



## Visual and Shadow Analysis of Additional Seventh Level: Mixed Use (Residential, Retail & Community) Development

29 Burlington Road + 32 The Crescent, Homebush

01 June 2012

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Appendix 1: Shadow Diagrams

Appendix 2: WireFrame Diagrams





AERIAL PHOTOGRAPH



## 1. Background

On Thursday 17<sup>th</sup> May 2012, the Sydney East Joint Regional Planning Panel considered the proposed redevelopment of an infill site at Nos. 29, 33 – 35 Burlington Road and No. 32 The Crescent, Homebush, within the Strathfield LGA for a mixed use development comprising residential, retail and community facility uses within a 7 storey building in the Homebush Town Centre.

The Panel resolved, inter alia, that:

- The applicant shall prepare a full set of shadow diagrams; and
- The applicant shall prepare a visual analysis of the potential impact of the seventh level as a comparison to that of the Court approved six level building, when viewed from Burlington Road and the Crescent.

This report addresses both resolutions. It:

- Presents and analyses the results of the shadow diagrams, both with and without the seventh level. (Hard copies of the shadow diagrams have been submitted under separate cover to both Council and the Panel); and
- Undertakes a townscape visual assessment of the addition of the seventh level.

The report concludes by undertaking a 'check measure' to address any potential concerns as to the accuracy of the analysis and material provided.

## 2. Part 1: Assessment of Shadow Impact

### 2.1 Shadow Diagrams Used in Assessment

The Shadow Impact Diagrams prepared by Tony Owen and Partners Architects are attached in Appendix 1 and partly reproduced herein. They comprise:

A260 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 9.00 am.

A261 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 10.00 am.

A262 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 11.00 am.

A263 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 12.00 noon.

A264 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 13.00 pm.

A265 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 14.00 pm.

A266 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow with Tree Shadow 15.00 pm.

A267 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 9.00 am.

A268 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 10.00 am.

A269 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 11.00 am.

A270 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 12.00 noon.

A271 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 13.00 pm.

A272 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 14.00 pm.

A273 Rev B, Site Plan Comparison 6 and 7 Storey, Additional Shadow without Tree Shadow 15.00 pm.

A274 Rev B, June 9.00 am Elevation Neighbour Building Affect by Shadow.

A275 Rev B, June 10.00 am Elevation Neighbour Building Affect by Shadow.

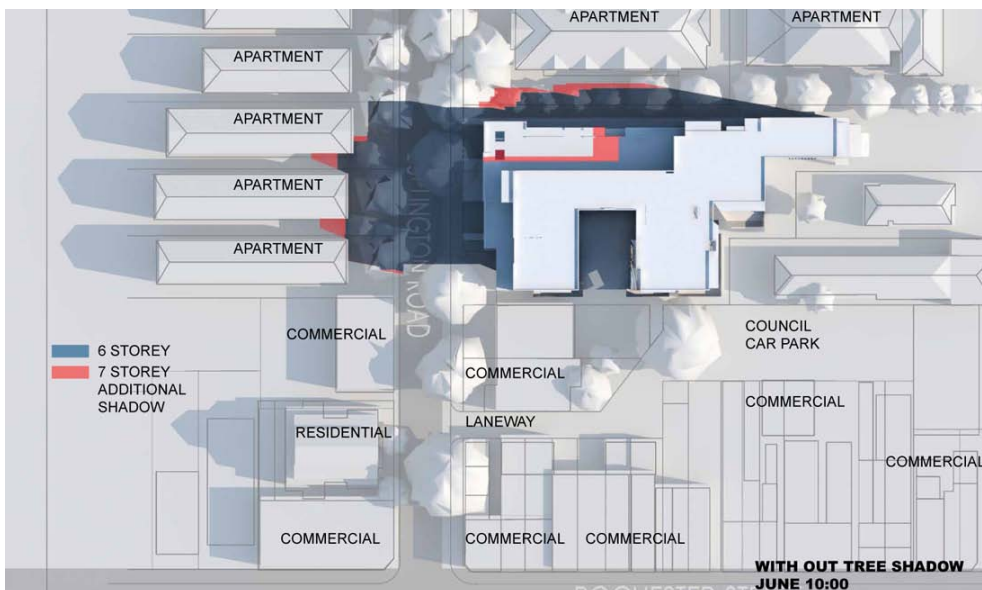
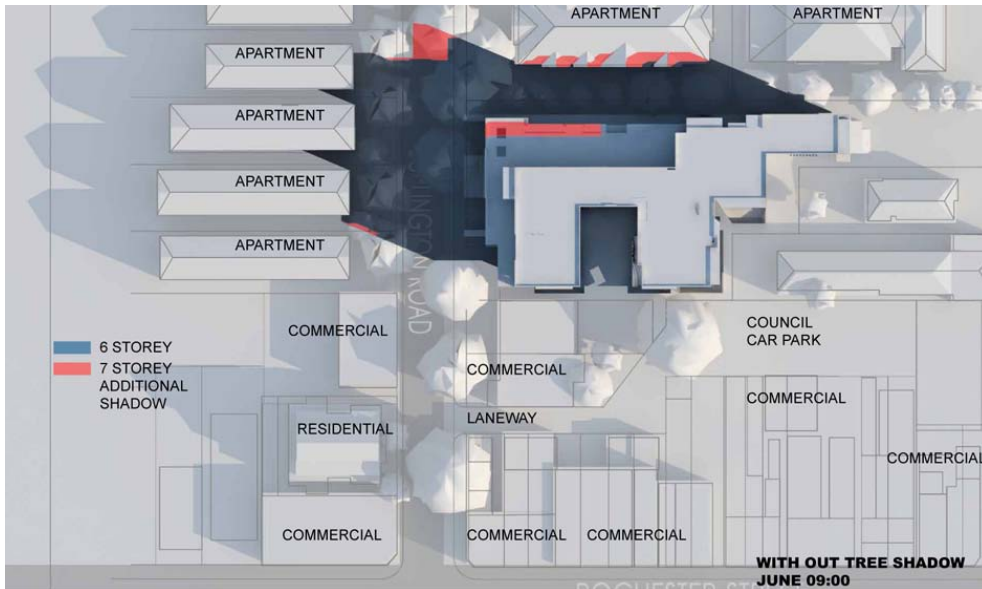
A276 Rev B, June 12.00 noon Elevation Neighbour Building Affect by Shadow.

A277 Rev B, June 03.00 pm Elevation Neighbour Building Affect by Shadow.

A278 Rev B Elevational Shadow Diagrams Including Existing Surrounding Trees Shadow.

A279 Rev B Elevational Shadow Diagrams Without Existing Surrounding Trees Shadow.

The diagrams have been extrapolated from the CAD drawings prepared by Tony Owen and Partners submitted with the development application. Elevations of surrounding buildings are based on survey data and supplemented with details (window and balcony locations, heights etc.), which have been calculated based on site inspection and photographic interpretation.



9AM



10AM



11AM



6 STOREY  
7 STOREY ADDITIONAL SHADOW

**ELEVATIONAL SHADOW DIAGRAMS  
WITHOUT EXISTING SURROUNDING TREES SHADOW**

> Shadow Impact on Elevations of Buildings on South Side of Burlington Road., 9.00, 10.00 and 11.00

> Shadow Impact 9.00 and 10.00





> Shadow Impact on Elevations of Buildings on West Side of Site., 9.00, 10.00

## 2.2 Assessment

Diagrams showing shadows cast by existing trees within the public domain and private gardens of buildings in Burlington Road are included in the package. They are provided to demonstrate the characteristics of the existing solar access within the streetscape. However the assessment of shadow impact presented below has not considered any shadow cast by existing trees.

The shadow diagrams show a representation of the proposed development with 6 levels and 7 levels. This comparison has been provided to complement the Visual Impact Assessment presented in Part 2 of the report that follows.

From an analysis of the diagrams it is evident that:

### Buildings on Southern Side of Burlington Road

1. At 9.00 am shadow from a six story building is cast upon the front of three apartment buildings addressing the southern side of Burlington Road. The shadow encompasses the paved driveway in the building setback area, the doors of the ground floor garages addressing the driveway and the part of the first floor windows. By 10.00am the shadow has all but receded with the exception of the lower part of the garage doors and by 11.00am there is no shadow cast on any residential property,
2. At 9.00 am shadow from a seven story building is cast upon the front of three apartment buildings addressing the southern side of Burlington Road. The shadow encompasses the paved driveway in the building setback



> View of Dwellings on South Side of Burlington Road

area, the doors of the ground floor garages addressing the driveway and the first floor windows. It also extends up the building and encompasses the majority of balconies and the glazed area of second floor apartment windows addressing Burlington Road. By 10.00 am the shadow has receded to the garage doors and by 11.00am there is no shadow cast on any residential property.

#### **Building to West of Site (37 – 39 Burlington Road)**

3. At 9.00 am shadow from a six story building is cast upon the eastern elevation of the apartment building. It encompasses the ground and first floors and extends to the rear (northern half) windows and balconies of the third floor. By 10.00am the shadow has receded and there is no shadow cast on any part of the building.

4. At 9.00 am shadow from a seven story building is cast upon the eastern elevation of the apartment building. It encompasses the ground and first floors and extends to the rear (northern half) windows and balconies of the third floor. It also extends up the building roof and encompasses the remaining third floor windows and balconies at the front of the building. By 10.00am the shadow has receded and there is no shadow cast on any part of the building.

#### **Commercial Buildings to the South and West of the Site**

5. At 12.00 noon and beyond the seventh level casts additional shadow on the frontage of the commercial buildings on the south side of Burlington Road.

#### **Residential Buildings to the North East and North West of Site addressing The Crescent**

6. At no time does any part of the proposed development cast any shadow on these buildings until 3.00 pm, when shadow from the northern part of the building is cast upon the southern western corner of the building wall of No. 31 The Crescent.

There are two relevant town planning instruments that present adopted standards and guidance upon which the environmental impact of shadow cast by a building can be assessed. They are:

- Strathfield Planning Ordinance. Clause 41C (d) 'Development Adjoining Residential Zones'. The Clause requires that development does not inhibit reasonable solar access to existing buildings within the residential zone between the hours of 9am and 3pm during the winter solstice; and
- The Residential Flat Design Code (SEPP 65). The Code presents now commonly accepted standards that living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3.00pm in mid-winter.

The shadow impact of the proposed development and the additional shadow cast by the seventh level provide un-interrupted sun to all windows and balconies after 10.00am (5 hours of the 6 hours between 9.00 am and 3.00pm) and thus achieve these standards and guidelines.

### 3. Part 2: Townscape Visual Impact Assessment

#### 3.1 General Approach to Townscape Visual Assessment

The assessment in this report adopts the approach presented in the Guidelines for Landscape and Visual Impact Assessment (2002) (GLVIA) produced jointly by the UK Landscape Institute and the Institute of Environmental Management and Assessment (IEMA). It is recognised as the established guidance on best practice in carrying out landscape/townscape and visual impact assessment of proposed developments.

A clear distinction is required between impacts on townscape character impacts and visual impacts, which are separate, yet related, as follows:

- Townscape impacts relate to the effects of a proposal in terms of changes in the physical fabric and other characteristics of the townscape (referred to as 'townscape receptor') and its resulting character and quality; while
- Visual impacts relate solely to changes in available views of the townscape from people (e.g. residents, visitors, etc - referred to as 'visual receptors' or 'viewers'), and the effects of those changes on the amenity they experience.

Townscape and visual impacts do not necessarily coincide and impacts can be beneficial as well as adverse.

The various features in the townscape make up:

1. its character;
2. its visual quality;
3. its sensitivity; and
4. Its absorption capability.

Three steps have been adopted in the assessment:

1. Identify townscape and visual character and quality;
2. Identify townscape and visual sensitivity; and
3. Identify Impact.

#### 3.2 The Base Line

The assessment of the significance of the effects of development on the townscape and visual resource are based upon the prediction of the potential impact in relation to the change in baseline conditions.

For this study, a development scenario of 6 storeys within the site has been adopted as a base line guide against which sensitivity of the addition of a seventh level to the proposed building has been assessed.

Photomontages of the baseline (6 levels) and the change to be assessed (the seventh level) prepared by Tony Owen and Partners Architects are presented on the following pages.





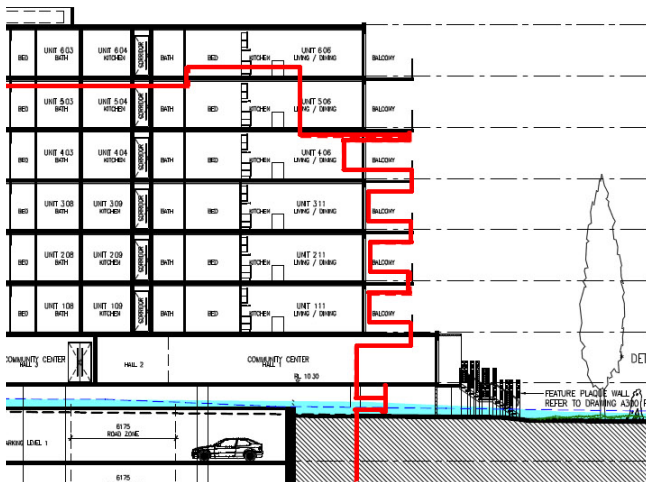
> Court Approved Elevation to The Crescent. Additional Levels Setback from Street.



> Elevation of Current Proposal (6 Levels) To The Crescent



> Elevation of Current Proposal (7 Levels) To The Crescent



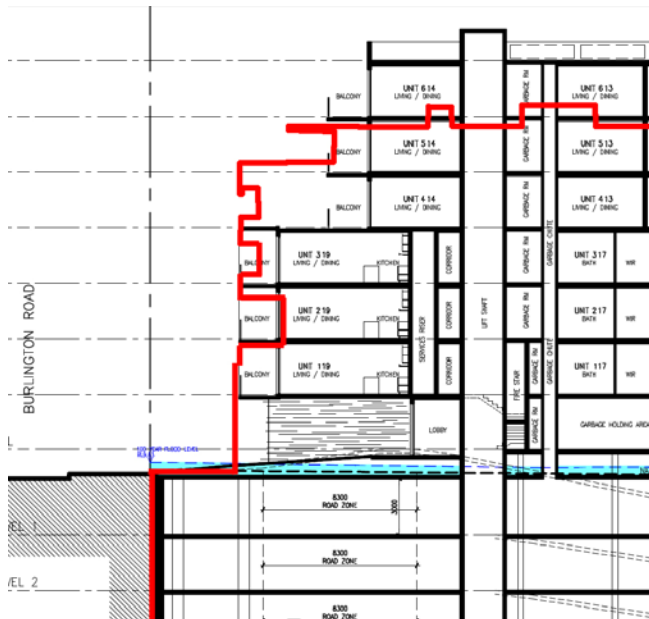
> Extract of DA Drawing A131 Indicating Outline of Proposed Development Against Court Approved Development



> Photomontage of Current Proposal (6 Levels) To The Crescent



> Photomontage of Current Proposal (7 Levels) To The Crescent



> Court Approved Photomontage Elevation to Burlington Road Not Available due to Time Constraints. However, Extract from DA Drawing A131 Indicating Outline of Proposed Development Against Court Approved Development Illustrates that Scale of Built Form of Court Approved proposal Addressing Burlington Road is Greater than That Proposed in Current DA.

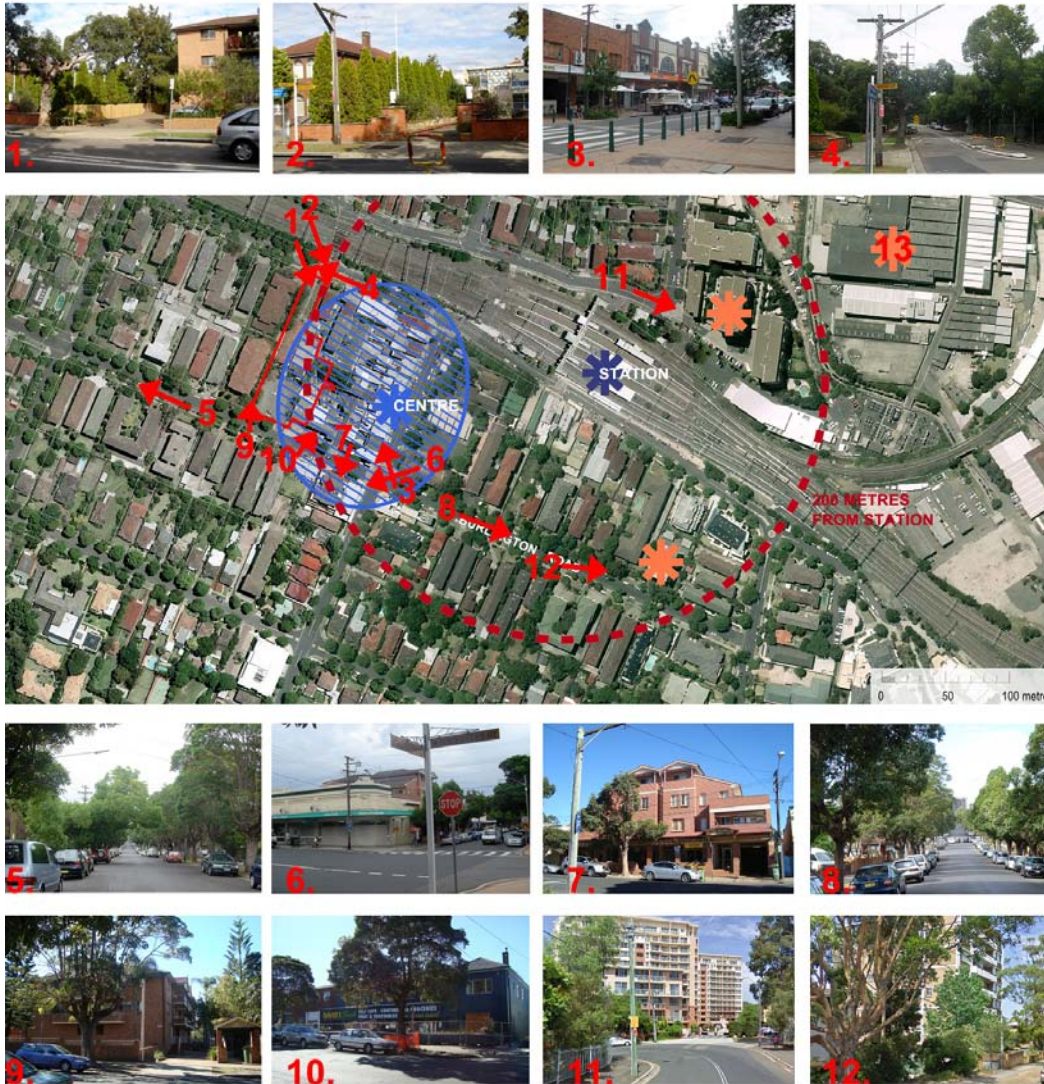


> Current Proposal (6 Levels) to Burlington Road with Trees (top) and Without Trees (Bottom)



> Current Proposal (7 Levels) to Burlington Road with Trees (top) and Without Trees (Bottom)





> Views of Townscape Character

### 3.3 Townscape and Visual Character and Quality

#### 3.3.1 Townscape and Visual Character

Views of the townscape surrounding the site are presented opposite. It can be observed that:

- In the immediate vicinity of the site is a mix of 2, 3 and 4 storey residential flat buildings. The prevailing development era is one of 1960/70s with little attention to architectural style and site landscaping. Opposite the site on the southern side of Burlington Road is a recent 4 story mixed use development, indicative of the character of infill development to date. Red brick and rendered /painted concrete are the dominant materials and colours of construction (photos 1, 2, 7,9).
- The area is distinguished by attractive tree lined streets. The tree canopy is an established distinctive and dominant feature of the streetscape that obscures views to the apartment buildings and provides a green treed ambience to the area's character (photos 4,5,8).
- Due to the lack of significant on-site landscaping in many properties, the standard of residential amenity relies to a high degree on the presence of street trees, and the dense green canopy they establish within the townscape;
- The site is located within the Homebush neighbourhood centre. It is a small, intimate retail strip addressing Rochester Street. It contains a range of two storey mixed use (shop top housing) developments. An IGA supermarket is located on the west side of Rochester Street and the Homebush Public School on the east side. It exhibits an attractive low scale 1930s (art deco) character. On Burlington Road adjoining the site to the south



east there is a former service station recently converted to a fruit shop. Part of the shop's car park is located in front of the site (photo 3);

- Beyond the immediate vicinity of the site are a number of high density residential towers in the order of 7 to 10+ storeys. To the north east is a proposed mixed use development consisting of 5 buildings ranging in height between 2-21 storeys. It is known as the 'Columbia Precinct' and is subject to an application for development consent under the former Part 3A of the EP&A Act. The Director General's requirements were issued on 11 November 2010 (photo 11 and point 13 on aerial); and
- On Burlington Road to the east of the centre is an 8 storey apartment building (Burlington Tower) and streetscape views extend to taller 15 storey buildings in neighbouring Strathfield. The buildings end the streetscape view, but are generally obscured by the mature street trees (photo 8).

In summary, the site is located within an attractive local neighbourhood centre. Built form in the centre is distinguished by a range of building heights comprising 2 storey mixed use 1930s era buildings in the centre, 3 to 4 storey residential surrounding the centre an isolated 7-8 storey towers and taller buildings to 10 – 15 storeys in dense residential developments on the periphery of the area.

The prevailing character is one of a higher density residential development of mixed heights and styles with a 1930s era retail "high street" at its centre anchored by attractive tree lined streets comprising large established trees with a prominent tree canopy. With the exception of the tree lined streets and canopy, none of the characteristics of the area are particularly distinctive, or memorable in their own right.

### 3.3.2 Townscape and Visual Quality

Visual quality is evaluated by identifying the vividness, intactness and unity present in the views and vistas of the townscape. Photographic views of these elements are presented on the following page.

**Vividness** is the visual power or memorability of townscape components as they combine in distinctive visual patterns. The Homebush Centre's vividness can be identified as its distinct treed streetscapes, dense green canopy, higher density urban living and attractive neighbourhood retail "high street" (Rochester Street).

**Intactness** is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. Due to the dominant presence of the tree canopy and street trees Homebush exhibits high visual quality and its visual integrity is intact. While there is a mix of building styles and heights their visual presence is subservient and their contribution to the Centre's visual quality minimal. Where views to potentially obtrusive elements are available the elements do not dominant, or influence the townscape's visual quality, or erode its intactness.

**Unity** is the visual coherence and compositional harmony of the townscape considered as a whole. It frequently attests to the careful design of individual components in the townscape. As noted above, the townscape exhibits a mix of building uses, styles / eras and heights, which in themselves display some commonality and unity in specific areas (e.g. the retail centre on Rochester Street and common brick colour). However, little unity is present at a Precinct wide scale, when assessed against the aesthetic framework of the Centre as a whole.



Overall, despite the mix of building styles, forms, uses and heights the townscape exhibits high visual quality due to the vividness and intactness of the visually dominant tree lined streets and elevated tree canopy. These characteristics unify these disparate elements within the townscape.

### 3.4 Townscape and Visual Sensitivity

The sensitivity of the townscape is the estimate of the significance that a change will have on its character and quality (discussed above), and to those viewing it (the viewers).

Best practice guidance recognises that a townscape with a high sensitivity does not automatically mean that the townscape has a low capacity for change. Rather, capacity is a question of the interaction between the sensitivity of the townscape, the type and amount of change and the way that the townscape is valued by the viewer.

There are two elements in determining visual sensitivity: viewer sensitivity; and viewer exposure.

#### 3.4.1 Estimate of Change to Character and Quality

As noted above:

- In terms of the prevailing character, it is one of a higher density residential development of mixed heights and styles with a 1930s era retail "high street" at its centre, anchored by attractive tree lined streets comprising large established trees with a prominent tree canopy. With the exception of the

> Views of Townscape Visual Quality

tree lined streets and canopy, none of the characteristics of the area are particularly distinctive, or memorable in their own right; and

- In terms of quality, despite the mix of building styles, forms, uses and heights, the townscape exhibits high visual quality due to the vividness and intactness of the visually dominant tree lined streets and elevated tree canopy. These characteristics unify these disparate elements within the townscape.

The proposed development seeks to preserve the significant trees present within the Memorial Garden, provide new landscaping at ground level to improve site presentation and retain the existing street trees in Burlington Road.

Thus the change proposed by the additional level is low and has negligible to the character and quality of the area

### **3.4.2 Viewer Sensitivity**

Viewer sensitivity is defined as:

- The viewers' concern for visual quality; and
- The viewers' response to change in the visual resources that make up the view.

Viewer sensitivity to the proposed development can best be identified by the concern expressed (and response) by the community to the public exhibition of the proposal. The proposal with seven stories was exhibited from 12 to 26 January 2012. Only two objections were received to the proposed development, which suggests that viewer sensitivity to the proposed changes is low.

### **3.4.3 Viewer Exposure**

Viewer exposure is typically assessed by measuring the number of viewers potentially exposed to the proposed change, type of viewer activity, the duration of their view, the speed at which the viewer moves, and the position of the viewer. High viewer exposure heightens the importance of managing the visual effects of a project.

Due to the comparatively flat terrain within the Centre, views of the site are primarily experienced from five locations;

1. Burlington Road directly opposite the site;
2. The Crescent directly opposite the site;
3. From the elevated railway line to the north of the site on the northern side of the Crescent;
4. From the elevated pedestrian bridge at Homebush Railway station; and
5. Neighbouring buildings.

Photomontage Views of the Proposed Development When viewed from Surrounding Streets, prepared by Tony Owen and Partners Architects are presented on the following page. Wire Frame drawings to warrant their accuracy are presented in Appendix 2.

Burlington Road is a local road that accommodates neighbourhood scale traffic volumes and pedestrian movements. Pedestrian moments are significant due to the site's location in the town centre and the road's function as a major access to the centre. Viewer exposure, however, is limited to immediate, transitory views from the road / footpath realised through openings between street trees.



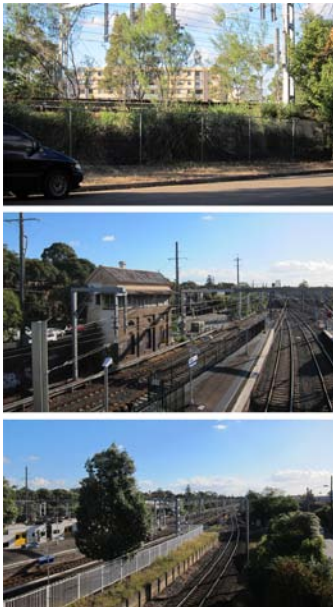


View C

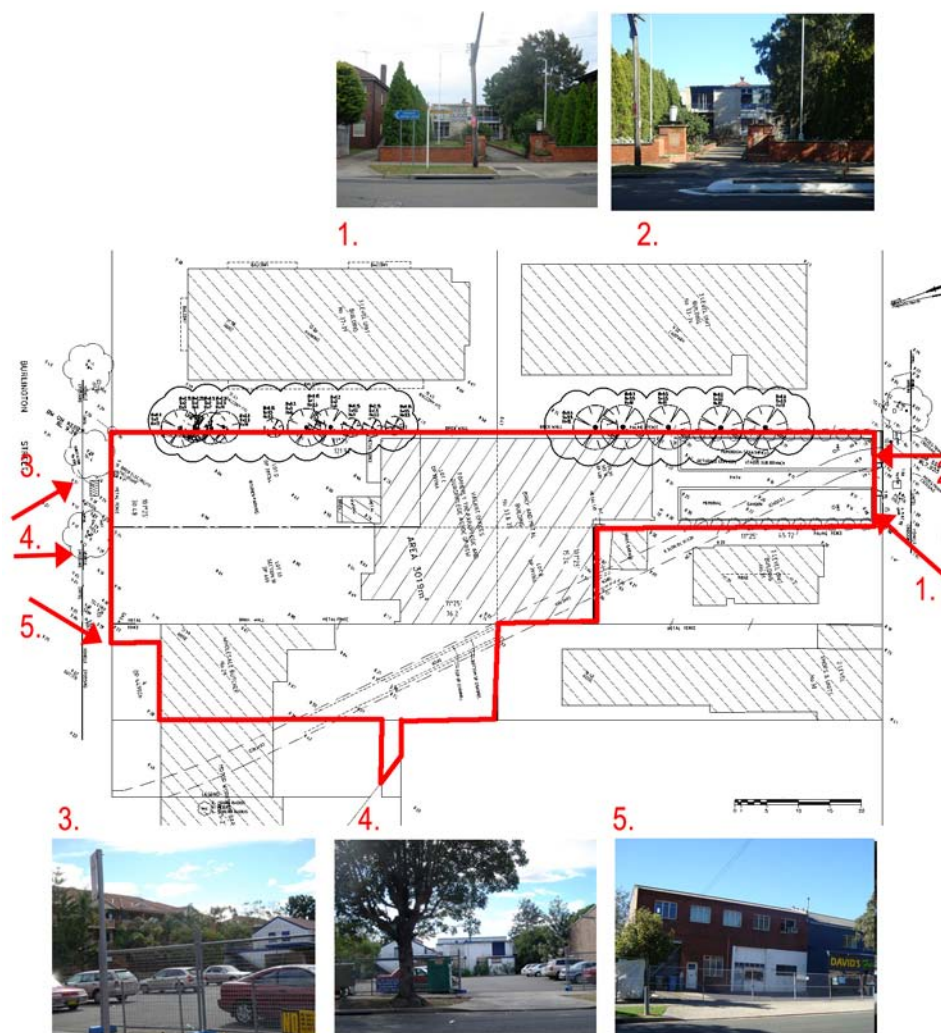
View D

> Photomontage Views of Proposed Development from Surrounding Streets (Refer to Wire Frame Diagrams in Appendix 2 for More Detail).





> Railway Line Viewpoint (top) and Views of Site from Pedestrian Bridge (Middle and Bottom).



> Direct views into Site

The Crescent is also a local road. However it carries higher traffic volumes, but generally lowers pedestrian traffic (anecdotally). Again, viewer exposure to the site is limited to the site's frontage itself due to the presence of street trees, neighbouring buildings and the dense stands of Cypress trees extending along the side boundaries of the Memorial Gardens. However the view is more expansive due to the absence of significant street trees and tree canopy at the site's frontage.

The railway line is elevated by some 2 metres opposite the site and forms part of the busy Western Line. While the numbers of potential train passengers who have the opportunity to view the site are high, views are fleeting, experienced at high speed and are realised between rail side vegetation and power catenary poles.

The pedestrian railway bridge crosses the railway line at Homebush Railway station. It affords station users and other casual users seeking to cross the railway elevated views of the town centre above the tree canopy. There is frequent use of the footbridge by pedestrians. However opportunities to enjoy views are restricted by tall fences that line its sides.

Views from neighbouring buildings are primarily available to residents and visitors. From apartment buildings to the south views are generally obstructed by street trees that line both sides of Burlington Road. From apartment buildings to the east and west, the extent of views is similar limited by mature trees that extend along the common boundaries of these properties with the site, the height of which often extend above the roof line of buildings.

In summary, viewer exposure to the site is low and primarily limited to some immediate neighbours and pedestrians who may have cause to walk along the footpaths within Burlington Road and The Crescent.

### 3.5 Impact Magnitude and Impact Significance

The magnitude of impact on the townscape or viewer depends upon the nature and scale of the development. The magnitude of impact is described as being low, moderate or high. Accepted Definitions of Magnitude of Impact are presented in the table below.

Magnitude of Change	Receptor	Criterion
Low	Townscape	A small change in components of the townscape.
	Visual	Viewers affected by minor changes in views, or visible for a short duration, at an oblique angle, or which blends to an extent with the existing view.
Moderate	Townscape	Moderate changes in townscape components.
	Visual	Viewers affected by moderate changes in views, or visible for a moderate duration, at a slight angle, or which is in contrast with the existing view.
High	Townscape	A notable change in townscape characteristics over an extensive area.
	Visual	Viewers affected by major changes in view, or visible for a long duration, facing the change, or which is in stark contrast with the existing view.

> Definitions of Magnitude of Impact

Impact significance is determined by cross-referencing the sensitivity of the townscape or viewer, with the magnitude of change expected as a result of the development. Thus a substantial impact will usually occur where both sensitivity of the townscape or viewer and the magnitude of the impact are high. Impact significance is described as being substantial, moderate, slight or none. Importantly, impacts can be further described as being beneficial/positive as well as adverse/negative.

Accepted Definitions of Significance of Impact are presented in the table below.

Magnitude Sensitivity	Low Magnitude of Townscape or Visual Change	Moderate Magnitude of Townscape or Visual Change	High Magnitude of Townscape or Visual Change
Low Townscape or Viewer Sensitivity	None	Slight	Slight/Moderate
Moderate Townscape or Viewer Sensitivity	Slight	Moderate	Moderate/Substantial
High Townscape or Viewer Sensitivity	Slight/Moderate	Moderate/Substantial	Substantial

> Definitions of Significance



Magnitude of Change	Receptor	Criterion
Low	Townscape	A small change in components of the townscape.
	Visual	Viewers affected by minor changes in views, or visible for a short duration, at an oblique angle, or which blends to an extent with the existing view.
Moderate	Townscape	Moderate changes in townscape components.
	Visual	Viewers affected by moderate changes in views, or visible for a moderate duration, at a slight angle, or which is in contrast with the existing view.
High	Townscape	A notable change in townscape characteristics over an extensive area.
	Visual	Viewers affected by major changes in view, or visible for a long duration, facing the change, or which is in stark contrast with the existing view.

In the assessment above, it can be observed that the addition of the seventh level will result in:

- “small changes in the townscape”; and
- “Viewers affected by minor changes in views, or visible for a short duration, at an oblique angle, or which blends to an extent with the existing view”.

Thus the magnitude of change will be low.

Subsequently in light of the “low” sensitivity to change, there will be no significant impact.

Magnitude Sensitivity	Low Magnitude of Townscape or Visual Change	Moderate Magnitude of Townscape or Visual Change	High Magnitude of Townscape or Visual Change
Low Townscape or Viewer Sensitivity	None	Slight	Slight/Moderate
Moderate Townscape or Viewer Sensitivity	Slight	Moderate	Moderate/Substantial
High Townscape or Viewer Sensitivity	Slight/Moderate	Moderate/Substantial	Substantial

## Appendix 1: Shadow Diagrams

























































JUNE 09:00AM ELEVATION NEIGHBOUR BUILDING AFFECT BY SHADOW

- 6 STOREY
- 7 STOREY ADDITIONAL SHADOW

<b>DISCLAIMER</b> These drawings are preliminary drawings and are subject to change without notice during the course of the proposed development and in consultation with council. Submission of the drawings does not constitute a representation or warranty by the developer or its servants, agents or contractors that the drawings are final nor that the proposed development will take place in accordance with these drawings.	<b>NOTES</b> DRAWINGS MADE TO A LARGER SCALE AND THOSE SHOWING PARTICULAR DETAIL OF WORKS SHALL TAKE PRECEDENCE OVER DRAWINGS MADE TO A SMALLER SCALE AND FOR MORE GENERAL PURPOSES.  WHERE ANY DISCREPANCY EXISTS BETWEEN FIGURED AND SCALED DIMENSIONS, THE FIGURED DIMENSIONS SHALL PREVAIL.  READER TO CHECK ALL SITE DIMENSIONS PRIOR TO FABRICATION OF FITMENTS.	<table><tr><th>AMENDMENTS</th><th></th><th></th><th></th><th></th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td>B</td><td>COMPARISON DIAGRAM</td><td>21-05-2012</td><td></td><td></td></tr></table>	AMENDMENTS															B	COMPARISON DIAGRAM	21-05-2012			<b>QUALITY RECORD</b> THE QUALITY RECORD IS A LIST OF CHANGES AND ACTIONS TAKEN TO CORRECT ANY DEFECTS OR ERRORS IN THE DRAWINGS. <table><tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th></tr><tr><td>1</td><td>ISSUED FOR PERMIT</td><td>21-05-2012</td><td>DA</td></tr></table>	NO.	DESCRIPTION	DATE	BY	1	ISSUED FOR PERMIT	21-05-2012	DA	<b>CONSULTANTS</b> <b>TOWN PLANNING : DMPS</b> 32, Harrison Lane, Cammeray NSW 2157 P: 02 9552 2599 M: 0438 990 454 E: dmpp@dmpp.com.au <b>HERITAGE : HAPPOPORT HERITAGE CONSULTANTS</b> 43, Harbord Street, Moscov NSW 2000 P: (02) 9693 1788 F: (02) 9617 5111 E: oia@happoport.com.au W: www.happoport.com.au <b>STORMWATER CONSULTING</b> Level 2, 33 York Street, Sydney NSW 2000 P: 2 9495 8100 F: 2 9495 8111 E: Sam.Holmes@stormwater.com.au <b>BICA, BICA Logic</b> Level 1, 71 Archer Street, Chateau NSW 2067 P: (02) 9411-5365 F: (02) 9411-5420 E: info@bicanz.com.au W: www.bicanz.com.au <b>TRAFFIC: Traffic</b> Suite 3.08, 466 macleay street, North Sydney NSW 2060 P: 02 9396 1811 E: +61 2 9396 1811 M: Andrew.Johnson@traffics.com.au <b>LANDSCAPE : Environmental Planning</b> 2 Blue Street, Botany NSW 2041 P: (02) 9555-1033 F: (02) 9555-1032 E: victoria@epn.com.au W: www.epn.com.au <b>FLOODING : Brian Consulting (NSW) Pty Ltd</b> Level 2, 2 Burbank Place, Newstead Business Park P: 02 8326 8700 F: 02 8326 4483 M: 02 8326 5000 F: (02) 8326 5009 E: Nigel.Bosevic@brianconsulting.com.au <b>BASIX/ACOUSTIC : Vpac Engineers &amp; Scientists Ltd</b> 2 Sirius Road, Lane Cove NSW 2066 P: 9422 4222 F: 9420 5111 E: helen@vpac.com.au	<b>ARCHITECTS</b> <b>tony o'neill ptnrs</b> 28-2, Grand View, 5-11 Lane Street, Homebush NSW 2140 P: 02 9396 1811 F: 02 9396 1811 E: tony@tpn.com.au	<b>CLIENT</b> Homebush Project Development Pty Ltd  <b>PROJECT ADDRESS</b> 29-35 BURLINGTON RD HOME BUSH	<b>DRAWING</b> COMPARISON SHADOW DIAGRAMS  <b>PROJECT</b> BURLINGTON ROAD APARTMENTS  NORTH N	<b>SCALE</b> Scale  <b>PROJECT</b> 819 DA-2  <b>DATE</b> MAY 2012  <b>REVISION</b> B
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NO.	DESCRIPTION	DATE	BY																																	
1	ISSUED FOR PERMIT	21-05-2012	DA																																	





<b>DISCLAIMER</b> These drawings are preliminary drawings and are subject to change without notice during the course of the proposed development and in consultation with council. Submission of the drawings does not constitute a representation or warranty by the developer or its servants, agents or contractors that the drawings are final nor that the proposed development will take place in accordance with these drawings.	<b>NOTES</b> DRAWINGS MADE TO A LARGER SCALE AND THOSE SHOWING PARTICULAR DETAIL OF WORKS SHALL TAKE PRECEDENCE OVER DRAWINGS MADE TO A SMALLER SCALE AND FOR MORE GENERAL PURPOSES.  WHERE ANY DISCREPANCY EXISTS BETWEEN FIGURED AND SCALED DIMENSIONS, THE FIGURED DIMENSIONS SHALL PREVAIL.  BUILDER TO CHECK ALL SITE DIMENSIONS PRIOR TO FABRICATION OF FIXTURES.	<b>AMENDMENTS</b>			<b>QUALITY RECORD</b> THE QUALITY RECORD IS A LIST OF CHANGES AND ANY OTHER CHANGES SHALL BE RECORDED IN THE QUALITY RECORD.  QUALITY RECORD STATUS <table><tr><td>PRELIMINARY</td><td>IN</td><td>1</td></tr><tr><td>PROPOSED</td><td>IN</td><td>1</td></tr><tr><td>REVISION</td><td>IN</td><td>1</td></tr></table> DATE OF PRELIMINARY: 21-05-2012	PRELIMINARY	IN	1	PROPOSED	IN	1	REVISION	IN	1	<b>CONSULTANTS</b> <b>TOWN PLANNING : DMPS</b> 32, Harrison Lane, Cammeray NSW 2157 P: 02 9552 2599 M: 0438 990 454 E: dmpp@dmpp.com.au  <b>HERITAGE : HAPPOPORT HERITAGE CONSULTANTS</b> 43, Harbord Street, Moscov NSW 2050 P: (02) 9693 1788 F: (02) 9617 5111 E: hna@happoport.com.au W: www.happoport.com.au  <b>STORMWATER CONSULTING</b> Level 2, 33 York Street, Sydney NSW 2000 P: 2 9495 8100 F: 2 9495 8111 E: Sam.Holmes@stormwater.com.au  <b>BCA, BCA Logic</b> Level 1, 71 Archer Street, Chetwode NSW 2067 P: (02) 9411-5365 F: (02) 9411-5420 E: shayna@bcalogic.com.au  <b>TRAFFIC: Traffic</b> Suite 3.08 466 Macquarie Street, Sydney NSW 2000 P: 02 9552 2599 F: 2 9495 8100 E: Andrew.Johnson@traffic.com.au  <b>LANDSCAPE : Environmental Planning</b> 2 River Street, Botany NSW 2011 P: (02) 9555-1033 F: (02) 9555-1032 E: victoria@epn.com.au  <b>FLOODING : Brian Consulting (NSW) Pty Ltd</b> Level 2, 2 Burbank Place, Newmarket Business Park, Bulahdelah NSW 2253 P: (02) 8808 5000 F: (02) 8808 5009 E: Nigel.Bosevich@brianconsulting.com.au  <b>BASIX/ ACOUSTIC : Vpac Engineers &amp; Scientists Ltd</b> 2 Sutherland Road, Lane Cove NSW 2066 P: 9422 4222 F: 9420 5111 E: henrym@vpac.com.au	<b>ARCHITECTS</b> <b>tony o'neill ptnrs</b> 28-2, Grand View, 5-11 Lane Street, Sydney NSW 2000 P: (02) 9555 1033 F: (02) 9555 1032 E: tony@tpn.com.au	<b>CLIENT</b> Homebush Project Development Pty Ltd	<b>DRAWING</b> COMPARISON SHADOW DIAGRAMS	<b>SCALE</b> Scale	<b>DATE</b> MAY 2012
PRELIMINARY	IN	1																		
PROPOSED	IN	1																		
REVISION	IN	1																		
<b>B</b> COMPARISON DIAGRAM		21-05-2012	<b>PROJECT ADDRESS</b> 28-35 BURLINGTON RD HOMEBSH		<b>PROJECT</b> BURLINGTON ROAD APARTMENTS	<b>PROJECT</b> 819	<b>DATE</b> MAY 2012	<b>REVISION</b> DA-2 A275 B												







9AM



10AM



11AM



6 STOREY  
7 STOREY ADDITIONAL SHADOW

# ELEVATIONAL SHADOW DIAGRAMS INCLUDING EXISTING SURROUNDING TREES SHADOW

DISCLAIMER		NOTES		AMENDMENTS		QUALITY RECORD		CONSULTANTS		ARCHITECTS		CLIENT		DRAWING	
These drawings are preliminary drawings and are subject to change without notice during the course of the proposed development and in consultation with council. Submission of the drawings does not constitute a representation or warranty by the developer or its servants, agents or contractors that the drawings are final nor that the proposed development will take place in accordance with these drawings.		DRAWINGS MADE TO A LARGER SCALE AND THOSE SHOWING PARTICULAR DETAIL OF WORKS SHALL TAKE PRECEDENCE OVER DRAWINGS MADE TO A SMALLER SCALE AND FOR MORE GENERAL PURPOSES. WHERE ANY DISCREPANCY EXISTS BETWEEN FIGURED AND SCALED DIMENSIONS, THE FIGURED DIMENSIONS SHALL PREVAIL. READER TO CHECK ALL SITE DIMENSIONS PRIOR TO FABRICATION OF FITMENTS.				THE QUALITY RECORD IS A COPY OF CERTIFICATE NO. 127181, DATED 21-05-2012, ISSUED BY THE NSW GOVERNMENT. QUALITY RECORD STATUS: APPROVED PREPARED BY: S CHECKED BY: S APPROVED BY: S DATE: 21-05-2012		TOWN PLANNING : DMPS 32, Hartson Lane, Cammerie NSW 2157 P/F : 9552 2599 M : 0438 995 454 E : dmpp@dmpp.com.au HERITAGE : RAPPOPORT HERITAGE CONSULTANTS 45, Harde Street, Mascot NSW 2020 P : (02) 9693 1788 F : (02) 9617 5711 E : rna@rapoport.com.au W : www.rapoport.com.au		STORMWATER : CARON Level 2, 33 York Street, Sydney NSW 2000 P : 2 9495 8100 F : 2 9495 8111 E : Sam.Holmes@caron.com.au TRAFFIC : Traffic Suite 3.08, 466 Macquarie Street, Sydney NSW 2000 P : 2 9495 8100 F : 2 9495 8111 E : Sam.Holmes@caron.com.au LANDSCAPE : Environmental Planning 2, Blue Street, Botany NSW 2041 P : (02) 9555 1033 F : (02) 9555 1032 E : victoria@epa.com.au FLOODING : Brian Consulting (NSW) Pty Ltd Level 2, 2 Burbank Place, Newmarket Business Park PO Box 8330, Bulahram Hills NSW 2157 P : (02) 8808 5000 F : (02) 8808 5009 E : Nigel.Bosevic@brianconsulting.com.au BASIX/ACUSTIC : Vpac Engineers & Scientists Ltd 2, Sula Road, Lane Cove NSW 2066 P : 9432 4222 F : 9432 5811 E : henrym@vpac.com.au		Homebush Project Development Pty Ltd 29-35 BURLINGTON RD HOMEBUSH		COMPARISON SHADOW DIAGRAMS PROJECT BURLINGTON ROAD APARTMENTS SCALE Scale DATE MAY 2012	
		B		COMPARISON DIAGRAM		21-05-2012				tony o'neill ptnrs		PROJECT ADDRESS 29-35 BURLINGTON RD HOMEBUSH		PROJECT 819 DA-2 REVISION A278 B	



9AM



10AM



11AM



6 STOREY  
7 STOREY ADDITIONAL SHADOW

ELEVATIONAL SHADOW DIAGRAMS  
WITHOUT EXISTING SURROUNDING TREES SHADOW

DISCLAIMER		NOTES		AMENDMENTS		QUALITY RECORD		CONSULTANTS		ARCHITECTS		CLIENT		DRAWING	
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## **Appendix 2: Photomontage Check Measure**

The Panel raised in discussions, as a matter for consideration, the level of certainty that the material provided in the visual impact assessment represents an accurate depiction of the potential impacts. As a check measure on the methodology adopted for this assessment, and the resulting conclusions, Wire Frame Diagrams illustrating the perspectives adopted for the photomontages on Page 14 are presented on the following page.





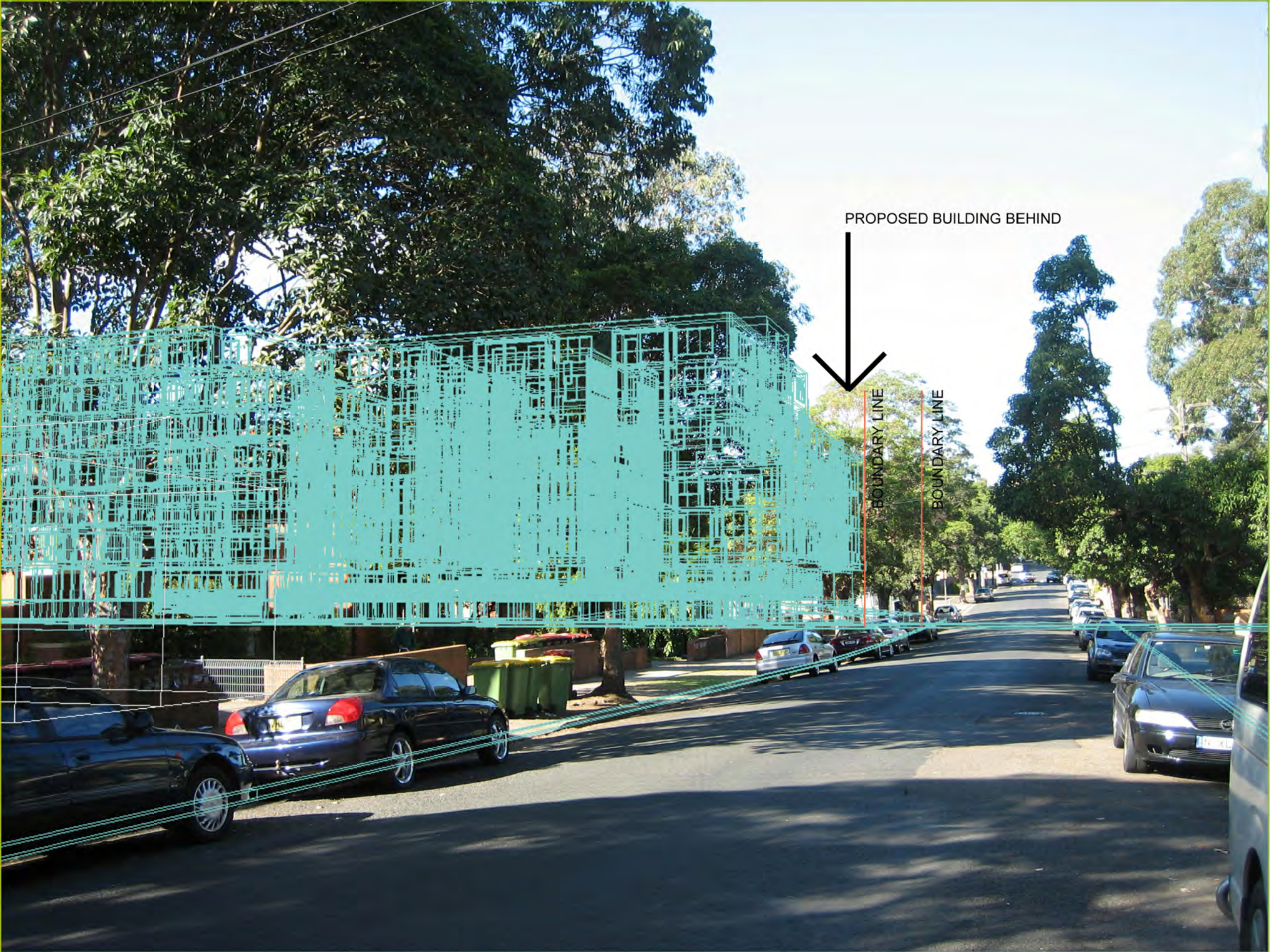












View C

DISCLAIMER		NOTES		AMENDMENTS		QUALITY RECORD		CONSULTANTS		ARCHITECTS		CLIENT		DRAWING	
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BEFORE FABRICATING ANY WORK ENSURE THAT THE DRAWINGS USED CARRY THE LATEST AMENDMENT NO.		BUILDER TO CHECK ALL SITE DIMENSIONS PRIOR TO FABRICATION OF FITMENTS.								29-35 BURLINGTON RD HOME BUSH		PROJECT 819 DA-2		REVISION MARCH 2012 B	



a04 ] [ Wireframe ]



View D

DISCLAIMER	NOTES	AMENDMENTS				QUALITY RECORD		CONSULTANTS		ARCHITECTS		CLIENT	DRAWING	SCALE 1:200 @ A1	DATE	14 MAR 2012
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		A2	- RELOCATED DRIVEWAY RAMP	07-10-2011		LANDSCAPE : ENVIRONMENTAL Level 1, 71 Archer Street, Chesham NSW 2057 P: 02 9411-5300 F: 02 9411-5300 E: alex@enviro.com.au		BASIC / ACOUSTIC : Vpac Engineers & Scientists Ltd 2, 5000 Road, Lane Cove NSW 2066 P: 0422 6222 F: 0422 6222 E: helen@vpac.com.au		J&J 2, Grand Park, 2411 Lakes Road, Bayside NSW 2095 P: 02 955 888 200 F: 02 955 888 200 E: j&j@jandj.com.au				PROJECT 819	DATE MARCH 2012	
		A3	- INCREASED SETBACK TO NORTH EASTERN BDRY	11-11-2011		HERITAGE : RAPPOPORT HERITAGE CONSULTANTS 45 Hardie Street, Mascot NSW 2020 P: 02 9693 1788 F: 02 9417 5311 E: info@rapoport.com.au		BASIC / ACOUSTIC : Vpac Engineers & Scientists Ltd 2, 5000 Road, Lane Cove NSW 2066 P: 0422 6222 F: 0422 6222 E: helen@vpac.com.au		J&J 2, Grand Park, 2411 Lakes Road, Bayside NSW 2095 P: 02 955 888 200 F: 02 955 888 200 E: j&j@jandj.com.au				REVISION B		
		A4	- CHANGES AS PER COUNCIL FEEDBACK	12-03-2012												
		B	COMPARISON DIAGRAM	21-05-2012												