/Macquarie Park rising from the current 7.8% as at July 2013 to 8.9% over the course of the second half of 2013, unless absorbed.



North Ryde/Macquarie Park vs Sydney Metro

Proportionally the Precinct's vacancy rate is below the total Metro market average of 8.6%¹. However, the graph below demonstrates that in terms of the total area of vacant stock North Ryde/Macquarie Park is ranked second with 65,196m² of space available for lease as at July 2013. This is equivalent to 1.5 times the size of the total Metro markets average.



The high level of vacant space in North Sydney was attributed to a doubling of sublease space over the six months to July 2013. Yet over the 2013 September quarter the vacant space has declined due to strong sublease take up and the withdrawal of 80 Alfred Street for residential conversion. Colliers International has forecast the total vacant space as at 2013 September quarter to be circa 79,946m².

Business consolidation and improved workplace efficiencies have been the main drivers behind the recent growth in vacancy rates with tenants looking to sublease or hand back excess space on renewal. Another driver has been higher vacancy rates in the Sydney CBD office market. This has seen Sydney CBD landlords offer very attractive incentives which are now beginning to entice tenants to move from surrounding metropolitan and suburban markets.

¹ The total Sydney Metro market includes north Sydney, St Leonards/Crows Nest, Chatswood, North Ryde/Macquarie Park, Parramatta, Sydney Olympic Park/Homebush Bay, Rhodes, Norwest, the Sydney Metro Fringe and South Sydney.



LOWEST A GRADE RENTS OF ALL METRO MARKETS

The North Ryde/Macquarie Park market has the lowest A Grade average rents when compared to all Sydney Metro markets, as demonstrated in the following graph. Despite the affordability provided within North Ryde/Macquarie Park, the Precinct has the second highest total vacant area of all Sydney Metro markets.



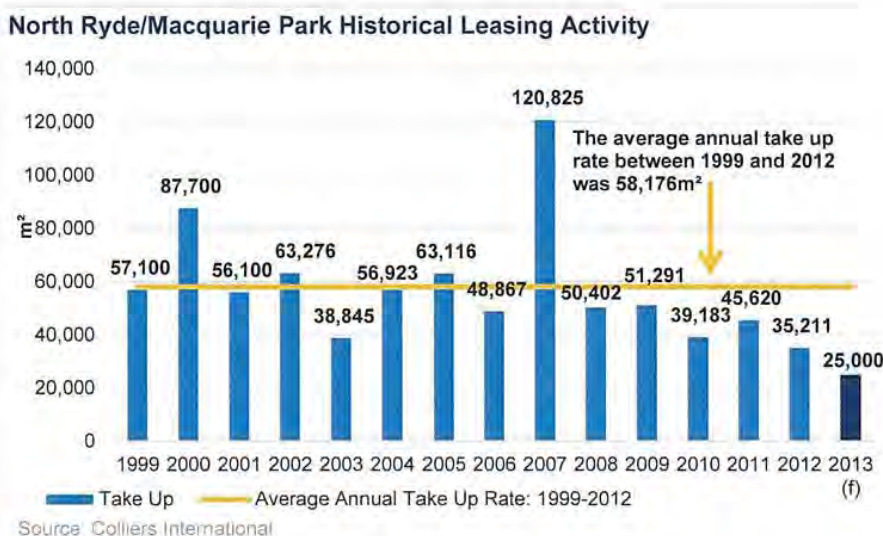
Norwest has the second lowest average net face rent range for A Grade space, approximately 2%-3% higher than the low and high average range within North Ryde/Macquarie Park. Despite the affordability of Norwest's average net face rents the market has the highest vacancy rate (11.0%), suggesting reasonably priced rents are not a catalyst for demand, given Norwest's and North Ryde/Macquarie Park's distance from other major markets.

The low rents being achieved in North Ryde/Macquarie Park assists in explaining why there is potentially 20.7 years of potential future supply earmarked for the Precinct. The current rents do not translate into a financially viable development. Furthermore, construction costs and the typically low car parking ratio associated with most developments within North Ryde/Macquarie Park adds additional burden to a projects development margins.



WEAK LEASING DEMAND

Despite the affordable nature of the market and the ample choice available, lease transactions and enquiry levels across the North Ryde/Macquarie Park office market continue to be well below average, despite the market offering the lowest A Grade Average net face rents as compared to Sydney's Metropolitan commercial markets. A lack of confidence in the domestic economic outlook and future business growth has been the main contributor holding firms back from committing to longer leases. Colliers International has forecast circa 25,000m² of lease transactions will take place over the course of calendar 2013, the lowest level recorded since data collection commenced in 1999. This is displayed in the graph on the following page.



The historical leasing activity graph also demonstrates the following:-

- Between 1999 and 2012 annual leasing activity levels declined on six occasions. Three of these instances have occurred since 2008 (2008, 2010 and 2012).

If we include the forecast figure for 2013 within the analysis, a total of seven periods of decreasing activity levels is evident. The forecast figure also suggests we are likely to record the first two consecutive periods (2012 and 2013) of decline since 1999, reinforcing the limited demand for space within the North Ryde/Macquarie Park market; and

- There have been ten instances of the annual take up rates being below the long term average annual rate, if we exclude the 2013 forecast. Colliers International has calculated the markets' average annual take up rate between 1999 and 2012 to be 58,176m². Since 2008 the North Ryde/Macquarie Park leasing activity has consistently reported below average take up rates. Over the last five years the differential between the actual take up rate and the long term average annual rate has ranged from -13% in 2008 to -39% in 2012. If we include the 2013 forecast figure the differential between the take up and the average annual rate will equate to an exponential -57%.

If the forecast 2013 figure is included in the calculations the average annual take up rate drops by a further 4% to 55,964m². Based on this figure there are eight occasions between 1999 and 2013 whereby the annual



rate has been lower than the long term average. Consecutive below average take up rates since 2008 are still evident. The differential between the actual take up rate and the long term average ranges from -8% in 2009 to the forecast -55% for 2013.

According to Colliers International leasing agents, the majority of leasing activity within 2013 has originated from tenants renewing space at their existing premises i.e. tenants who are already ensconced within the North Ryde/Macquarie Park market, and from those looking at short-term fitted out project space. There are no new tenants coming from outside the North Ryde/Macquarie Park market, particularly for new builds.

For example the most recent major pre-commitments in the North Ryde/Macquarie Park market were made by Canon Australia at *The Park* at 5 Talavera Road, Macquarie Park and Fujitsu at 112-118 Talavera Road, Macquarie Park. Both tenants already have presence within the precinct. Canon Australia is currently located at 3 Thomas Holt Drive, Macquarie Park whilst Fujitsu has space at 1 and 2 Julius Avenue, North Ryde. The movement of these tenants will result in new backfill space.

The weak leasing demand has also translated into the North Ryde/Macquarie Park office market reporting the third highest average incentive of 25%, following on from St Leonards and Chatswood which both are residing at 28% as at the 2013 September quarter. In comparison the best performing Metro markets, in terms of incentives, are Parramatta and Sydney Olympic Park with an average 18% and Rhodes and South Sydney at 19%.

WHAT DO TENANTS WANT?

Lack of tenant demand within the market is reflective of the following issues:-

- North Ryde/Macquarie Park is not perceived to be a corporate location due to its distance from the CBD, despite the region's various forms of public and private transport options. Corporate tenants are only willing to go as far north as North Sydney and hence the rents achieved are reflective of the lack of corporate demand. The following table illustrates the market rental differences between North Ryde/Macquarie Park as compared to North Sydney.

Region	Grade	Average Net Face Rents (\$/m ²)	
		Low	High
North Ryde/Macquarie Park	A	\$315	\$330
	B	\$265	\$285
North Sydney	Prime	-	-
	A	\$470	\$590
	B	\$350	\$460
% Difference	Prime	N/A	N/A
	A	49%	79%
	B	32%	61%

Note: Figures represent market averages as at the 2013 September quarter.

Source: Colliers International Research



There have only been two examples of corporate tenants moving from North Sydney to North Ryde/Macquarie Park. Both Optus and CSR relocated in 2007, prior to the Macquarie University or Macquarie Park train stations opening in 2009. The recently improved connectivity since 2009, via way of new train stations and additional on/off ramps at Christie and Herring Roads, has not only failed to draw new corporate tenants to the market but Optus still provides exclusive bus services to their Campus from Wynyard and Parramatta. This implies the current services are not adequate for their staff. We reinforce the market is presently forecast to report its weakest take up rates since 1999, implying the demand drivers are not assisting in drawing new tenants to the North Ryde/Macquarie Park area;

- Traffic gridlock at peak times is still a major issue and is also seen as an impediment to any potential corporate tenants. According to leasing agents, feedback from tenants within North Ryde/Macquarie Park reveal meetings with external parties are limited to non-peak periods given the associated impediments to efficient travel time during peak hours;
- Demand within North Ryde/Macquarie Park is predominantly restricted to business parks not commercial towers. This is attributed to both costs and exclusivity.

Cost conscious tenants are scrutinising accommodation budgets. Tenants within North Ryde/Macquarie Park are only willing to pay rents in the high \$300/m² net. The most recent major pre-lease net face rents achieved were to Canon Australia at *The Park* at 5 Talavera Road, Macquarie Park (\$360/m²) and Fujitsu at 112-118 Talavera Road, Macquarie Park (\$385/m²). According to Colliers International leasing agents data centres are bolstering rental values within North Ryde/Macquarie Park.

The rents needed to support the development of a commercial tower are considerably higher and more reflective of the rents achieved in Chatswood or St Leonards/Crows Nest market. The following table demonstrates the market rental differences between North Ryde/Macquarie Park as compared to Chatswood and St Leonards/Crows Nest.

Region	Grade	Average Net Face Rents (\$/m ²)	
		Low	High
North Ryde/Macquarie Park	A	\$315	\$330
	B	\$265	\$285
Chatswood	A	\$360	\$480
	B	\$280	\$320
% Difference between North Ryde/Macquarie Park and Chatswood	A	14%	45%
	B	6%	12%
St Leonards/Crows Nest	A	\$420	\$490
	B	\$280	\$340
% Difference between North Ryde/Macquarie Park and St Leonards/Crows Nest	A	33%	48%
	B	6%	19%



Market fundamentals do not currently support commercial development in the corridor, moreover the development of a commercial tower. Tenant expectations would need to shift as approximate construction costs for a low rise office building, ranging from four to seven storeys, are currently \$2,295/m². Whereas the cost to develop a commercial tower, ranging in height from seven to twenty storeys, is approximately \$3,250/m². This equates to a 42% differential in cost between the development of a low rise office building and a commercial tower. We note the DA approval for the subject site incorporates three buildings in excess of seven storeys.

Market rents would need to improve considerably to support a commercial tower development. A prime example of this issue i.e. rental levels not supporting the development costs, resulted in the proposed development of the former Peter Board High School site into four new commercial buildings not commencing. The current owners of the site do not intend to proceed with this development option either. For further detail see Section 2.2.

We also note budget responsibility is not unique to the North Ryde/Macquarie Park market but evident throughout Sydney, in both the CBD and metropolitan markets. This lack of demand has resulted in tenants handing back space on renewal and increased sublease opportunities creating attractive incentives.

Tenants within North Ryde/Macquarie Park also want exclusive occupancy of a building, which can easily occur within a business park, but is difficult within a large tower due to the associated costs, as mentioned above. The private sector is seeking major campus style office developments within all Sydney Metro areas, not traditional commercial towers.



2.2 SUPPLY

This Section identifies the potential future commercial supply within the North Ryde/Macquarie Park commercial market.

POTENTIAL FUTURE SUPPLY

We refer to the following projects which are in various stages of the planning and have yet to commence due to the negative property fundamentals, as discussed in Section 2.1, associated with the North Ryde/Macquarie Park market. This lack of demand, in terms of take up rates, and the rental price ceiling has resulted in these commercial tower developments being unviable or alternative highest and best uses sought.

Address	Proposal	Comment
Epicentre, 6-8 Julius Avenue, Ryde	Proposal to develop three buildings, two x six storey buildings of 9,822m ² , and one of 14,546m ² , with a total 34,194m ² net of office space, and 1,013 car spaces.	Despite Development Approval being granted the site has been vacant since 2008 and no pre-commitments have been secured. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 1.4 years for this development to be absorbed.
36-42 Waterloo Road, Macquarie Park	Development Approval for a 17 and 8 storey commercial building comprising a total NLA of 76,082m ² .	Development Approval was granted in May 2012. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 3 years for this development to be absorbed.
Pinnacle, Stage Two, 2-4 Drake Avenue, Macquarie Park	Stage two is proposed to comprise of 16,714m ² .	Whilst there is no Development Approval held stage one was completed in December 2008 and work on stage two has yet to commence. A Development Application was previously submitted to Council but did not progress. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 0.7 years for this development to be absorbed.
43-61 Waterloo Road, Macquarie Park	This 38,980m ² , site is owned by the NSW Government and is soon to be offered for sale, within approximately the next six months. The site is zoned commercial core. Based on the FSR the site could be developed to accommodate up to 116,940m ² .	Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 4.7 years for this development to be absorbed.
63-71 Waterloo Road, Macquarie Park	Development Approval for the construction of a mixed use development containing eight storeys of commercial office (11,822.5m ² of GFA) and nine storeys of serviced apartments and retail uses on the ground floor.	Development Approval was granted in August 2011. Assuming an 85% efficiency the NLA of the entire development would equate to 27,049m ² .



Address	Proposal	Comment
80 Waterloo Road, Macquarie Park	<p>There are two additional buildings master planned each comprising approximately 10,000m² fronting Waterloo Road.</p> <p>The total GFA is approximately 31,823m².</p> <p>Proposal for a new nine storey retail and commercial building with 13,540m² of NLA for a concept proposal for 10,000m² of NLA at 16 Byfield Street (stage two) was lodged in 2008. Overall the project was to comprise a total 23,540m² NLA.</p>	<p>Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 1.1 years for this development to be absorbed.</p> <p>The Development Application was lodged in 2008 but did not proceed. We regard the site as suitable for a potential future development.</p> <p>Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 0.9 years for this development to be absorbed.</p>
Station North Development, corner of Herring Road, University Avenue and Research Park Drive, Macquarie Park	In 2008 a proposed Joint Venture between the Macquarie University and GPT to deliver 90,000m ² (GFA) was announced.	<p>The proposed development was never lodged and hence is deemed to be a Concept. The project has yet to commence despite the projects affiliation with the University. We regard the site as suitable for a potential future development and if developed would likely occur in the long term.</p> <p>Assuming an 85% efficiency this equates to 76,500m² of NLA.</p> <p>Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 3.1 years for this development to be absorbed.</p>
The Former Peter Board High School Site, 144 Wicks Road, Macquarie Park	Stage one development approval for a commercial building with 27,340m ² of floor space and 309 vehicles.	<p>The entire site has Master Plan approval for a four stage development with a total proposed GFA of 107,351m². Assuming an 85% efficiency this equates to 91,248m² of NLA.</p> <p>Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take one year for stage one to be absorbed. However, the entire master planned development would take approximately 3.6 years.</p> <p>The previous owner, DEXUS, was unable to find a tenant to pre-commit to the development and the current owner Masters Home Improvement intends on using the site for an alternative use. No Development Application for an alternative use has been lodged as yet.</p>
Total Potential Developable Area		Approximately 462,267m²

Based on the above noted projects we have calculated there is the potential for 462,267m² of potential developable space. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market it would take **18.5 years** for all the space to be absorbed.



We also note the following proposals have been recently lodged:-

Address	Proposal	Comment
NOVARTIS Campus, 52-58 Waterloo Road, Macquarie Park	Development Application for construction of a six storey commercial building (9,885m ²)	Lodged with the JRPP on 24/9/2013. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 0.4 years for this development to be absorbed.
8 Khartoum Road, Macquarie Park	We understand Development Approval is likely to be granted for a 10,686 m ² five level building.	Lodged in April 2013. JRPP meeting set for 29/10/2013. Based on the 2013 forecast take up rate for the North Ryde/Macquarie Park market, it would take 0.4 years for this development to be absorbed.
Total Potential Developable Area		20,571m ²

If we assume the above two developments are approved the potential future supply pipeline will increase by 4% to total 482,838m², equating to **19.3 years** of potential supply.

The Development Approval pertaining to the subject site for 34,033m² of NLA has been excluded from the above analysis. However, if the site is included the potential future supply rises by 7% to total 516,872m², equivalent to **20.7 years** of potential supply.

Once the current vacant space is included into the above calculation there is approximately 582,067m² of potential space, equating to **23.3 years** of potential supply.

We note the following property is expected to be developed for residential purposes; however the site has been earmarked for commercial development since 2007 and did not proceed due to the lack of demand.

Address	Proposal	Comment
27-37 Delhi Road, North Ryde	Development Approval for the "Global Business Park" which would comprise of four x eight storey buildings with a total NLA of 31,847m ² .	Despite Development Approval being granted in 2007 no pre-commitment was made and the site remains mostly vacant. Hence an alternative use was sought. The site has recently been rezoned for residential purposes and will accommodate approximately 800 apartments.

Not only does the potential future supply indicate there is ample development opportunities within the North Ryde/Macquarie Park development there are two examples (the former Peter Board High School site and 27-37 Delhi Road, North Ryde that show developers seeking alternative uses, other than commercial.

The Former Peter Board High School Site

A detailed example of a development that did not proceed due to weak leasing activity is the proposed redevelopment of the 5.9 hectare former Peter Board High School site at 144 Wicks Road, Macquarie Park. The entire site has an existing Master Plan in place which proposes a four stage development comprising four buildings with a total proposed GFA of 107,351m². The GFA per Stage is as hereover:-

Mirvac
Demand/Supply Analysis of the North Ryde/Macquarie Park Commercial and Residential Markets
October 2013



Stage	Total Proposed GFA
Stage One	27,340
Stage Two	19,445
Stage Three	19,800
Stage Four	40,766
Total	107,351

Ryde Council granted Deferred Development Consent (LDA2008/0531) on 27 June 2011 for Stage One of the Master Plan. The Consent is for the construction of a commercial building containing 27,340m² of floor space and 309 car spaces. This was amended on submission of a Voluntary Planning Agreement to 324 car spaces. The development also includes site infrastructure works including roads, landscaping and stormwater management works.

Based on the forecast take-up rate for 2013 for the entire North Ryde/Macquarie Park it would take over four years for this space to be absorbed. Even if we utilise the long term average annual average achieved between 1999 and 2012 the proposed development would be absorbed in just under two years. The probability of this occurring is low and we reinforce there has only been four occasions whereby the annual take-up rate within North Ryde/Macquarie Park was above the long term average annual rate.

According to discussions with DEXUS, the development was contingent upon securing lease pre-commitments at higher economic rents than currently achievable. We are aware of a valuation undertaken on the site in December 2012 which refers to a residual feasibility analysis that was undertaken which resulted in "a negative value for Stage 1, meaning development of this site (for a number of reasons) is not viable at the present time".

DEXUS did seek to gain pre-commitments as soon as they purchased the site. The lack of demand and unviability of the project resulted in the development not proceeding and the site recently on-sold for \$27,285,000 in December 2012 to Hydrox Nominees Pty Ltd (trading as Masters Home Improvement). This transaction to Masters has resulted in a \$24,465,000 loss equivalent to -47%, excluding stamp duty and holding costs etc. The new owner believes the highest and best use of the site is an alternative use i.e. bulky goods. We note this use is non-zoning compliant.



3 NORTH RYDE/MACQUARIE PARK RESIDENTIAL MARKET

3.1 DEMAND

The main demand drivers for the commercial market i.e. Macquarie University, infrastructure, the Macquarie University Hospital and the redevelopment of Macquarie Centre are also applicable to the residential market, perhaps even more so as demonstrated by the strong residential apartment presales rates achieved. We also refer to the lack of historical supply, see Section 3.2, which in turn has created pent up demand in the area.

DEMOGRAPHIC CHARACTERISTICS OF APARTMENT BUYERS

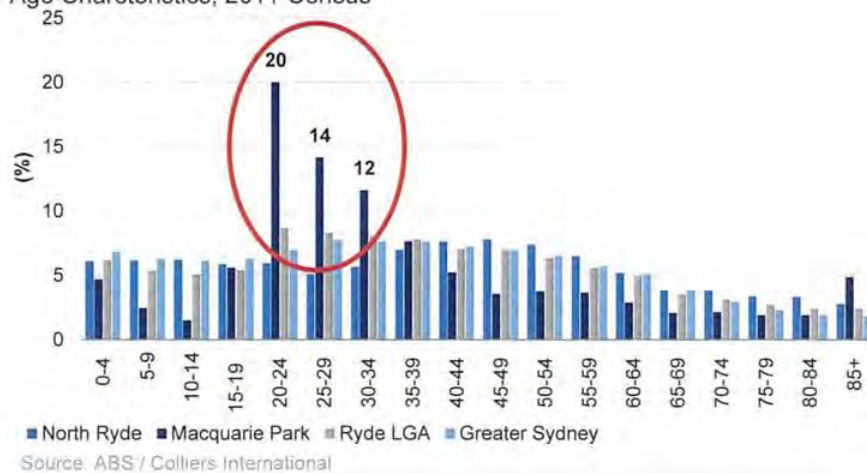
Characteristically the main target market for an apartment development is young adults aged between 20-30 years. Hence the mix and design of a development should focus on the needs and desires of this age bracket. The 20-30 year age group who reside in an apartment will consist of singles, couples, group households and a small proportion of couples with children. The investor, who will rent their apartment to the 20-30 year olds, will represent a wide age group. The investment will not be suitable for their needs and lifestyle.

The graph on the following page demonstrates the potential demand for apartment living within North Ryde/Macquarie Park area as compared to the Ryde LGA and Greater Sydney as at the 2011 Census. The size of the main target market within Macquarie Park was exponentially higher as compared to the Ryde LGA. Proportionally the 20 to 30 years age group represents 34% and 17% of the total population respectively. This demographic trend has occurred despite the lack of representation in new housing supply options within the suburb offered over the last 26 years (see Section 3.2). The average sale price for 2013 for the only apartment development to have been developed in the last 26 years within Macquarie Park, is \$609,167. If we expand this target market to include the 30 to 34 years age group the size of the market rises to 46%. Given the continuing rising cost of housing the 30 to 34 year age group will also be a potential target market for any future apartment development.

New housing options for the 20 to 30 year old age group within North Ryde have been limited to villas and townhouses. There have been no apartments developed in over 26 years in the suburb. Based on the villa sales that have occurred between January and June 2013 the average sale price achieved was \$746,800, which is likely to be beyond the reach of many first home buyers, and 23% higher than the average established apartment price within Macquarie Park. This lack of affordable supply assists in explaining the poor representation of 20 to 30 years old within North Ryde as compared to Greater Sydney (11% vs 15%).



North Ryde, Macquarie Park and Ryde LGA
Age Characteristics, 2011 Census



MACQUARIE CENTRAL

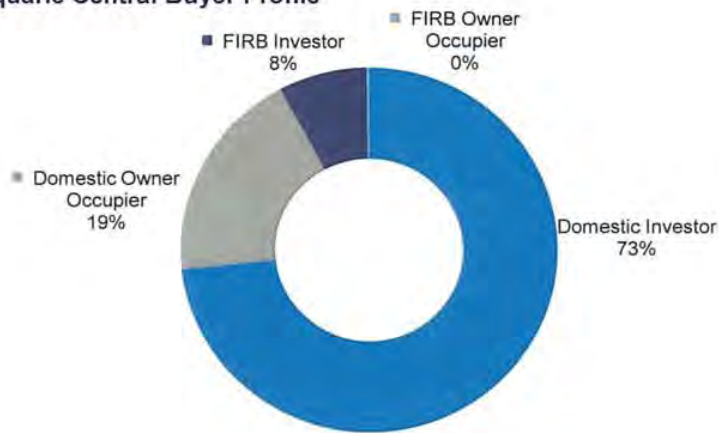
Toga Group of Companies in joint venture with LaSalle Investment Management launched Macquarie Central at 120-128 Herring Road, Macquarie Park in mid-2011. The development is currently under construction and will comprise 618 residential apartments over five buildings ranging in height from 9 to 12 storeys. As at December 2012, 605 of the 618 apartments had sold, equating to a 98% pre-sale rate. Significant presale success occurred initially over the first few weeks for the first two blocks offered. Further details of the sales rate achieved in the project are as hereunder:-

Block	No. of Apartments	Sales Rate
Block A - Skyview	129	As at December 2012 98% of the 129 apartments had sold.
Block B - Rise	117	As at December 2012 all the apartments in the building had presold.
Block C - Altitude	148	As at December 2012 96% of the 148 apartments had sold. The official launch date was 3 March 2012 and 80% of the apartments were sold in one week.
Block D - Jade	80	As at December 2012 all the apartments in the building have presold. The official launch date was 3 March 2012 and 65% of sales occurred in the first week of marketing.
Block E - Skyline	144	As at December 2012 97% of the 139 apartments had sold.
Total	618	As at December 2012, 605 of the 618 apartments had sold, equating to a 98% pre-sale rate.

We have ascertained the buyer profile of 472 of the 618 apartments. The domestic investor is the most dominant purchaser type for all buildings. The proportion of sales made to the domestic investor ranges from 65% in Rise to 81% in Altitude. The graph on the following page shows the prevalence of the domestic investor. We are of the opinion the demand driver i.e. proximity to Macquarie University has heavily influenced the purchasing decision. Anecdotally it has been reported that the vast majority of purchasers are Asian.



Macquarie Central Buyer Profile



Source: Colliers International

Given the current strength of the market, attributed to the historically low cash rate, Sydney's property market is becoming even more attractive to offshore investors. We are of the opinion demand levels have increased since the release of Macquarie Central.

MACQUARIE RESIDENCES

Meriton released their mixed-use development comprising a hotel and three detached residential buildings ranging in height from seven to eight storeys with a total of 232 apartments in early 2012. We are aware that by the end of 2012 approximately 35% of the development had sold.

Meriton is a unique developer in the sense their strategy is vastly different to most development companies as the delivery of apartment stock is seen as a long term investment. Typically Meriton retains a considerable proportion of each development and gains additional value from depreciation, rental returns, capital growth etc. Hence the low pre sales rate, as compared to Macquarie Central, is not a reflection of demand but more so the sale strategy of the developer.



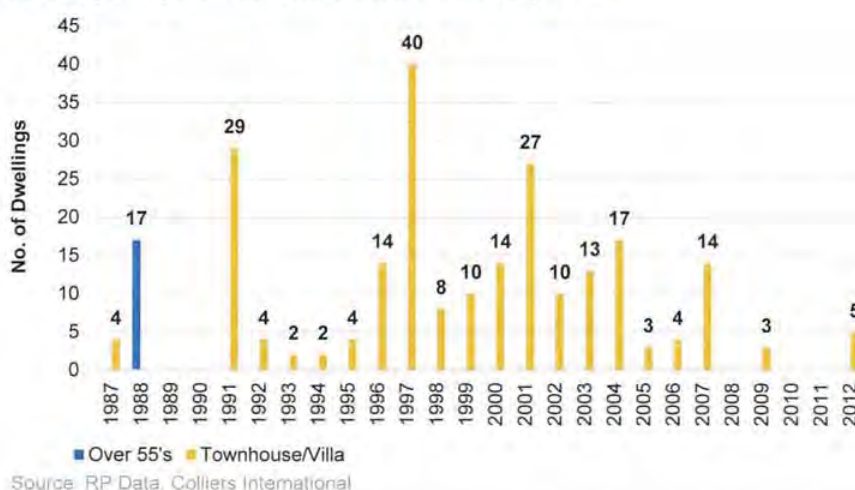
3.2 SUPPLY

Historical Supply

North Ryde

Since 1987 potential purchasers within North Ryde have witnessed reasonably consistent new residential supply. Of the 244 dwellings delivered 93% comprise villas, with the remainder of stock being within an 'Over 55s' development. The greatest amount of supply in the one year was a total of 40 dwellings in 1997. There have been no 'traditional' apartments delivered since 1987. The following graph demonstrates the residential supply delivery timeline since 1987.

North Ryde Apartment/Townhouse/Villa Completions



Macquarie Park

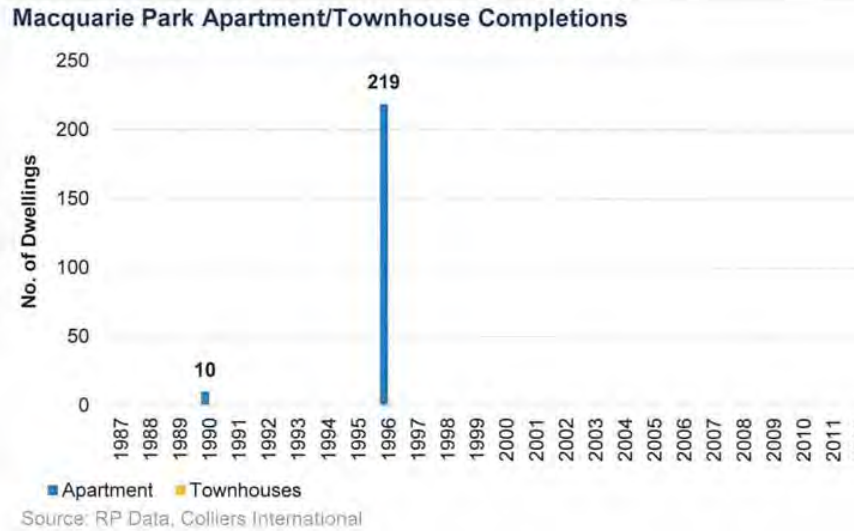
Prospective purchasers within Macquarie Park have witnessed limited new residential purchasing opportunities since 1987. The most recently completed (January 2012) residential project was a boutique townhouse development comprising five townhouses. Prior to this development the suburb had not seen the completion of any new apartments since 1996 when Meriton finished their development comprising of a total 219 apartments. This equates to a period of 15 years whereby no new residential supply was available. Before Meriton completed their development there was a seven year hiatus in the delivery of any new residential supply.

The table below shows the details and timeline of the four most recently completed apartment and townhouse developments within Macquarie Park.

Address	No. Dwelling Type	Completion Date
1-15 Tuckwell Place, Macquarie Park	44 apartments	December 1986
33 Fontenoy Road, Macquarie Park	10 apartments	July 1990
1 Fontenoy Road, Macquarie Park – Stage 1	97 apartments	July 1996
1 Fontenoy Road, Macquarie Park – Stage 2	122 apartments	December 1996
448 Lane Cove Road, Macquarie Park	5 townhouses	January 2012

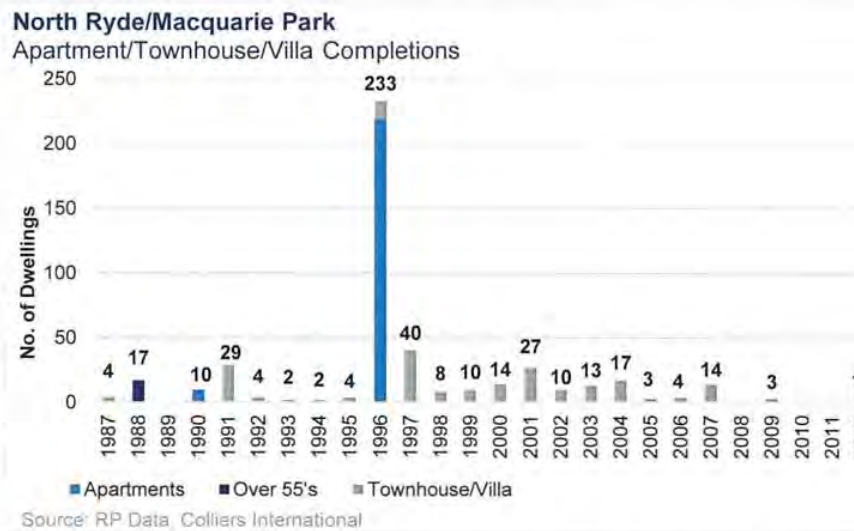


Between 1987 and 2011, equivalent to a period of 26 years, a total of 234 strata dwellings within three separate developments have been completed, as graphed hereunder:-



North Ryde/Macquarie Park

Over the last 26 years, the suburbs of North Ryde and Macquarie Park collectively have seen residential supply levels rise by a total 478 dwellings (apartments, over 55s and townhouses/villas), equivalent to an average 18 dwellings per annum. The delivery of this supply is graphed hereunder:-



Toga's Macquarie Central development will add 618 apartments within the one project, equivalent to 1.3 times the total delivery over a 26 year period within North Ryde/Macquarie Park. The lack of historical new apartment/townhouse supply explains why demand and hence absorption rates within the two projects, Macquarie Central and Macquarie Residences, that have been recently released have been positive.



Future Supply

Macquarie Park Village, 110-114 Herring Road, Macquarie Park

Stamford Property Services has commenced initial marketing for Macquarie Park Village with imminent release of the development comprising 593 apartments over four buildings. This development is of similar scale to Macquarie Central in that it is 1.3 times the size of the collective supply released since 1987 within North Ryde and Macquarie Park.

Harvey Norman Mixed-Use Development, 111 Wicks Road and 29-35 Epping Road, Macquarie Park

We are aware of the potential redevelopment of the Harvey Norman site at 111 Wicks Road and 29-35 Epping Road, Macquarie Park. This potential project will possibly add 160-170 apartments to the supply pipeline. We note Harvey Norman Group was seeking to obtain a Gateway determination for the site.

27-37 Delhi Road, North Ryde

Development Approval for four x eight storey commercial buildings with a total NLA of 31,847m² on the 17,610m² site was granted in 2007. No pre-commitments have been made. According to Goodman, the site has recently been rezoned for residential purposes and will likely house approximately 800 apartments. It is believed this site is in the process of being sold to a residential developer. We are of the opinion the site's proximity to the Macquarie Park Cemetery and Crematorium, as discussed in further detail below, is expected to hinder demand.

Urban Activation Precincts

We note the **North Ryde Station Urban Activation Precinct**, which encompasses approximately 14 hectares at the junction of Epping Road, the M2 and Delhi Road has been earmarked as suitable for future residential development. This area alone is forecast to add approximately 3,000 dwellings to the supply pipeline.

However, there is a major impediment to the practical absorption and hence delivery of this supply – the proximity of the Macquarie Park Cemetery and Crematorium which is located directly opposite Delhi Road and the M2. Recently Colliers International had discussions with a developer who currently is constructing apartments within the Macquarie Park Precinct and they commented they would lose approximately 90% of the Chinese buyers in any development within the North Ryde Station Urban Activation Precinct due to the proximity and views over the cemetery.





According to Dr. Jes T. Y. Lim, founder of Qi-Mag Feng Shui & Geobiology Institute, a home should not be built within 500 metres of a cemetery. Although some real estate agents say that many Chinese will not live the greater radius.

Whilst the lack of demand from the Chinese buyer is attributed to the principals of Feng Shui many other cultures view the close proximity of a cemetery as a significant deterrent to an acquisition. Hence, it is unlikely demand for new apartments within the North Ryde Station Urban Activation Precinct will match the demand recorded within the projects currently under construction within Macquarie Park or North Ryde. Based on the proximity to the cemetery the financial and practical viability of the North Ryde Station Urban Activation Precinct is questioned.

The **Herring Road, Macquarie Park Urban Activation Precinct** is still in the initial stages and at this stage a planning framework has not been prepared. The development of this Precinct is expected to commence at best in the medium term but more likely in the long term.



4 SUMMARY AND CONCLUSION

4.1 COMMERCIAL

We are of the opinion there is limited demand for additional office accommodation within North Ryde/Macquarie Park due to the following reasons:-

- Despite the presence of Macquarie University, the introduction of additional demand drivers, including improvements to infrastructure, does not appear to have made a major impact on demand, which is demonstrated by the total vacant space currently available, the lowest average A Grade average net face rents, poor take up rates and in excess of 500,000m² of potential total supply;
- The Precinct has the second highest total area of vacant stock of all Sydney Metro markets, which equates to 1.5 times the size of the total Metro markets average;
- Sydney CBD landlords are offering very attractive incentives which are enticing tenants to move from surrounding Metro and suburban markets.
- The development of commercial towers is not financially feasible as the Precinct continues to record the lowest average net face rents (\$315/m² to \$330/m²) for A Grade space of all the Metro markets;
- The distance to major commercial markets is likely to be having a major impact on the vacancy rate and rents being achieved as Norwest is showing a similar trend;
- Weak demand has translated into the North Ryde/Macquarie Park Precinct currently reporting the third highest average incentive rate of all Metro markets;
- The typically low car parking ratio associated with most developments within the area adds additional burden to a projects development margins;
- Despite the affordable nature of the market, from a prospective tenant's perspective, and the ample choice available, lease transactions and enquiry levels across the market continue to be well below average. Colliers International has forecast circa 25,000m² of lease transactions will take place over the course of calendar 2013, the lowest level recorded since data collection commenced in 1999. The market has recorded below average take-up rates over the last five consecutive years;
- The Precinct is not viewed by tenants as a corporate location;
- There are no new tenants coming from outside the North Ryde/Macquarie Park markets. Given the total vacancy and potential level of supply this is a critical factor hindering any development;
- Demand within North Ryde/Macquarie Park is predominantly restricted to business parks not commercial towers. Tenants seeking a Metro location are demanding campus style developments which allows for exclusive occupancy

These factors have translated into an estimated 20.7 years of potential supply.



4.2 RESIDENTIAL

Overall we are of the opinion there is limited potential new supply in the North Ryde/Macquarie Park market in the short or medium term given the following parameters:-

- The lack of historical supply within North Ryde and Macquarie Park;
- The pent-up demand associated with a growing population base and limited historical housing options;
- The positive demand drivers including the Macquarie University, the various improvements to the private and public transport infrastructure base, the University Hospital and the redevelopment of Macquarie Centre. These add considerable merit to the residential sector and have yet to display any significant positive impact on the commercial market; and
- The proximity of the Macquarie Park Cemetery and Crematorium to the North Ryde Station Urban Activation Precinct and 27-37 Delhi Road, North Ryde is anticipated to hinder the success and hence demand of a future development on these sites. Hence, the likelihood of an apartment oversupply is limited which in turn will impact the prospect of the housing targets for Ryde being met.

The strength of the residential market within North Ryde/Macquarie is demonstrated via way of the robust absorption rates recorded within the two recent apartment projects released, particularly the 98% pre-sale rate within Macquarie Central which comprises a total 618 apartments.

APPENDIX A
Colliers International Valuation & Advisory Services Pty Limited
Terms and Conditions



Colliers International Valuation & Advisory Services Pty Limited
Terms and Conditions



IT IS AGREED AS FOLLOWS:

1. DEFINITIONS

'Confidential information' means information that:

- (a) Is by its nature confidential;
- (b) Is designated by Us as confidential;
- (c) You know or ought to know is confidential;
- (d) and includes, without limitation:
 - (i) Information comprised in or relating to any of Our intellectual property in the Services or any reports or certificates provided as part of the Services; and
 - (ii) The Quotation annexed hereto.

'Currency Date' means, in relation to any valuation or consultancy report, the date as at which our professional opinion is stated to be current.

'Fee' means the amount agreed to be paid for the Services as set out in the Quotation.

'Parties' means You or Us as the context dictates.

'Quotation' means the written quote provided by Us in relation to the Services.

'Services' means the valuation or consultancy services provided pursuant to these Terms and Conditions and the Quotation, and includes any documents, reports or certificates provided by Us in connection with the services.

'We', 'Us', 'Our' means Colliers International Valuation & Advisory Services Pty Limited (ABN 88 076 848 112).

'You', 'Your' means the entity engaging Us to perform the Services as set out in the Quotation.

2. PERFORMANCE OF SERVICES

- 2.1. We will provide the Services in accordance with:
 - (a) The Terms and Conditions contained herein; and
 - (b) The required provisions of the current Australian Property Institute Professional Practice standard.

3. CONDITION OF THE PROPERTY

- 3.1. In undertaking the Services We will have regard to the apparent state of repair, condition and environmental factors in relation to the property based upon a visual inspection, but We will not (and are not qualified to) carry out a structural, geotechnical or environmental survey. We will not inspect those parts of the property that are unexposed or inaccessible.
- 3.2. We will assume that there is no timber infestation, asbestos or any other defect (unless advised otherwise) and that the property is compliant with all relevant environmental laws. It is Your responsibility to provide reports to Us that are relevant to these issues.
- 3.3. We will not undertake a detailed inspection of any plant and equipment or obtain advice on its condition or suitability.
- 3.4. We recommend that You engage appropriately qualified persons to undertake investigations excluded from the Services.
- 3.5. No responsibility will be accepted either to You or to any third party for loss or damage that may result directly or indirectly from the condition of the property.

4. ENVIRONMENT AND PLANNING

- 4.1. We will obtain only verbal town planning information. It is Your responsibility to check the accuracy of this information by obtaining a certificate under the appropriate legislation.
- 4.2. State or Federal Laws may require environmental audits to be undertaken before there is a change of land use. You will provide such audits to Us where they are required. We will not advise You whether such audits are required or obtain such audits. If You do not provide Us with such audits We will perform the Services on the assumption that such audits are not required.

5. BUILDING AREAS AND LETTABLE AREAS

- 5.1. Where a survey is provided to Us for consideration, We will assume that information contained in the survey is accurate and has been prepared in accordance with the Property Council of Australia (PCA) Method of Measurement.

- 5.2. If You do not provide Us with a survey, We will estimate building and/or lettable areas based only upon available secondary information (including but not limited to building plans, Deposited Plans, and our own check measurements). Such estimates do not provide the same degree of accuracy or certainty as would be provided by a survey prepared by an appropriately qualified professional in accordance with the Property Council of Australia (PCA) Method of Measurement.
- 5.3. Where such a survey is subsequently produced which differs from the areas estimated then You will refer the valuation or consultancy advice back to Us for comment or, where appropriate, amendment.

6. OTHER ASSUMPTIONS

- 6.1. Unless otherwise notified by You, We will assume:
 - (a) there are no easements, mortgages, leases, encumbrances, covenants, caveats, rights of way or encroachments except those shown on the Title; and
 - (b) all licences and permits can be renewed and We will not make any enquiries in this regard.
- 6.2. Where third party expert or specialist information or reports are provided to Us or obtained by Us in connection with the Services (including but not limited to surveys, quantity surveyors reports, environmental audits, structural/dilapidation reports), We will rely upon the apparent expertise of such experts/specialists. We will not verify the accuracy of such information or reports.

7. VALUATION FOR FIRST MORTGAGE SECURITY

- 7.1. Where the Services are provided for mortgage purposes, You agree that You will not use the valuation or consultancy report where the property is used as security other than by first registered mortgage.
- 7.2. We reserve the right, at Our absolute discretion, to determine whether or not to assign Our valuation to any third party. Without limiting the extent of Our discretion, We may decline a request for assignment where:
 - (a) the proposed assignee is not a major recognised lending institution (such as a major bank);
 - (b) the assignment is sought in excess of 3 months after the date of valuation;
 - (c) We consider that there has been a change in conditions which may have a material impact on the value of the property;
 - (d) the proposed assignee seeks to use the valuation for an inappropriate purpose (including in a manner inconsistent with Your agreement at clause 7.1); or
 - (e) Our Fee has not been paid in full.
- 7.3. Where We decline to provide an assignment on either of the bases at 7.2(b) or (c), We may be prepared to provide an updated valuation on terms to be agreed at that time.
- 7.4. In the event that You request us to assign Our valuation and We agree to do so, You authorise Us to provide to the assignee a copy of these Terms and Conditions, the Quotation and any other document, including instructions provided by You, relevant to the scope of Our Services.

8. ESTIMATED SELLING PRICE

- 8.1. Where You instruct Us to provide an Estimated Selling Price, You agree that the Services:
 - (a) are limited to the provision of an opinion based upon Our knowledge of the market and informal enquiries.
 - (b) We are not required to carry out a full inspection of the property; any inspection of comparable properties; a search on Title(s) or other enquiries as to encumbrances, restrictions or impediments on Title(s); or other investigations which would be required for a formal valuation.
 - (c) provide an indicative figure only which is not suitable for use for any purpose other than as general information or guide as to sale expectations. It is not suitable to be relied upon for the purpose of entry into any transaction.
- 8.2. No responsibility will be accepted either to You or to any third party for loss or damage that may result from the issue of such an Estimated Selling Price.

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9. CURRENCY OF VALUATION

- 9.1. Due to possible changes in market forces and circumstances in relation to the subject property the Services can only be regarded as relevant as at the Currency Date.
- 9.2. Where You rely upon Our valuation or consultancy report after the Currency Date, You accept the risks associated with market movement between the Currency Date and the date of such reliance.
- 9.3. Without limiting the generality of 9.2, You should not rely upon Our valuation or consultancy report:
- (a) after the expiry of 3 months from the Currency Date;
- (b) where circumstances have occurred during that period which may have a material effect on the value of the property or the assumptions or methodology used in the valuation or consultancy report.

10. MARKET PROJECTIONS

- 10.1. Any market projections incorporated within our Services including, but not limited to, income, expenditure, associated growth rates, interest rates, incentives, yields and costs are projections only, and may prove to be inaccurate. Accordingly, such market projections should be interpreted as an indicative assessment of potentialities only, as opposed to certainties.
- 10.2. Where Our Services include market projections such projections require the dependence upon a host of variables that are highly sensitive to varying conditions. Accordingly, variation in any of these conditions may significantly affect these market projections.
- 10.3. Where market projections form part of Our Services, We draw your attention to the fact that there will be a number of variables within acceptable market parameters that could be pertinent to Our Services and the projections adopted are representative of only one of these acceptable parameters.

11. YOUR OBLIGATIONS

- 11.1. You warrant that the instructions and subsequent information supplied by You contain a full and frank disclosure of all information that is relevant to Our provision of the Services.
- 11.2. You warrant that all third party expert or specialist reports provided to Us by You for the purpose of Us providing the Services are provided with the authority of the authors of those reports.
- 11.3. You authorise and licence us to incorporate Your intellectual property within our report(s).
- 11.4. You will not release any part of Our valuation or consultancy report or its substance to any third party without Our written consent. Such consent will be provided at Our absolute discretion and on such conditions as We may require including that a copy of these Terms and Conditions be provided to such third party. This clause shall not apply to persons noted as recipients in Your prior instruction to Us or in the Quotation provided that You shall provide any such recipient with a copy of these Terms and Conditions.
- 11.5. If You release any part of the valuation or consultancy advice or its substance with our written consent, You agree: a) to inform the other person of the terms of our consent; and b) to compensate Us if You do not do so. We have no responsibility to any other person even if that person suffers damage as a result of any other person receiving this valuation or consultancy advice.
- 11.6. You must pay our Fees within 14 days of the date of a correctly rendered invoice. Fees that remain unpaid for a period of 30 days or more will attract an administration charge of 2% of the total of the invoice calculated per month or part thereof.
- 11.7. We reserve the right to reconsider or amend the valuation or consultancy advice, or the Fee set out in our Quotation to You if:
- (a) Certificates, surveys, leases, side agreements or related documentation that were not provided to Us prior to the provision of the Services are subsequently provided, and contain matters that may affect the value of the advice; or

- (b) Where subsequent site inspections made in relation to any of the matters raised in clause 3 materially affect or may alter the value of the property the subject of the Services.

12. CONFIDENTIALITY

- 12.1. You must not disclose or make any of the Confidential Information available to another person without Our written consent.
- 12.2. If consent to disclose the Confidential Information is provided by Us, You agree to abide by any additional terms and conditions that We may apply to that disclosure.

13. PRIVACY

- 13.1. We may obtain personal information about You in the course of performing Our Services. We respect Your privacy. The Privacy Amendment (Private Sector) Act, 2001 requires Us to advise You that we will only obtain information that is necessary to assist us in the course of performing Our Services. If it is necessary for Us to engage third parties, we will inform these parties that they are not to disclose any personal information about You to any person or organisation other than Us. A copy of Our Privacy Policy can be obtained by contacting Our Chief Privacy Officer.

14. SUBCONTRACTING

- 14.1. We may subcontract or otherwise arrange for another person to perform any part of the Services or to discharge any of Our obligations under any part of these Terms and Conditions, with Your consent.

15. LIABILITY

- 15.1. You agree to release Us and hold Us harmless from all liability to You for or in respect of any loss, damage, costs and expenses of whatsoever kind which we have or may have or, but for the operation of this Clause, might have had arising from or in any way connected with the Services or the use of the Services or any part of them. This release shall be complete and unconditional except in the case of gross negligence or wilful misconduct by Us in the provision of the Services.
- 15.2. You agree that You will fully indemnify Us for and in respect of all loss, liability, costs and expenses of whatsoever kind which We may suffer or incur arising from or in any way connected with any breach by You of Clause 11 or Clause 12. This indemnity shall include but not be limited to loss, liability, costs and expenses which we may suffer or incur in respect of any claims, actions, proceedings, disputes or allegations made against Us or to which we are a party.

16. ENTIRE AGREEMENT

- 16.1. No further agreement, amendment or modification of these Terms and Conditions shall be valid or binding unless made in writing and executed on behalf of the Parties by their duly authorised officers.
- 16.2. If there is an inconsistency between these Terms and Conditions and the Quotation, any letter of instruction from You, or other specific request or information, the other specific request or information shall prevail to the extent of the inconsistency.

