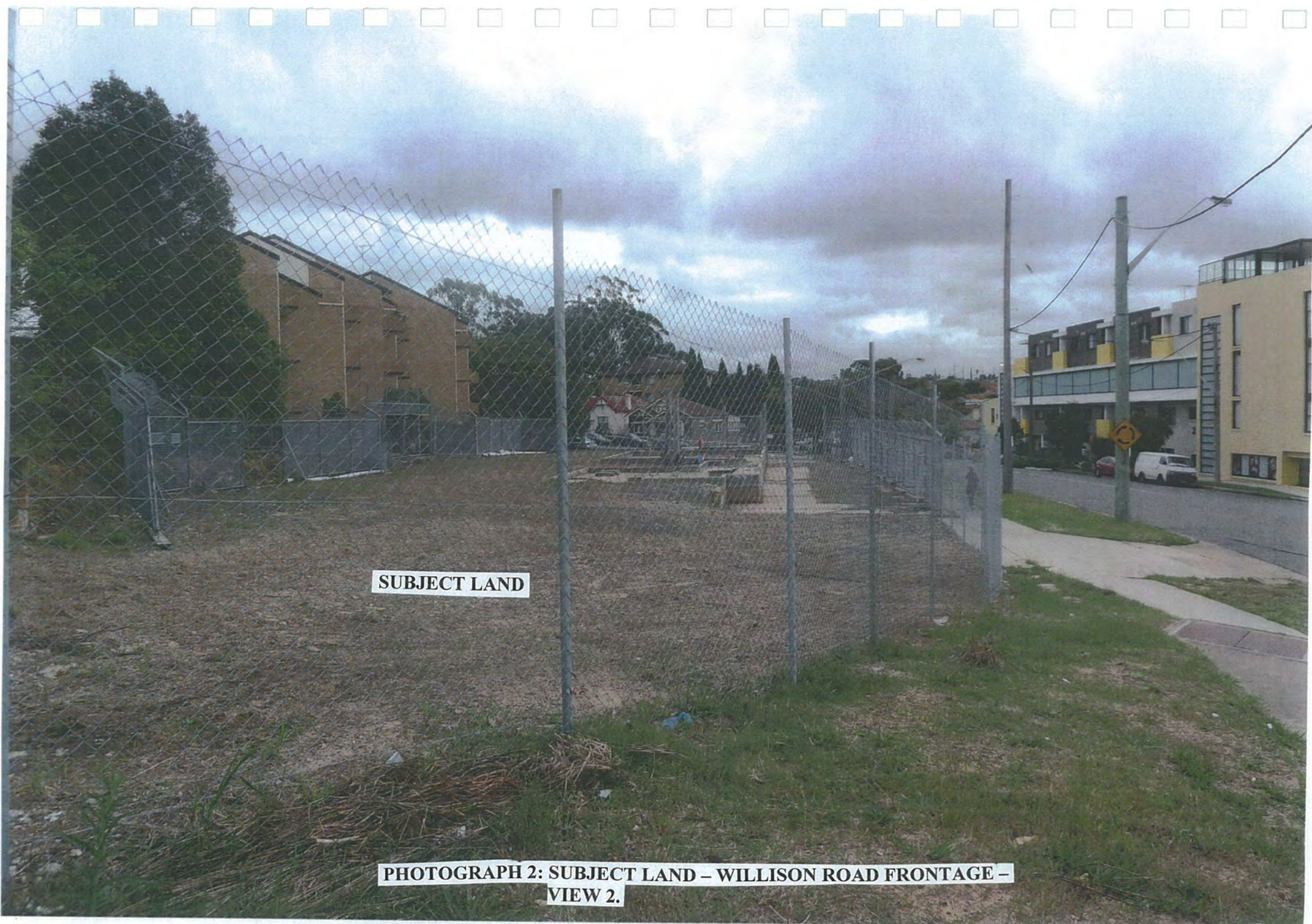
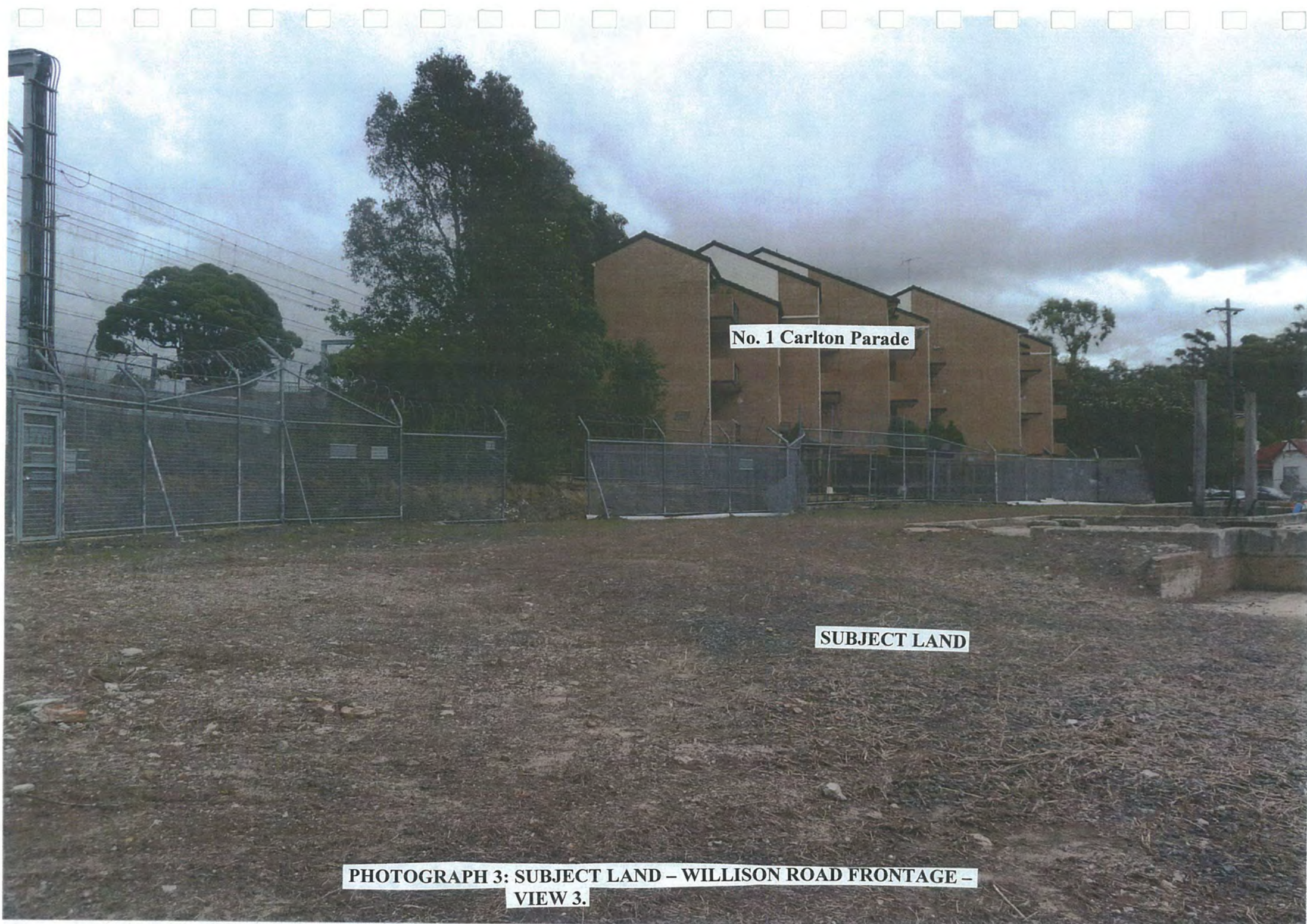




SUBJECT LAND

**PHOTOGRAPH 2: SUBJECT LAND – WILLISON ROAD FRONTAGE –
VIEW 2.**



**PHOTOGRAPH 3: SUBJECT LAND – WILLISON ROAD FRONTAGE –
VIEW 3.**



No. 1 Carlton Parade

SUBJECT LAND

Carlton Parade

Willison Road

PHOTOGRAPH 4: SUBJECT LAND – CORNER OF WILLISON ROAD AND CARLTON PARADE.



PHOTOGRAPH 5: SUBJECT LAND – CARLTON PARADE FRONTAGE –
VIEW 1.



SUBJECT LAND

No. 1 Carlton Parade

**PHOTOGRAPH 6: SUBJECT LAND – CARLTON PARADE FRONTAGE –
VIEW 2.**

APPENDIX C: SITE AUDIT STATEMENT

(Andrew Lau – JBS& G. 20th October 2014).

NSW Site Auditor Scheme SITE AUDIT STATEMENT



A site audit statement summarises the findings of a site audit. For full details of the site auditor's findings, evaluations and conclusions, refer to the associated site audit report.

This form was approved under the Contaminated Land Management Act 1997 on 31st October 2012. For more information about completing this form, go to Part IV.

PART I: Site audit identification

Site audit statement no. 0503-1119

This site audit is a ~~statutory audit~~ **non-statutory audit*** within the meaning of the *Contaminated Land Management Act 1997*.

Site auditor details (as accredited under the *Contaminated Land Management Act 1997*)

Name **Andrew Lau** Company **JBS&G**

Address **Level 1, 50 Margaret Street**

SYDNEY

NSW

Postcode **2000**

Phone **02 8245 0300**

Fax **02 8245 0399**

Site Details

Address **1A Carlton Pde Carlton NSW**

Postcode **2218**

Property description (attach a list if several properties are included in the site audit)

Lot 1 DP 634007

Local Government Area **Rockdale**

Area of Site

2027 m²

Current zoning

**SP2 Infrastructure – Electricity
Generating Works**

To the best of my knowledge, the site ~~is~~ **is not*** the subject of a declaration, order, agreement, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*.

Declaration/Order/Agreement/Proposal/Notice* no(s) **N/A**

* Select as appropriate

Site audit commissioned by

Name **Daniel Halton** Company **Ausgrid**

Address **25-27 Pommeroy St Homebush NSW**

Postcode **2140**

Phone **02 9394 6655**

Fax **-**

Name and phone number of contact person (if different from above)

Purpose of site audit

☐ ~~A. To determine land use suitability (please specify intended use(s))~~

OR

☐ ~~B(i) To determine the nature and extent of contamination, and/or~~

☐ ~~B(ii) To determine the appropriateness of an investigation/remedial action/management plan*, and/or~~

☒ B(iii) To determine if the land can be made suitable for a particular use or uses by implementation of a specified **remedial action plan/management plan*** (please specify intended use(s))

Residential with minimal access to soil

Information sources for site audit

Consultancy(ies) which conducted the site investigation(s) and/or remediation:

Coffey Environments Pty Ltd

GHD Pty Ltd

Title(s) of reports reviewed

Former Carlton Zone Substation, Environmental Site Investigation and Waste Soil Classification EP Project CL699, Coffey Environments Australia Pty Ltd, 17 June 2011 (Coffey 2011b).

Supplementary Environmental Site Assessment, Carlton Zone Substation, GHD, 5 October 2012 (GHD 2012b).

Draft Remedial Action Plan, 1A Carlton Parade Carlton NSW, GHD, 8 October 2012 (GHD 2012c).

Former Carlton Zone Substation, Lead Delineation Investigation Report, GHD, 26 August 2013 (GHD 2013b).

Remedial Action Plan, 1A Carlton Parade, Carlton, NSW, GHD, 3 September 2013 (GHD 2013c).

Former Carlton Zone Substation – Groundwater Monitoring Event April 2014 – Pre-Remediation, GHD, 15 July 2014 (GHD 2014a).

Validation Report – Stage 1 Remediation, Former Carlton Zone Substation, 1A Carlton Parade, Carlton, NSW, GHD, September 2014 (GHD 2014b).

Other information reviewed (including previous site audit reports and statements relating to the site)

Sampling Analysis and Quality Plan Former Carlton Zone Substation Willison Road, Carlton, Coffey Environments Australia Pty Ltd, 13 April 2011 (Coffey 2011a).

* Select as appropriate

Asbestos Materials Re-Inspection Survey Report – Carlton Zone Substation ZN00109952, Wilson Road Corner Carlton Parade NSW, Noel Arnold and Associates, 22 May 2012 (NA 2012).

Carlton Zone Substation Sampling of Presumed and Previously Inaccessible Hazardous Materials, GHD, 17 September 2012 (GHD 2012a).

Site audit report

Title **Site Audit Report, 0503-1119, 1A Carlton Pde, Carlton, NSW**

Report no. **42387-59249**

Date **20 October 2014**

PART II: Auditor's findings

Please complete either Section A or Section B, **not** both. (*Strike out the irrelevant section.*)

Use Section A where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land use(s).

Use Section B where the audit is to determine the nature and extent of contamination and/or the appropriateness of an investigation or remedial action or management plan and/or whether the site can be made suitable for a specified land use or uses subject to the successful implementation of a remedial action or management plan.

Section A

☐ ~~I certify that, in my opinion, the site is **SUITABLE** for the following use(s)
(tick all appropriate uses and strike out those not applicable):~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☐ ~~Residential with minimal opportunity for soil access, including units~~
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify)~~

~~subject to compliance with the following environmental management plan
(insert title, date and author of plan) in light of contamination remaining on the site:~~

OR

☐ ~~I certify that, in my opinion, the site is **NOT SUITABLE** for any use due to the risk of harm from contamination.~~

Overall comments

Section B

Purpose of the plan¹ which is the subject of the audit

I certify that, in my opinion:

- ☐ ~~the nature and extent of the contamination HAS/HAS NOT* been appropriately determined~~

AND/OR

- ☐ ~~the investigation/remedial action plan/management plan* IS/IS NOT* appropriate for the purpose stated above~~

AND/OR

- ☒ **the site CAN BE MADE SUITABLE for the following uses** (tick all appropriate uses and strike out those not applicable):

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☒ Residential with minimal opportunity for soil access, including units
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify)~~

if the site is remediated/managed* in accordance with the following remedial action plan/management plan* (insert title, date and author of plan)

Remedial Action Plan, 1A Carlton Parade, Carlton, NSW, GHD, 3 September 2013 (GHD 2013c).

subject to compliance with the following condition(s):

NIL

¹ For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

* Select as appropriate

Overall comments

The site assessment activities and Stage 1 remediation and validation works are considered to have met the requirements of the Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition) (DEC 2006).

A RAP (GHD 2013c) has been prepared for the site to address the identified contamination issues. The RAP prepared for the site (GHD 2013c) proposed a two-staged approach to remediation, with Stage 1 works occurring prior to divestment and Stage 2 works to occur after divestment as part of the anticipated redevelopment of the site. The remediation approach documented in the RAP prepared for the site (GHD 2013c) was checked by the auditor and found to be: technically feasible; environmentally justifiable given the nature and extent of the identified contamination; and consistent with relevant laws, policies and guidelines.

The Stage 1 remediation works described in the RAP (GHD 2013c) have been completed in a satisfactory manner in accordance with the RAP (GHD 2013c). The Stage 1 Validation Report confirms the successful remediation of lead contamination at former locations SS01 and CBH06; hydrocarbon contamination at CBH02; removal of the former oil UST; validation beneath the former control building; and removal of visible ACM across the site surface, as at the time of the inspection/clearance works.

Stage 2 remediation works described in the RAP (GHD 2013c) remain to be completed in order to address the remaining issue of asbestos at the site. These remaining actions relate to removal and validation of subsurface asbestos conduits and fragments of asbestos containing materials which may remain below the ground surface in fill materials.

It is considered that the site can be made suitable for residential use with minimal access to soil subject to implementation of the remaining Stage 2 works in the RAP (GHD 2013c), noting the following comments:

- The Stage 2 Validation Report should include data and findings from the Stage 1 Validation Report to provide a comprehensive stand-alone report and conclusion on the suitability of the site for the proposed residential use with minimal access to soil.
- A Site Audit Statement and accompanying Site Audit Report, certifying the suitability of the site for the intended residential use with minimal access to soil, should be prepared following the successful completion of the Stage 2 remediation and validation activities described in the RAP prepared for the site (GHD 2013c).

PART III: Auditor's declaration

I am accredited as a site auditor by the NSW Environment Protection Authority under the *Contaminated Land Management Act 1997* (Accreditation No. 0503).

I certify that:

- I have completed the site audit free of any conflicts of interest as defined in the *Contaminated Land Management Act 1997*, and
- with due regard to relevant laws and guidelines, I have examined and am familiar with the reports and information referred to in Part I of this site audit, and
- on the basis of inquiries I have made of those individuals immediately responsible for making those reports and obtaining the information referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete, and
- this statement is, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties under the *Contaminated Land Management Act 1997* for wilfully making false or misleading statements.



Andrew Lau

20 October 2014

PART IV: Explanatory notes

To be complete, a site audit statement form must be issued with all four parts.

How to complete this form

Part I identifies the auditor, the site, the purpose of the audit and the information used by the auditor in making the site audit findings.

Part II contains the auditor's opinion of the suitability of the site for specified uses or of the appropriateness of an investigation, or remedial action or management plan which may enable a particular use. It sets out succinct and definitive information to assist decision-making about the use(s) of the site or a plan or proposal to manage or remediate the site.

The auditor is to complete either Section A or Section B of Part II, **not both**.

In **Section A** the auditor may conclude that the land is *suitable* for a specified use(s) OR *not suitable* for any beneficial use due to the risk of harm from contamination.

By certifying that the site is *suitable*, an auditor declares that, at the time of completion of the site audit, no further remediation or investigation of the site was needed to render the site fit for the specified use(s). Any **condition** imposed should be limited to implementation of an environmental management plan to help ensure the site remains safe for the specified use(s). The plan should be legally enforceable: for example a requirement of a notice under the *Contaminated Land Management Act 1997* (CLM Act) or a development consent condition issued by a planning authority. There should also be appropriate public notification of the plan, e.g. on a certificate issued under s.149 of the *Environmental Planning and Assessment Act 1979*.

Auditors may also include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

In **Section B** the auditor draws conclusions on the nature and extent of contamination, and/or suitability of plans relating to the investigation, remediation or management of the land, and/or whether land can be made suitable for a particular land use or uses upon implementation of a remedial action or management plan.

By certifying that a site *can be made suitable* for a use or uses if remediated or managed in accordance with a specified plan, the auditor declares that, at the time the audit was completed, there was sufficient information satisfying guidelines made or approved under the CLM Act to determine that implementation of the plan was feasible and would enable the specified use(s) of the site in the future.

For a site that *can be made suitable*, any **conditions** specified by the auditor in Section B should be limited to minor modifications or additions to the specified plan. However, if the auditor considers that further audits of the site (e.g. to validate remediation) are required, the auditor must note this as a condition in the site audit statement.

Auditors may also include **comments** which are observations in light of the audit which provide a more complete understanding of the environmental context to aid decision-making in relation to the site.

In **Part III** the auditor certifies his/her standing as an accredited auditor under the CLM Act and makes other relevant declarations.

Where to send completed forms

In addition to furnishing a copy of the audit statement to the person(s) who commissioned the site audit, statutory site audit statements must be sent to:

EPA (NSW)

Contaminated Sites Section

PO Box A290, SYDNEY SOUTH NSW 1232

nswauditors@epa.nsw.gov.au

AND

the **local council** for the land which is the subject of the audit.

APPENDIX D: REVIEW OF VEHICULAR ACCESS DRIVEWAY LOCATIONS.

(Varga Traffic Planning Pty Ltd – July 2014).

Review of Vehicular Access Driveway Locations
For a Residential Development Proposal

**1A Willison Road,
Carlton**

TRAFFIC ASSESSMENT REPORT

11 July 2014

Ref 14123

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants 

Suite 6, 20 Young Street, Neutral Bay NSW 2089 - PO Box 1868, Neutral Bay NSW 2089
Ph: 9904 3224 Fax: 9904 3228, Email: varga@vtp.net.au

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1. INTRODUCTION	1
2. SITE	4
3. TRAFFIC ASSESSMENT	7

LIST OF ILLUSTRATIONS

Figure 1	Location
Figure 2	Site
Figure 3	Site Access Driveway Options
Figure 4	Road Hierarchy
Figure 4	Existing Traffic Controls
Figure 5	Existing Parking Restrictions

1. INTRODUCTION

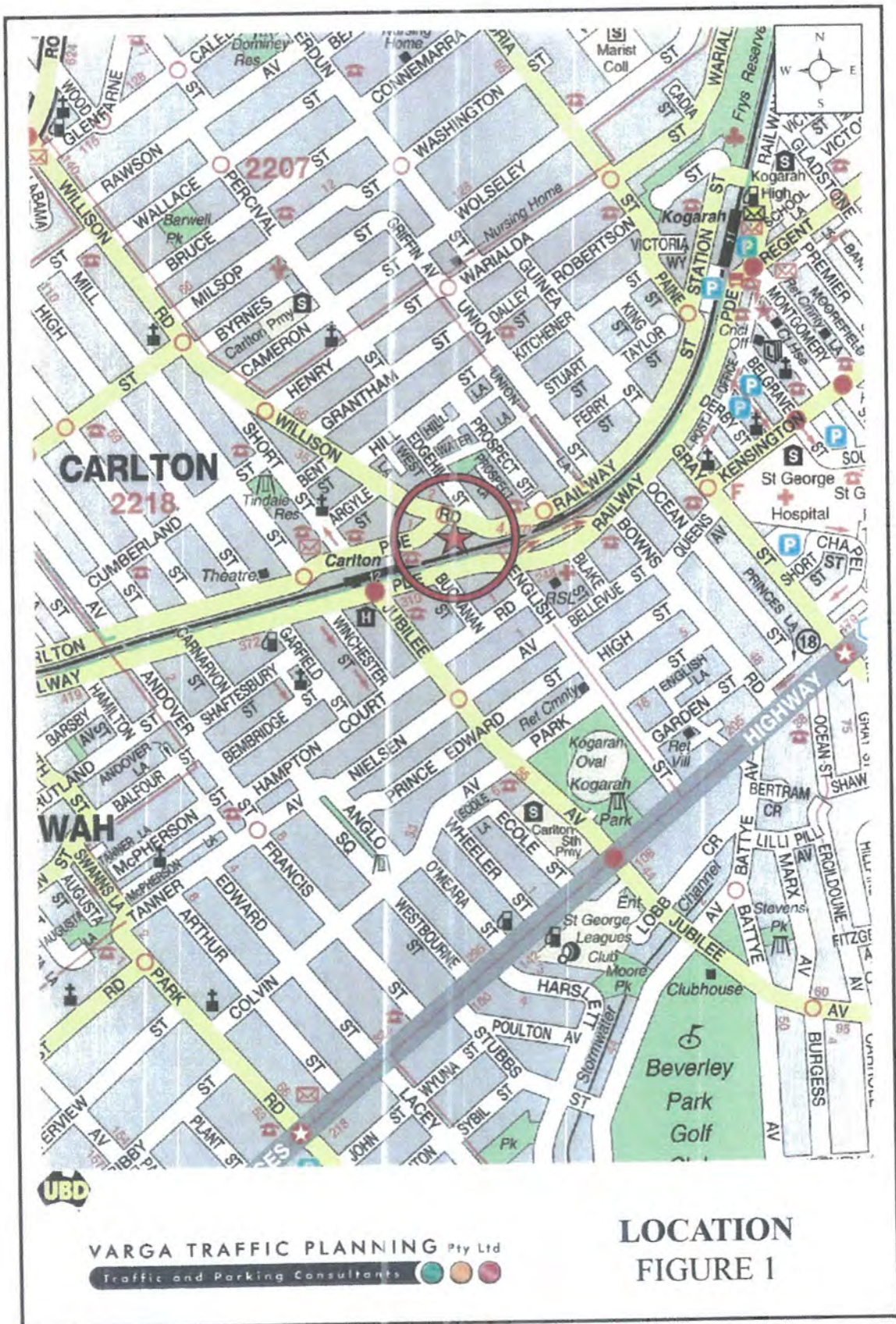
This report has been prepared to review the options available for providing vehicular access to a potential residential flat building development located at 1A Willison Road, Carlton (Figures 1 and 2).

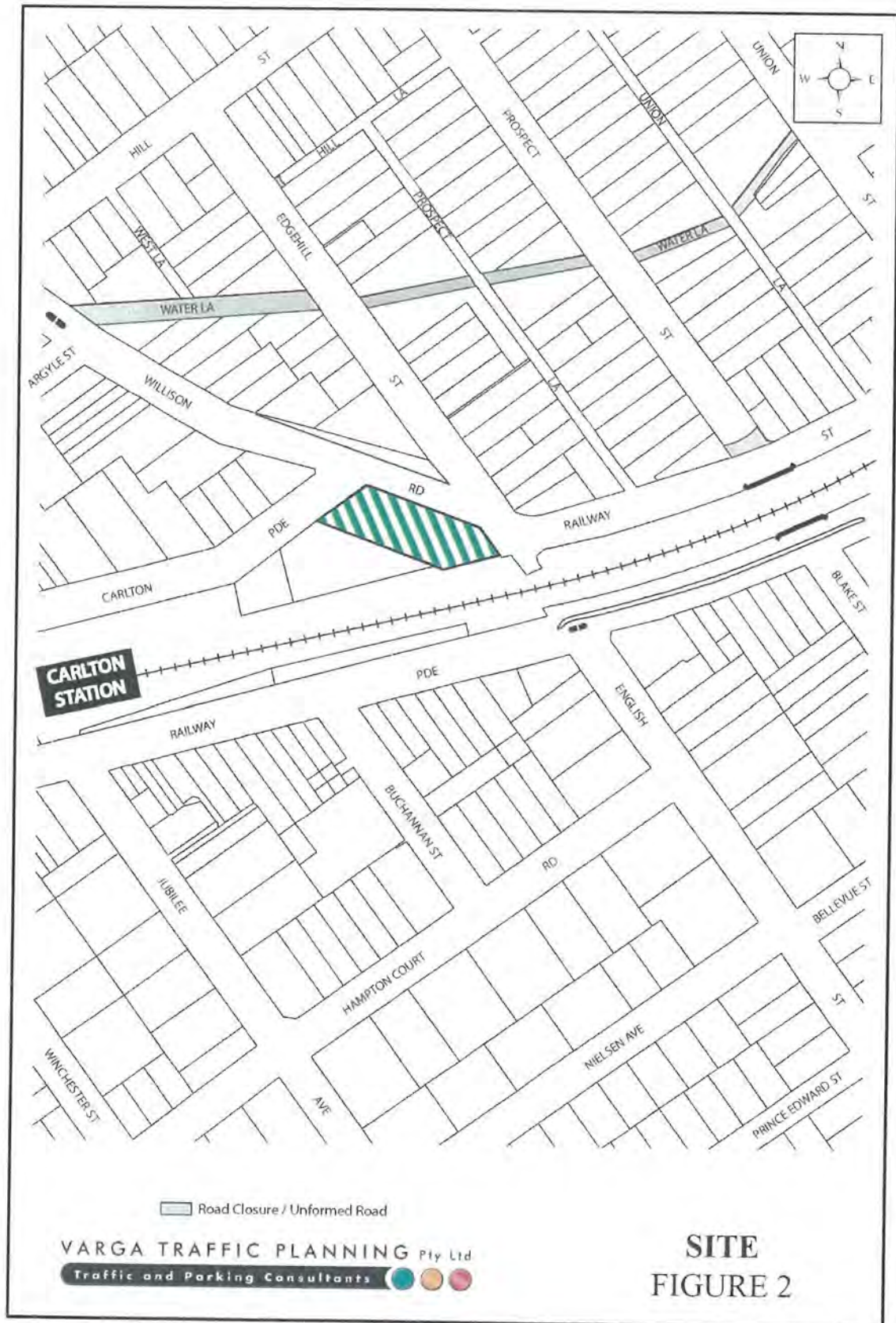
The subject site is currently occupied by an *Ausgrid* substation which has recently been replaced by a new facility located nearby, and is no longer in use.

Consideration is therefore being given for a potential redevelopment of the site with a residential flat building.

The purpose of this report is to review the options available for providing access to a residential flat building on the subject site. To that end this report:

- describes the site and provides details of a potential residential flat building which could be provided on the site
- reviews the road network in the vicinity of the site, and the traffic conditions on that road network
- estimates the traffic generation potential of a residential flat building development which could be provided on the site
- identifies the options available for providing vehicular access to an RFB development on the site, and
- assesses those potential driveway locations against Standards Australia and Austroads criteria.





2. SITE

The subject site is located on the south-eastern corner of the Willison Road and Carlton Parade intersection, and has street frontages approximately 79m and 32m in length to those roads respectively. The total site area is 2,027m².

The subject site is currently occupied by the former Carlton Zone Substation which is no longer in use.

Vehicular access to the site was previously provided via two separate vehicular access driveways located in Willison Road (directly opposite the intersection with Edgehill Street), and in Carlton Parade (immediately to the south of Willison Road).

Potential redevelopment of the Site

Discussions with Council officers have indicated that, in view of adjacent residential developments and zoning, the R4 High Density Residential Zone is the most appropriate alternative zoning for the site which would permit the construction of a residential flat building.

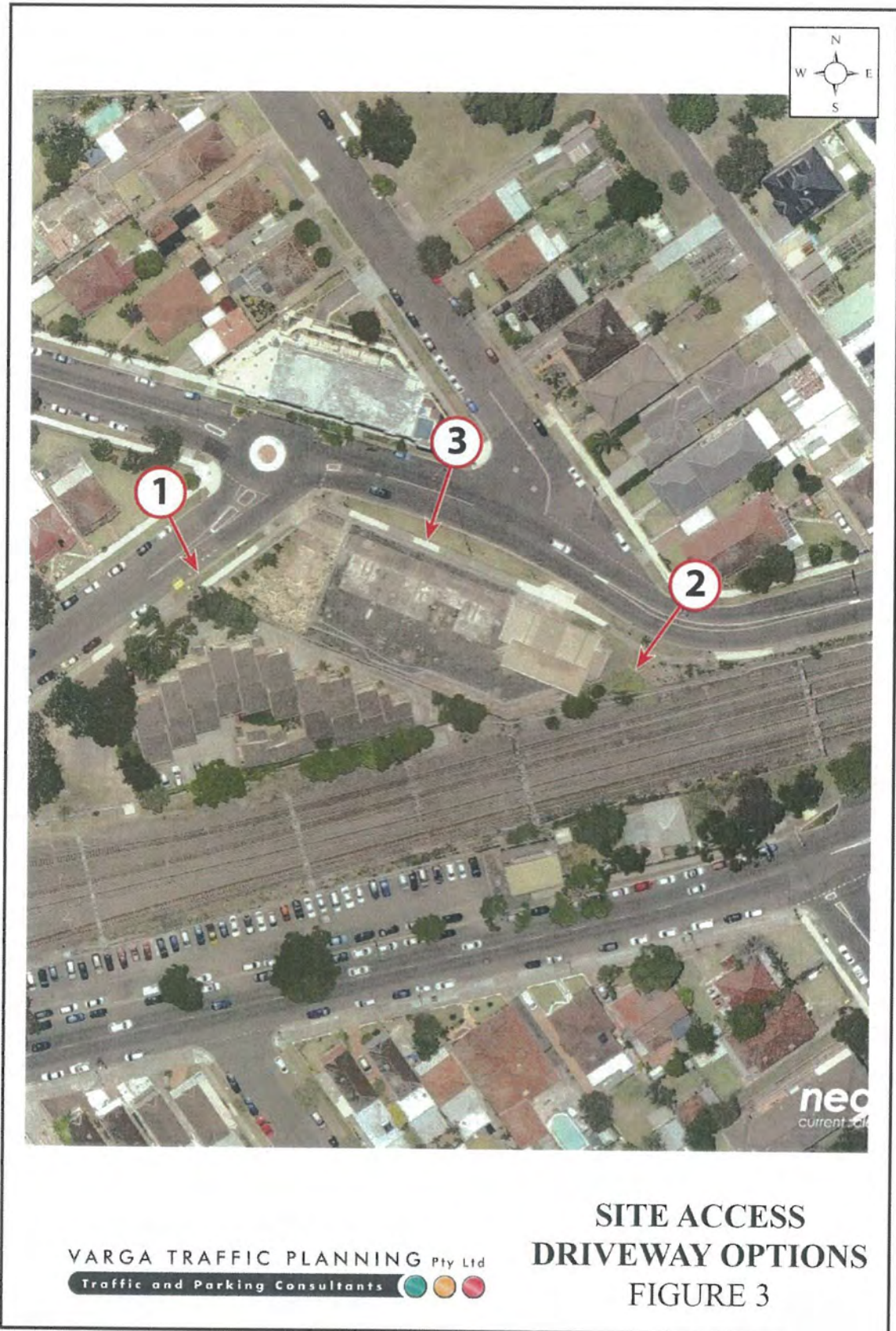
For the purposes of this assessment, it has been *assumed* that a residential flat building comprising approximately 30 residential apartments could be provided on the site, which would require the provision of approximately 36 off-street car parking spaces.

There are a number of options available for providing vehicular access to the site as follows:

- Option 1:** in Carlton Parade, approximately 25m south of Willison Road, adjacent to the southern boundary of the site. This option caters for all turning movements in all directions.
- Option 2:** in Willison Road, at the far eastern-end of the site, near Railway Street. This option caters for left-turn-only entry/exit movements, and relies on nearby roundabouts for traffic to depart the site towards the east or to approach the site from the west.

Option 3: in Willison Road, about 20m to the east of the roundabout. This option requires the existing central median island in Willison Road to be extended from the roundabout to the intersection of Edgehill Street to prevent right-turn movements in the mid-block area between the two intersections, and would therefore also rely on nearby roundabouts. This option has the benefit of being able to provide access to a basement car parking area from the lowest point on the site.

These options are illustrated on Figure 3 and examined in detail in the following section of this report.



3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 4.

Willison Road and Railway Street are classified by the RMS as a *Regional Road* and typically carry 1 traffic lane in each direction, with kerbside parking generally permitted on both sides of the road.

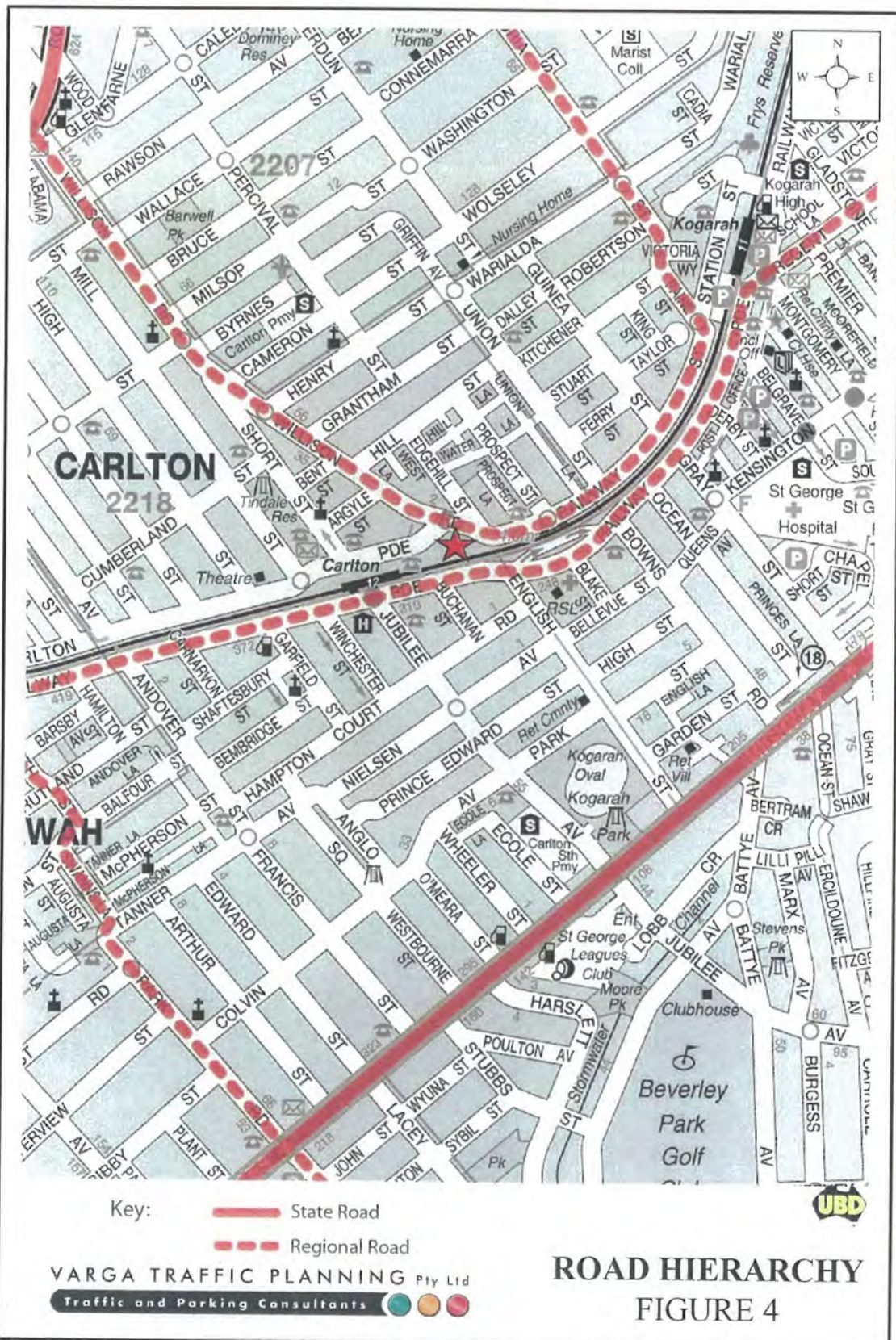
Carlton Parade is a local, unclassified road which performs the function of a *collector route*. It typically carries 1 traffic lane in each direction, with kerbside parking permitted on both sides of the road.

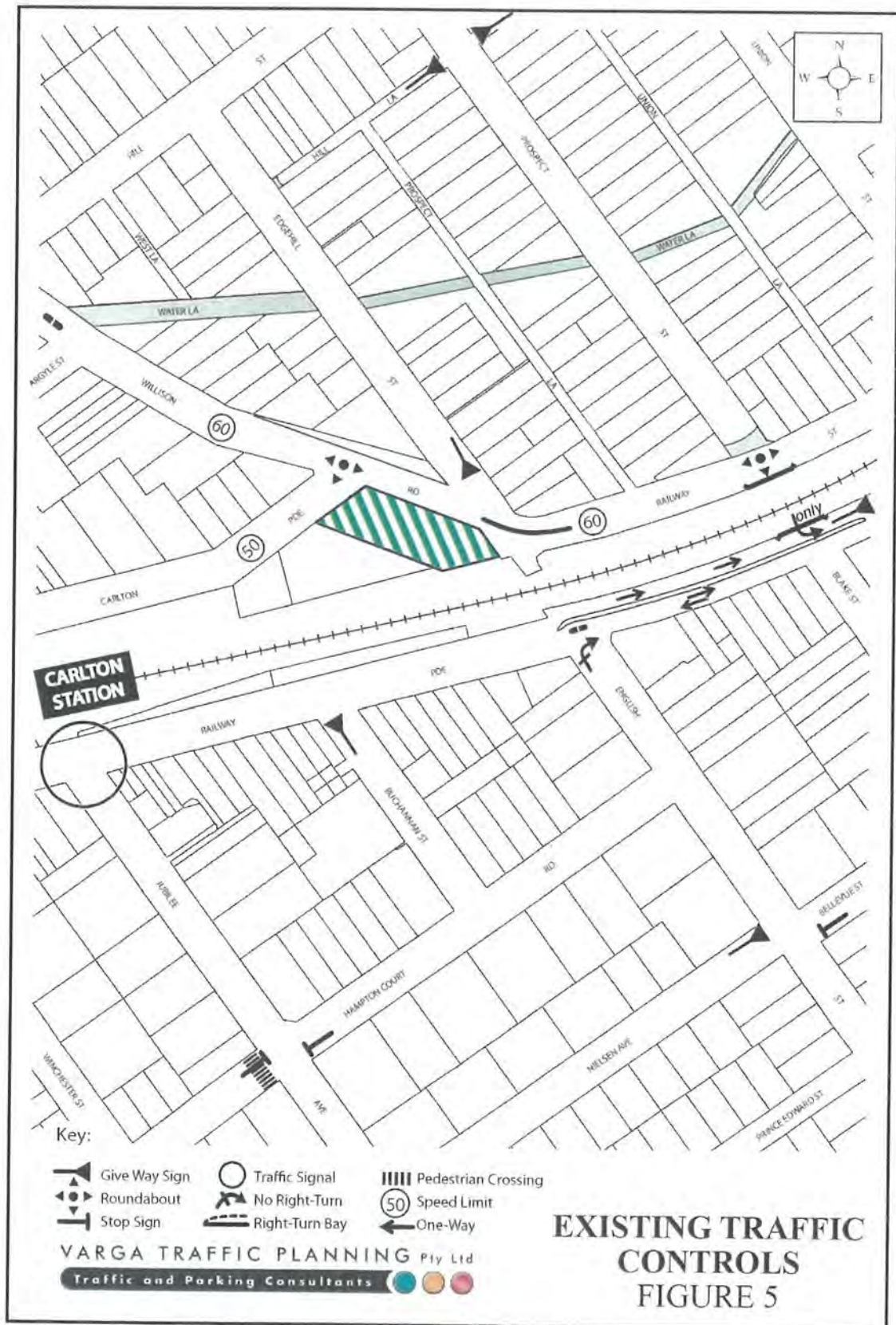
Edgehill Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties.

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 5. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to Willison Road and Railway Street
- a 50 km/h SPEED LIMIT which applies to all other local roads in the surrounding area
- a ROUNDABOUT in Willison Road at its intersection with Carlton Parade
- a FULL MEDIAN ISLAND on the bend between Willison Road and Railway Street
- a GIVE-WAY SIGN in Edgehill Street at its intersection with Willison Road.





Existing Parking Restrictions

The existing parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6. Key features of those parking restrictions are:

- NO PARKING restrictions along the entire street frontage of the site in Willison Road and in Carlton Parade
- NO STOPPING restriction on the northern side of Willison Road in the vicinity of the existing roundabout
- a short section of 1 HOUR PARKING on the northern side of Willison Road, directly opposite the site.

Driver Sight Distance/Visibility

The driver sight distance/visibility requirements at property entrances are specified in *Figure 3.2 – Sight Distance Requirements at Access Driveways* in the Standards Australia publication *Parking Facilities Part 1: Off-Street Car Parking AS2890.1 – 2004*, and in *Chapter 3.4 Sight Distance at Property Entrances* in the Austroads publication *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2009)*.

Both publications nominate a desirable gap acceptance time of 5 seconds, as well as an absolute minimum stopping sight distance. The absolute minimum distance is the distance required to enable the driver of a vehicle to stop to avoid a collision.

The 5 seconds Gap Sight Distances and the Stopping Sight Distances are set out in the table below:

5 SECOND GAP SIGHT DISTANCES AND STOPPING SIGHT DISTANCES						
	10 km/h	20 km/h	30 km/h	40 km/h	50 km/h	60 km/h
5 Seconds Gap Sight Distances	14m	28m	42m	55m	69m	83m
Stopping Sight Distances	6m	16m	26m	40m	55m	73m



Under Option 1, the driver sight distance available to/from the east is approximately 25m, and to/from the west is approximately 80m. These distances satisfy the desirable 5 second gap sight distance requirements, noting that vehicles circulating around the roundabout before proceeding into Carlton Parade are travelling at a speed of approximately 10-15 km/h.

Under Option 2, the driver sight distance available towards the east is more than 100m. Driver sight distance/visibility towards the west is *not relevant*, as the existing central median island prevents any interaction with traffic approaching from the west.

Under Option 3, the driver sight distance/visibility available towards the east is approximately 85m, noting that visibility extends across the bend into Railway Street. It is also noted that vehicle speeds around the bend between Railway Street and Willison Road are typically in the order of 40 km/h, and that advisory speed sign on the approaches to the bend recommends a speed of 35 km/h. This option would require the extension of the central median island in Willison Road from the roundabout to the intersection of Edgehill Street to prevent right-turn movements in/out of the site, and visibility to/from the west is therefore *not relevant*.

Conclusion

In summary, all three options satisfy the desirable driver sight distance/visibility criteria as specified in *AS2890.1 – 2004* and in *Austroads 2009*.

Option 1 provides the most flexibility and is therefore recommended, however Options 2 and 3 could also be considered from a planning prospective as these options also satisfy the driver sight distance/visibility criteria.

**APPENDIX B: SITE SCHEMATIC DEVELOPMENT ENVELOPE MASSING
STUDY - Thrums Architects Pty Ltd (13th August 2015).**



PROJECTED YIELD ANALYSIS PRELIMINARY REPORT

(13 Aug 2015)

IN CONJUNCTION WITH

SITE SCHEMATIC DEVELOPMENT ENVELOPE MASSING STUDY

FOR
PROSPECTIVE RESIDENTIAL APARTMENTS PROJECT

AT
No.1A WILLISON ROAD, CARLTON. NSW

PREPARED FOR
AUSGRID



CONTENTS

1. INTRODUCTION
2. SITE DESCRIPTION
3. SURROUNDING LOCALITY
4. OUTLINE DEVELOPMENT CONSTRAINTS
5. THE SCHEMATIC DEVELOPMENT ENVELOPE
6. APARTMENTS - PROJECTED YIELD
7. VEHICLE PARKING
8. ACCESSIBILITY
14. DRAWINGS
15. OVERVIEW

ANNEXURES

The following annexure documents are to be read in conjunction with this report:

Annexure A	Deposited Plan
Annexure B	Schematic Site Plan SK-01
Annexure C	Site Plan SK-02
Annexure D	3D Massing Schematic 4 Storey Model, - Image View 1, SK-03
Annexure E	3D Massing Schematic 4 Storey Model, - Image View 2, SK-04
Annexure F	3D Massing Schematic 4 Storey Model, - Image View 3, SK-05
Annexure G	3D Massing Schematic 3 Storey Model, - Image View 4, SK-06
Annexure H	3D Massing Schematic 3 Storey Model, - Image View 5, SK-07
Annexure I	3D Massing Schematic 3 Storey Model, - Image View 6, SK-08

1. INTRODUCTION

The purpose of this report is to provide an analysis of what possible development yield potential the site would offer for prospective re-development into a new residential apartments development.

This report has been prepared in conjunction with a schematic overall envelope and outline master planning envelope massing study that was concurrently carried out for the site by Thrum Architects.

This report is also prepared for the purpose of accompanying the proposed re-zoning application documentation prepared by Doug Sneddon Planning Pty Ltd.

2. SITE DESCRIPTION

The subject site is currently vacant land, and was formerly the site of a state utility owned electricity substation. Those electrical infrastructure improvements uses have been vacated from the site. The process currently underway is the conversion of the site zoning from that of 'SP2 infrastructure' to become 'R4 high density Residential'.

The site is located in a mature urban area at Carlton, and is bounded on two sides by local streets, one side by the railway corridor, and on the fourth side by an existing multi-storey residential flats building.

Site details are:

Site Titles: The site is comprised of two land titles. They are:

- Lot 1 DP:634007

Site Address: No. 1A Willison Road, Carlton. NSW

Site Street Frontages: The site has street frontages to the following two public roads:

- Willison Road
- Carlton Parade St

The total Area of the Existing Site area is: **2,027 sqm.**

The site is of elongated and irregular shape, but has two long sides that are almost but not quite parallel to each other.

A copy of the Deposited Plan showing lengths and bearings of the boundaries is provided at Annexure A.

The Boundary lengths of the subject site are:

- Street boundary to Willison Road (on north side of site): **61.61 and 17.35 metres**
- Street boundary to Carlton Parade (on west side of site), **32.13 metres**
- Long side boundary (on south side of site), **70.7 metres**
- Boundary to Railway Corridor (on east side of site): **28.51 metres**

Topography of the site is almost level, but with a generally uniform very gentle slope from the east end down toward Carlton Parade at the west end.

3. THE SURROUNDING LOCALITY

The subject site is located in a residential neighbourhood in the Sydney suburb of Carlton. Development in this locality is generally of mature age, although there are several examples close to the site of relatively newer buildings having replaced older ones.

The existing forms of development immediately surrounding the subject site are:

- To the North side: - On the opposite side of Willison St is a variety of residential buildings ranging from apartment buildings to individual dwellings.
- To the East side: - The wide Railway Corridor with multiple sets of tracks.
- To the South side: - A four storey building on the adjacent large consolidated site containing a large number of apartments.
- To the South side: - On the opposite side of Carlton Parade is a variety of residential buildings ranging from apartment buildings to individual dwellings.

4. OUTLINE DEVELOPMENT CONSTRAINTS

The proposed development which is the subject of the accompanying development application documentation set, comprises the following:

Rockdale LEP 2011.

The principal numerical controls are:

- Maximum permissible building height - 14.5 metres;
- Maximum permissible FSR - 1:1.

Rockdale Development Control Plan 2011

The principal numerical controls are:

Site Coverage:

- Maximum permissible building footprint - 35% of site area;

Setbacks:

- Primary street setback to Willison Road, consistent with prevailing setbacks in range of 3 - 5m.
- A Setback of 3 m to Willison Rd was adopted by this study.

- Secondary street setback (Carlton Parade) of 3 - 5 m was adopted,
- Side boundary minimum setback of 4.5 m (for buildings over 3 storeys) was adopted,
- Rear boundary (the railway corridor) - a minimum of 12 m or 15% of length of site, whichever is the greater, was adopted.

Site Open Space:

- Communal open space - 5 m² per dwelling.

Other Constraint Criteria:

- The guidelines for quality residential design contained in the NSW Residential Flat Development Code (RFDC).
- The Building Code of Australia (BCA).

5. THE SCHEMATIC DEVELOPMENT ENVELOPE

The single most restrictive constraint to the development of a residential apartments project on this site, is the limitation imposed by the permissible FSR ratio of the relatively small 1:1.

This limit that is set by this FSR, means that:

- (i) although the allowable height limit on the site would easily accommodate a building of 4 stories (with room to spare), the most economical building form on this site will be only 3 stories high.
- (ii) a building that is designed comfortably to the maximum allowable building footprint ratio of 35% of site area, and still maximises its allowable floor space, would still only need to be 3 stories high.
- (iii) a building that is designed comfortably to the allowable building set back distances from boundaries, would still only need to be 3 stories high.
- (iv) a building that is designed to leave ample space to provide for required quantities of landscaped open space and communal open spaces, would still only need to be 3 stories high.

In taking into consideration the above factors and other essential constraints including economic, the schematic development building envelope formulated and arrived at by this study, is one of 3 stories.

The analysis process essentially arrived at the following choice of overall building envelope scenarios, after weighing up likely cost out-lay verses market return considerations:

Either:

Scenario 1: Being of two x separate four storey building envelopes each of relatively small footprint size, with a substantial proportion of the car parking being in the form of surface outdoor car parking spaces located at ground level between landscaped areas.

The relatively small FSR ratio of 1:1, would produce the unfortunate effect of encouraging developers to use all the non needed / under utilised site area in this scenario for outdoor exposed surface car parking.

or

Scenario 2. Being of one x single three storey building envelope of longer length, with car parking located within a semi buried basement.

This scenario would produce a reduced construction cost for the overall building envelope, and also aid the basement carpark to be constructed more economically.

Analysis: Scenario 2, is the building configuration selected by this report for analysis and yield reporting because of the combination of:

- The NSW RFDC code strongly discourages surface carparking around such buildings. Its guidelines call for undercover basement parking for all residential developments in this category of 'high density' zoning.
- plus the more favourable construction cost economies that will be available with the single building envelope configuration of 3 stories high.

Although Scenario 1 is the configuration selected by this report as being the one that is projected to yield the better cost benefit outcome after weighing up all factors, that is not to rule out the possibility of market circumstances perhaps also making the combination of Scenario 1 with a basement carpark sufficiently feasible to attract a developer to it.

The principal point is that with the 1:1 FSR control on the site being so disproportionately more limiting of development on the site in comparison to all the other planning controls (which are substantially more relaxed), it produces the novel outcome of a 3 storey building envelope being considered as the more attractive and more likely form of profitable development even where 4 stories are permissible.

Result: The result is therefore strangely that in precinct where 4 storey residential buildings already exist on adjacent sites, that owing to the distortingly low FSR of just 1: 1 on this site, that the most likely and economically feasible compliant building outcome is one of only 3 stories high.

Drawings: Refer to Annexures G, H and I attached to this report for the mass modelled envelope study images for a 3 storey high envelope. Note the already existing 4 storey building located on the neighbouring land, is also mass modelled & depicted in context for comparison purposes.

As this envelope of just 3 storeys high uses up the 1:1 FSR allowance, it is considered that this FSR rate is inappropriately low for this site in this urban context.

Recommendation: For the above reasons, It is submitted that an FSR of 1.35 :1 would be more appropriate for this site, because it would allow the most likely form of development to be

4 stories high, and thus better reflect the already established existing pattern of 4 storey development on the sites located adjacent and opposite.

6. APARTMENTS - PROJECTED YIELD

The residential apartments development yield that is projected as being both achievable and producing the optimum mix, on this development site on the basis of an FSR of 1:1 in a 3 storey envelope, is set out in the table below.

<i>Apartments Mix by Category</i>	<i>Quantity</i>
• Studio / one bathroom:	Nil
• One (1) Bedroom / one bathroom, plus Study:	3 off
• Two (2) Bedroom / one bathroom	3 off
• Two (2) Bedroom / two bathroom,	9 off
• Three (3) Bedroom / two bathroom	9 off
• Adaptable One (1) Bedroom / one bathroom, plus Study:	3 off
• Adaptable Two (2) Bedrooms / two bathroom:	3 off
Total:	30 off

Each of the above projected types would also have the appropriately sized essential spaces for: living, kitchen, dining or meals, and laundry

The general floor area sizing of this mix of apartments would be in the range from 80sqm down to approximately 50sqm.

Regarding the two competing development envelope scenarios described in section 5 of this report above, it needs to be noted that the same apartments yield will apply equally for both.

The projected mix of apartment types as listed above, would also apply equally both scenarios.

If however an FSR of 1.35 : 1 were to be allowable on the site, then the 4 storey building envelope that would result, would have a projected apartments yield of approximately 33% more than those listed above, viz: approx yield of 40 apartments of similar mix ratios.

7. VEHICLE PARKING

The preferred projected form of carparking, is the provision of all spaces located within a semi buried undercroft basement that is completely concealed from view from the street and landscaped open spaces by mounded gently inclining landscaping that would present the bottom residential floor as appearing to be at ground level.



This stacking arrangement, is all easily achievable within the allowable height limit.
Refer also to section 5 above.

8. ACCESSIBILITY

The projected development yield is consistent with, and allows for, all applicable requirements to comply with all BCA premises code and other applicable Australian Standards requirements to achieve compliance for the acceptable standards of access for persons with a disability.

9. OVERVIEW

The development yield projections provided by this report, are those arrived at on the basis of the particular broad master planning approach that has been taken in relation to the sets of planning controls, codes and other constraint criteria generally operating on the site. It needs to be noted that these development yield projections are not the only set of project yields that are able to be formulated for this site, and not the only ones that are possible.

The yield projections reported have been formulated on the basis of what is reasonable at this pre-concept stage. They are preliminary in nature, and able to increase or decrease upon commencement of any concept design process for an actual project on this site.

CHRIS BAKER.

Bsc(Arch), B.Arch Hons II, LLB(Syd), AAIA.
Registered Architect No. 5845.
Director.

The site plan for the 'SUBJECT SITE' shows a large, irregularly shaped plot. The site is bounded by a 'PARADE' on the left and a 'RAILWAY' on the bottom right. The plan includes several building footprints, each with a dashed line indicating its setback from the site boundary. Dimensions are provided for these setbacks: 3,000, 5,000, 4,000, and 3,000 along the left boundary; 3,000, 3,500, 3,500, 4,500, and 3,000 along the bottom boundary; and 12,000 along the right boundary. The central area is labeled 'SUBJECT SITE'.

RAILWAY

ADJACENT TO EXISTING
FOUR STOREY
RESIDENTIAL BUILDING

thrum
A CONJECTURE

(NOT FOR CONSTRUCTION)

Dwg No:
#Pln SK-01

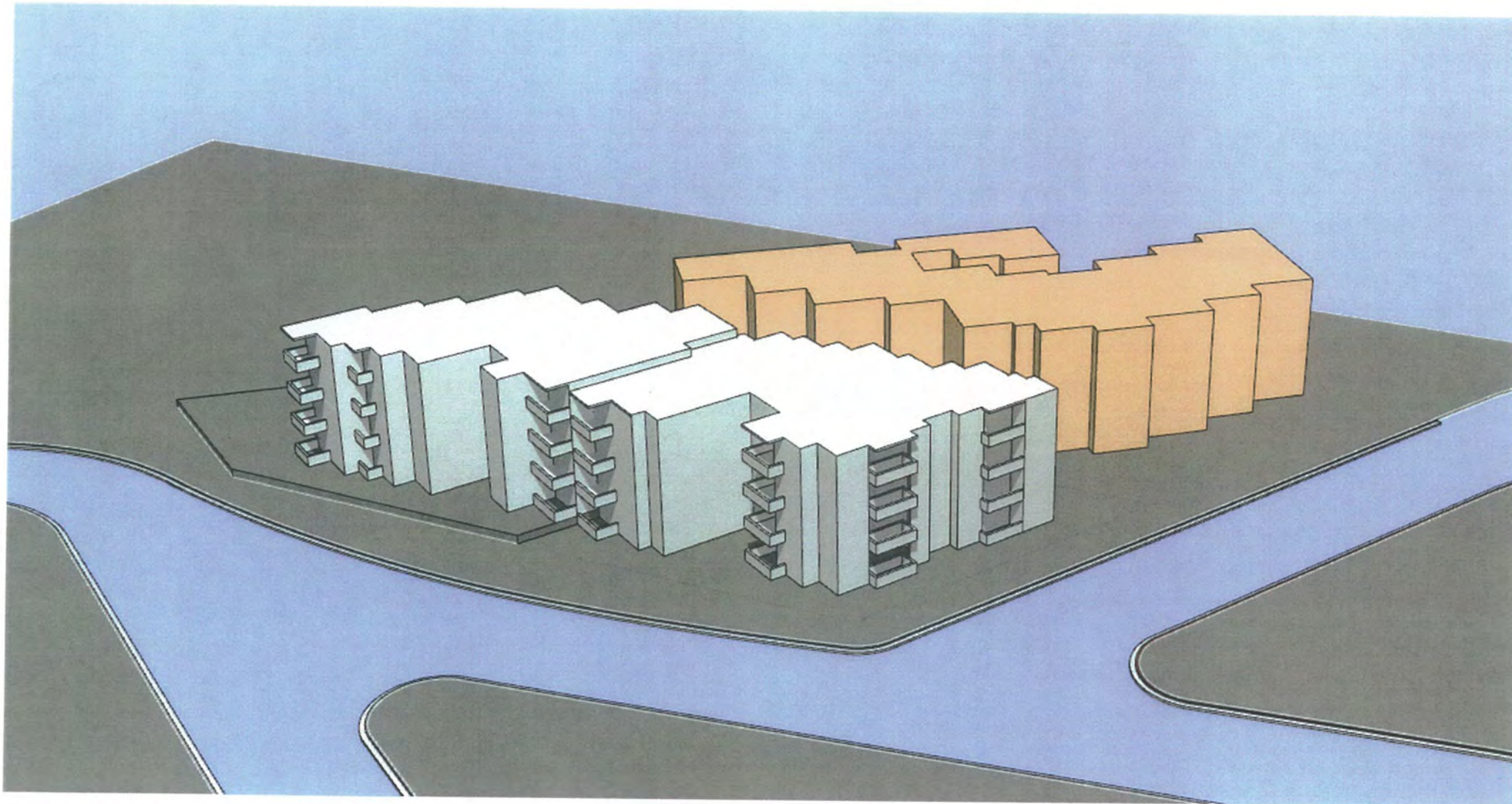
Drawn:	Scale:	QA Checked:	Rev:
GuKangke	@ A3		

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LEGEND:



THE EXISTING ADJACENT
BUILDING



THE SUBJECT GENERIC
BUILDING MASS



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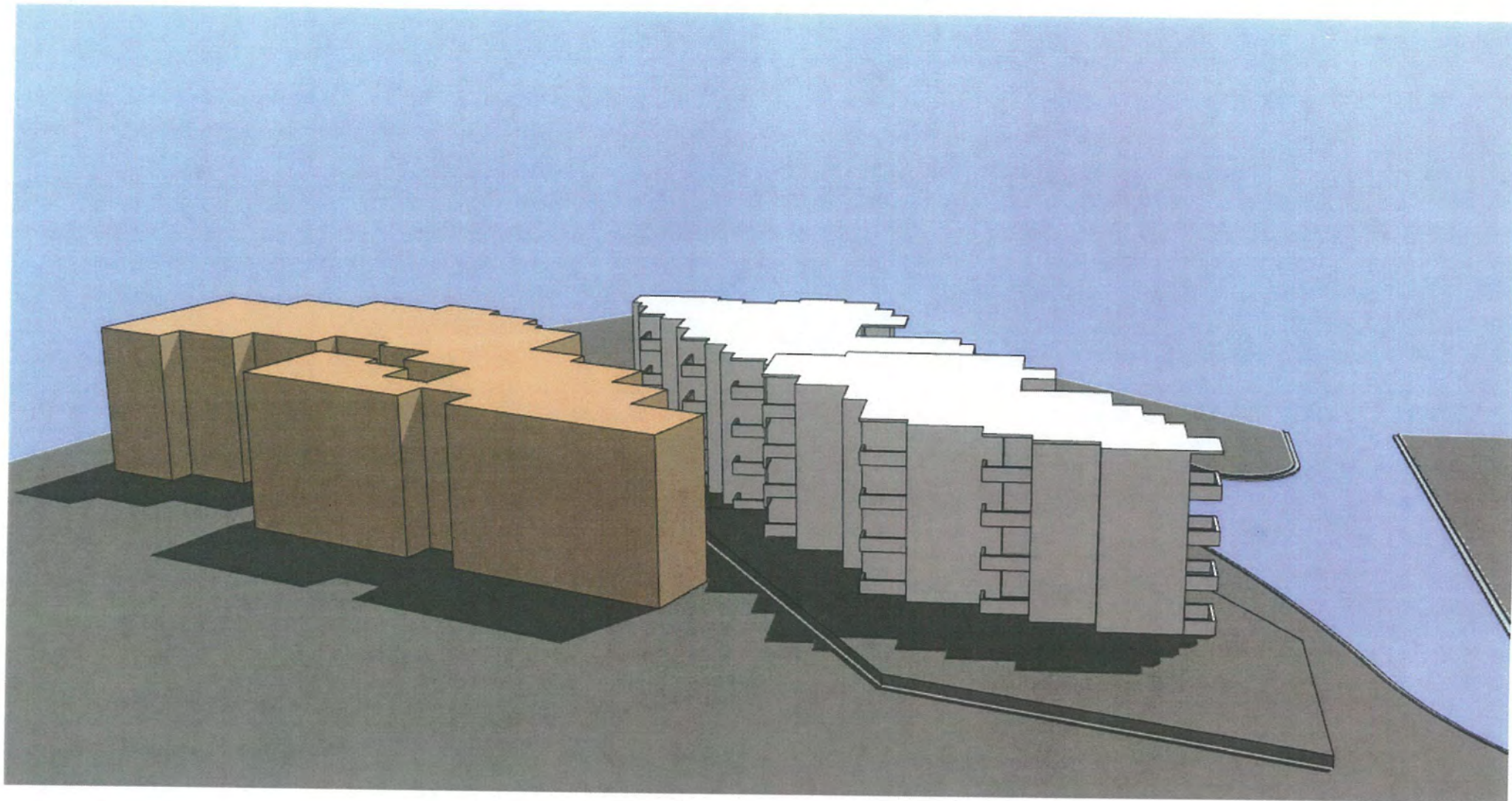


Project: AUSGRID SITE 1 WILLISON ROAD, CARLTON		#Architect City		Date: 13/08/15		Dwg No: #Pln SK-03	
Dwg Name: MASTER PLANNING ENVELOPE MASSING STUDY 3D MASSING SCHEMATIC 4 STOREY MODEL - VIEW 1		Drawn: GuKangke		Scale: @ A4		QA Checked: Rev:	

Level 3, 80 Clarence Street, Sydney, NSW 2000
ABN 21 278 857 200 ACN 001 964 254

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LEGEND:



THE EXISTING ADJACENT
BUILDING



THE SUBJECT GENERIC
BUILDING MASS



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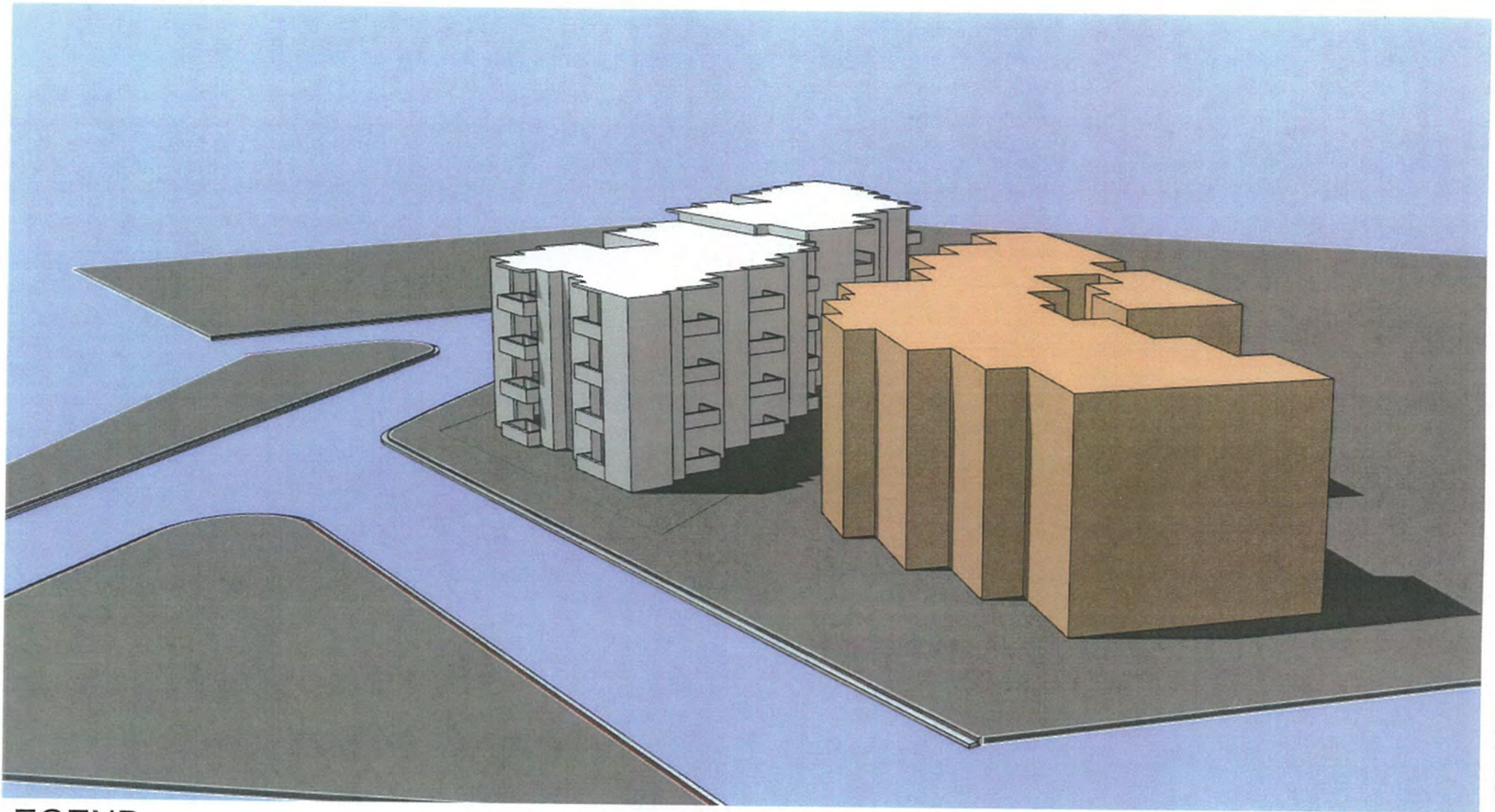


Project: AUSGRID SITE 1 WILLISON ROAD, CARLTON		#Architect City		Date: 13/08/15		Dwg No: #PIn SK-04	
Dwg Name: MASTER PLANNING ENVELOPE MASSING STUDY 3D MASSING SCHEMATIC 4 STOREY MODEL - VIEW 2		Drawn: GuKangke		Scale: @ A4		QA Checked: Rev:	

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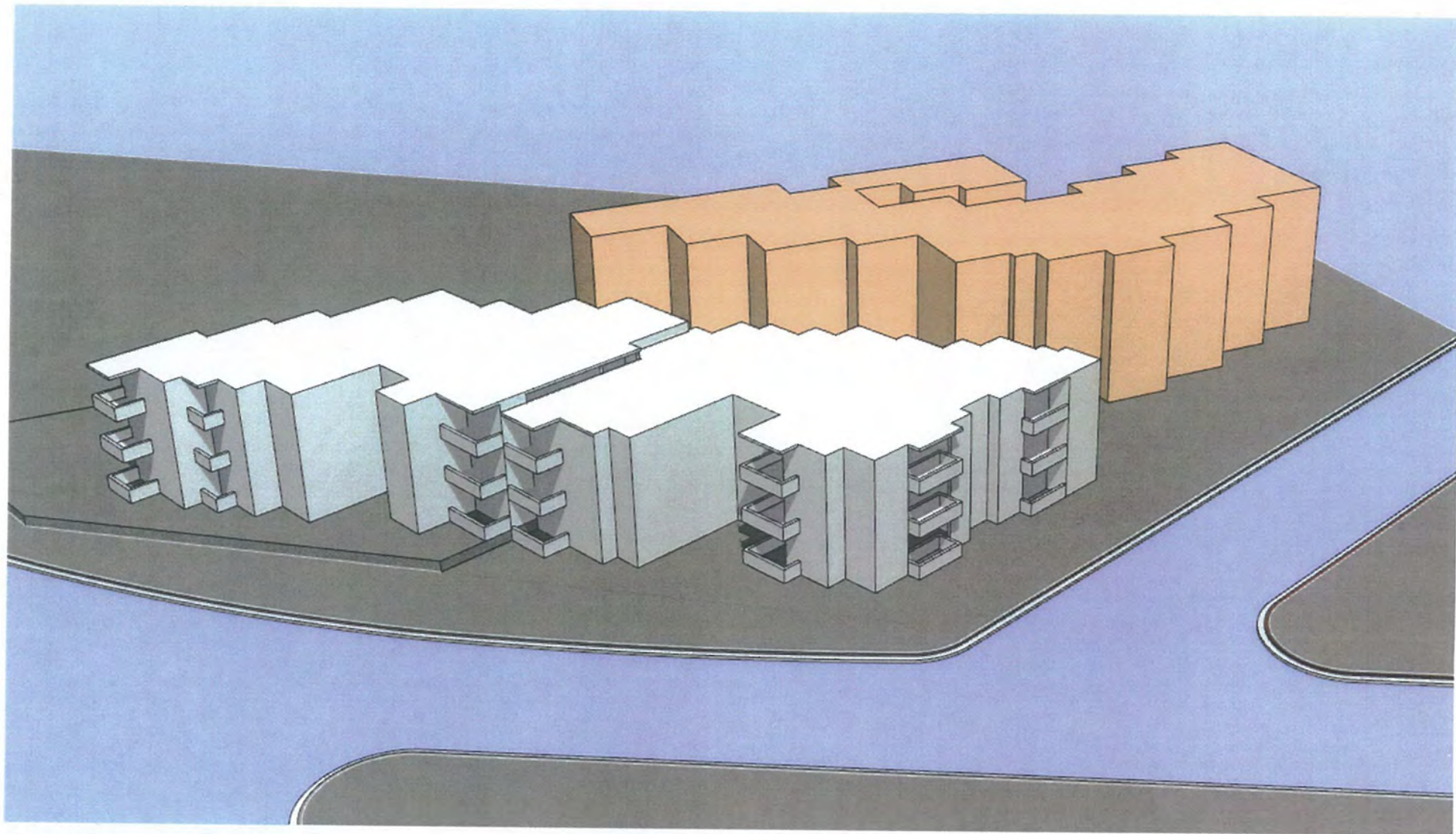


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Dwg Name: MASTER PLANNING ENVELOPE MASSING STUDY 3D MASSING SCHEMATIC 4 STOREY MODEL - VIEW 3			Drawn: GuKangke	Scale: @ A4	QA Checked: Rev:

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Dwg Name: MASTER PLANNING ENVELOPE MASSING STUDY 3D MASSING SCHEMATIC 3 STOREY MODEL - VIEW 4			Drawn: GuKangke	Scale: @ A4	QA Checked: Rev:

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