"MOXHAM QUARRY" PLANNING PROPOSAL TO PERMIT RESIDENTIAL DEVELOPMENT

WINDSOR ROAD, NORTHMEAD

Traffic Impact Assessment

July 2013

Reference 07247

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
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Facsimile (02) 9904 6622
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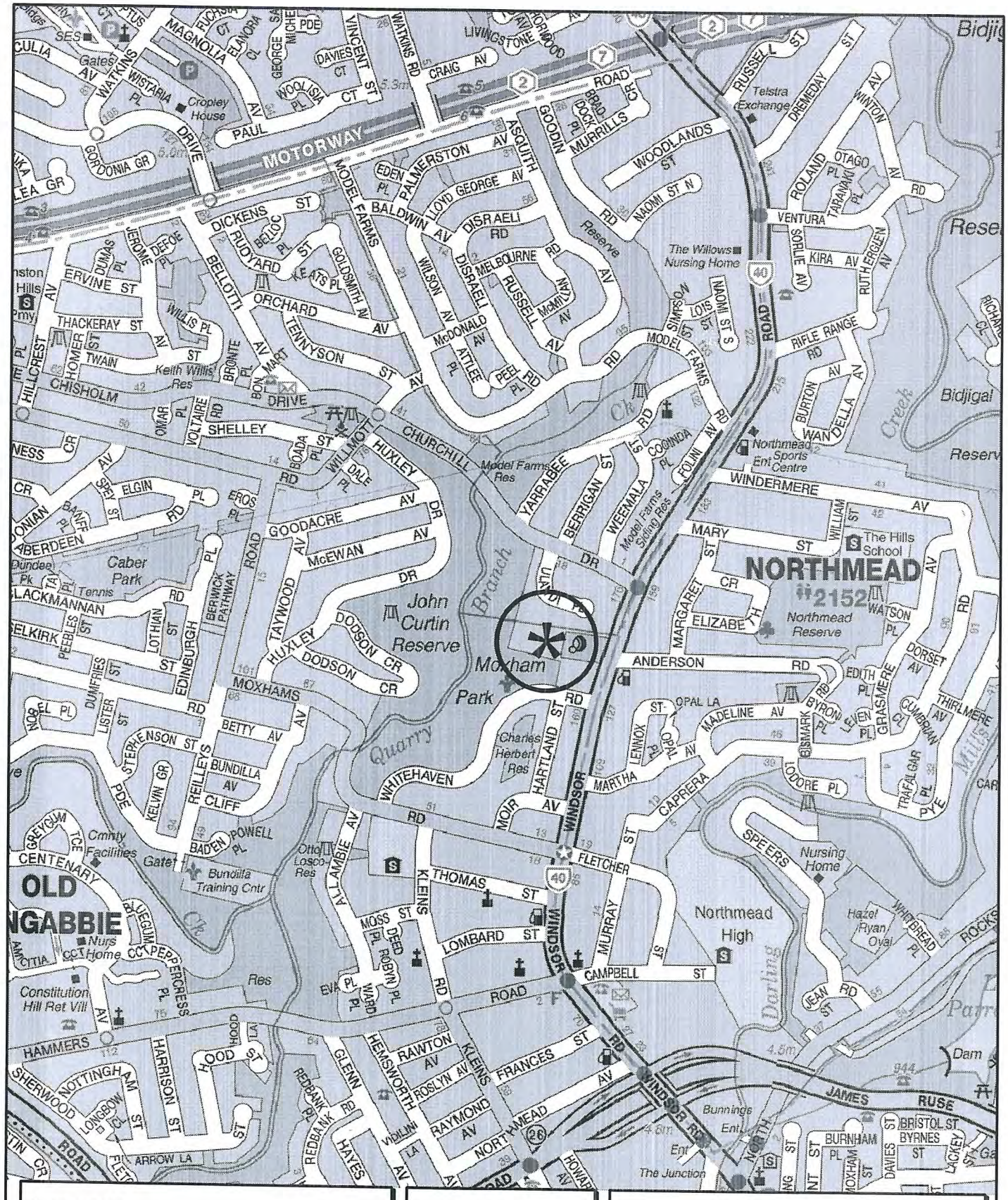
LIST OF ILLUSTRATIONS

1. INTRODUCTION

This report has been prepared to accompany a Planning Proposal to the Department of Planning and Infrastructure to permit residential apartment development on the 'Moxham Quarry' site located adjacent to Northmead Bowling Club on Windsor Road, Northmead (Figure 1).

The continuing development of Parramatta CBD as a regional centre ('Centre of the Sydney Metropolitan Area') has created an increased demand for housing in the immediate fringe areas which have convenient access to the employment, shopping and entertainment facilities available in the centre. Existing single dwelling allotments are being consolidated and superfluous sites redeveloped to provide medium/high density housing, as part of the urban consolidation process, which will support the centre and minimise infrastructure demands. The abandoned Moxham Quarry site on Windsor Road presents such an opportunity in a location which has good access to the arterial road system and public transport.

The Planning Proposal would permit the development of a contemporary residential apartment complex with basement carparking. The purpose of this report is to present an assessment of the potential traffic implications.



LEGEND

LOCATION

FIG 1

2. PROPOSED DEVELOPMENT SCHEME

2.1 SITE, CONTEXT AND FORMER USE

The site (Figure 2) is Lots 939/940 in DP 1176567 which is zoned Environment Protection (bushland) under the Parramatta LEP 2001 and is superfluous property owned by the Department of Lands. The site has access to Windsor Road via a 10 metre wide unmade laneway running down the northern boundary of the site and the Bowling Club.

The surrounding uses comprise:

* the adjoining Northmead Bowling Club with access on Windsor Road
* the single dwelling residences to the north accessed along Ulandi Place
* the single dwelling residences to the south (and Scouts site) accessed along Whitehaven Road
* the dwellings and service station along the eastern side of Windsor Road.

The site was used for an extractive quarry in the past and the extensive excavated area is located in the western part while there is an access driveway on the Windsor Road frontage.

2.2 PLANNING PROPOSAL

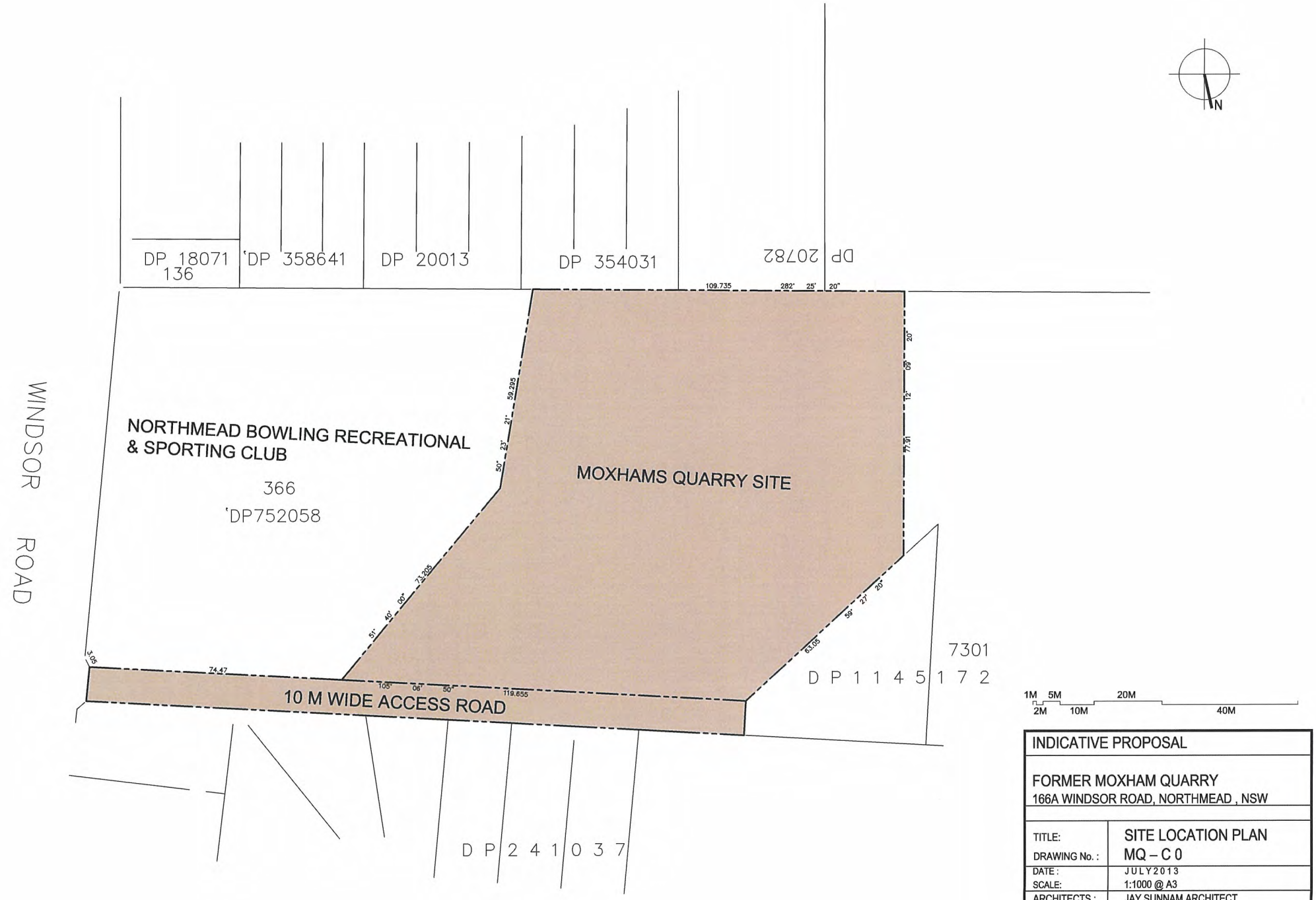
The proposal is to rezone the site to part R4 Residential and part E3 Environmental Conservation which would permit the construction of a residential apartment complex.

The envisaged development which could occur in the R4 zoned part of the site comprises a number of "terraced" building elements providing for a total of 57 apartments with:

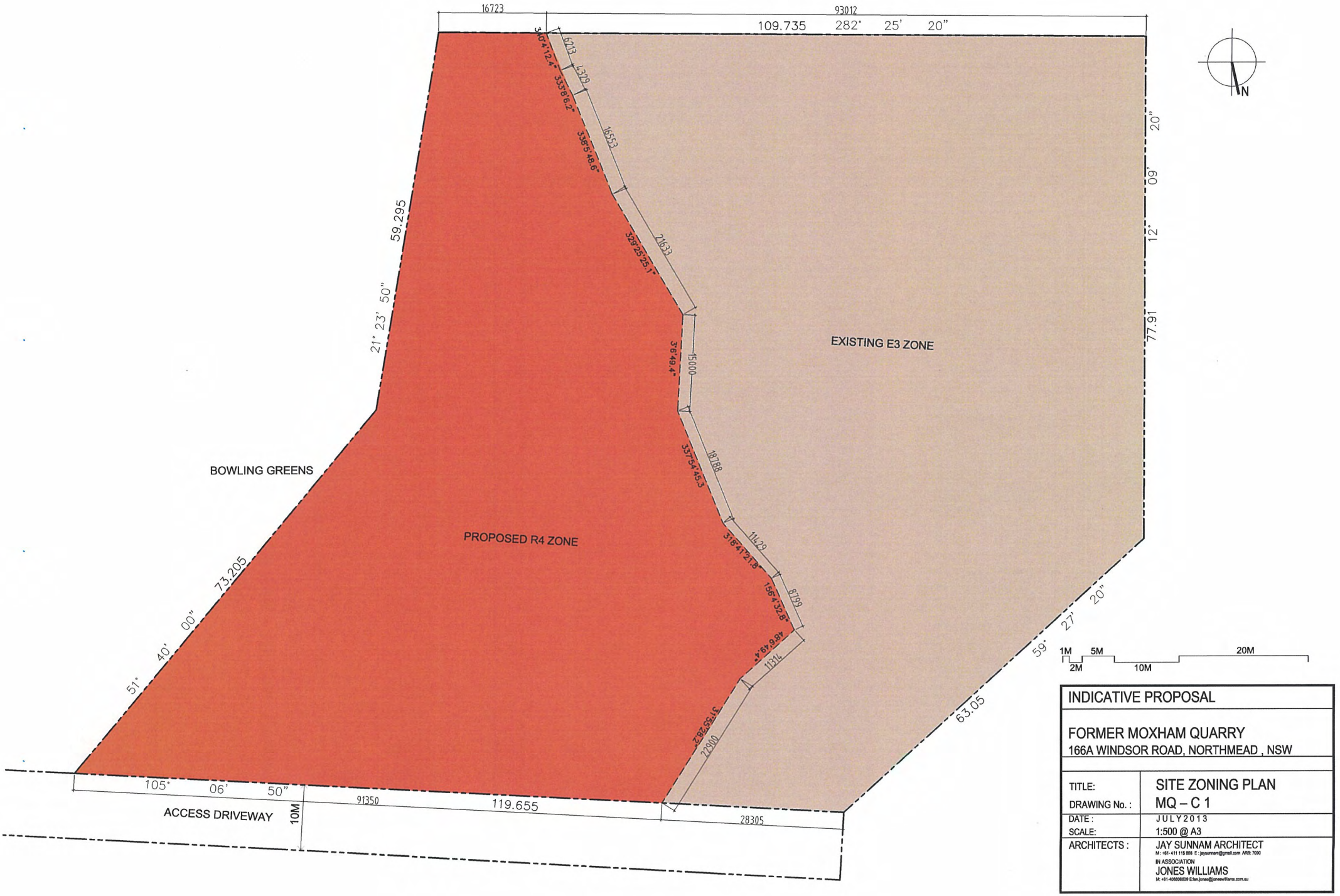
LEGEND

SITE

FIG 2



INDICATIVE PROPOSAL	
FORMER MOXHAM QUARRY 166A WINDSOR ROAD, NORTHMEAD , NSW	
TITLE: DRAWING No. :	SITE LOCATION PLAN MQ – C 0
DATE : SCALE:	JULY2013 1:1000 @ A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61-411 118 889 E : jaysunnam@gmail.com ARB: 7090 IN ASSOCIATION JONES WILLIAMS M: +61-408806809 E:ben.jones@joneswilliams.com.au



INDICATIVE PROPOSAL	
FORMER MOXHAM QUARRY 166A WINDSOR ROAD, NORTHMEAD , NSW	
TITLE: DRAWING No. :	SITE ZONING PLAN MQ – C 1
DATE : SCALE:	JULY2013 1:500 @ A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61-411 115 888 E : jaysunnam@gmail.com ARB: 7090 IN ASSOCIATION JONES WILLIAMS M: +61-408808099 E:tim.jones@joneswilliams.com.au

9 x one-bedroom apartments
41 x two-bedroom apartments
7 x three-bedroom apartments

Some 80 parking spaces would be provided in basement levels and an internal access road system connecting to a driveway linking to/from Windsor Road.

Details of the envisaged development scheme are provided on the Architectural concept drawings prepared by Jay Sunnam Architects which accompany the application and are reproduced in part overleaf.

PROJECT SUMMARY

SITE & PROJECT ANALYSIS		
PROPERTY DESCRIPTION	Lots 939 & 940 in Deposited Plan 1176567P on Windsor Road at Northmead	
ITEM	PROPOSAL	REGULATION
TOTAL AREA : Site + access	14390 + 1971 = 16361 sqm	
AREA : PROPOSED REZONING R4 - HIGH DENSITY RESIDENTIAL	6646.2 sqm	
AREA : PROPOSED REZONING E3 - ENVIRONMENTAL MANAGEMENT	7743.8 sqm	
AREA : BUILDING AREA-FOOT PRINT	5465.1 sqm	
AREA : INDICATIVE PROPOSAL	2970.0 sqm	
SITE COVERAGE OF TOTAL SITE	2970 sqm of 16361sqm = 18.15%	
SITE COVERAGE OF BUILDING AREA	2970 sqm of 5465.1sqm = 54.34%	
FSR	6.1	

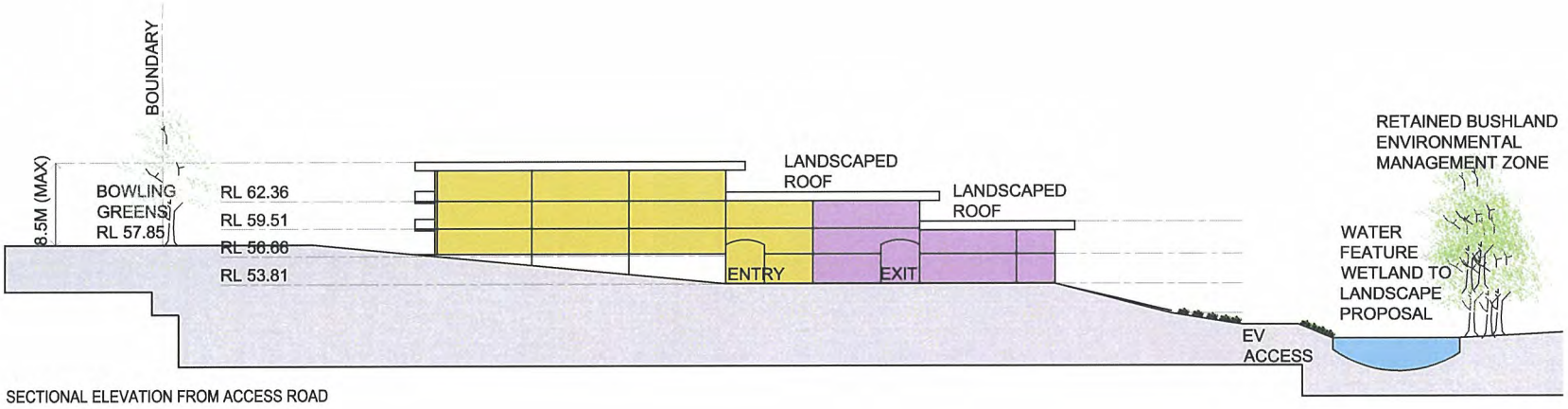
INDICATIVE PROPOSAL

INDICATIVE UNIT MIXTURE	NUMBER
ONE BEDROOM	9
TWO BEDROOM	41
THREE BEDROOM	7

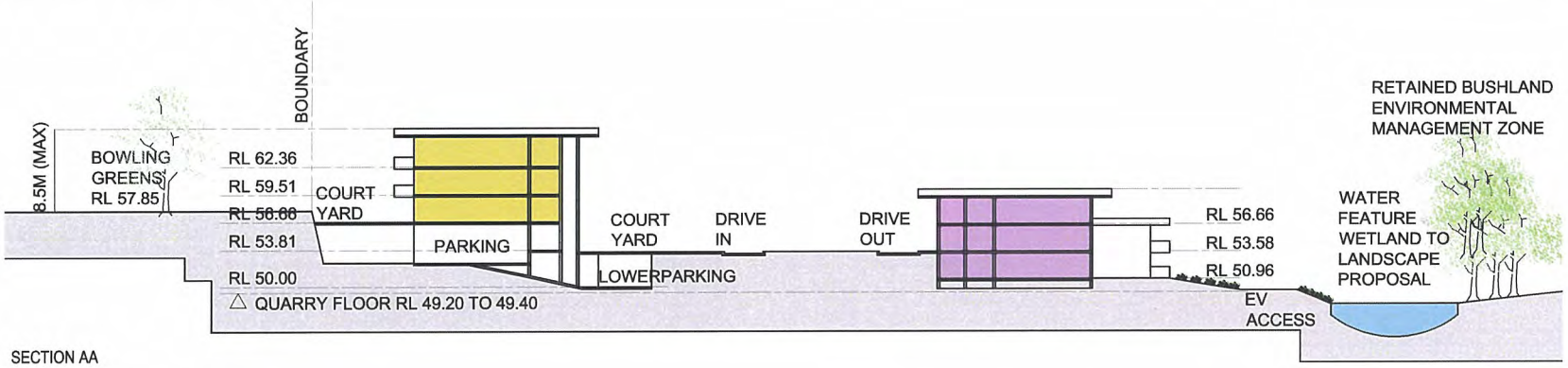
CAR PARKING SUMMARY

LEVEL	R.L.	CARPARKING PROPOSED	Authority requirement	
COURTYARD VISITOR PARKING	53.81	8	Unit	No required
LEVEL 1	53.81	32	1 bed	9
LEVEL 2	50.00	40	2 bed	41
			3 bed	9
			Visitors	15
TOTAL		80		74

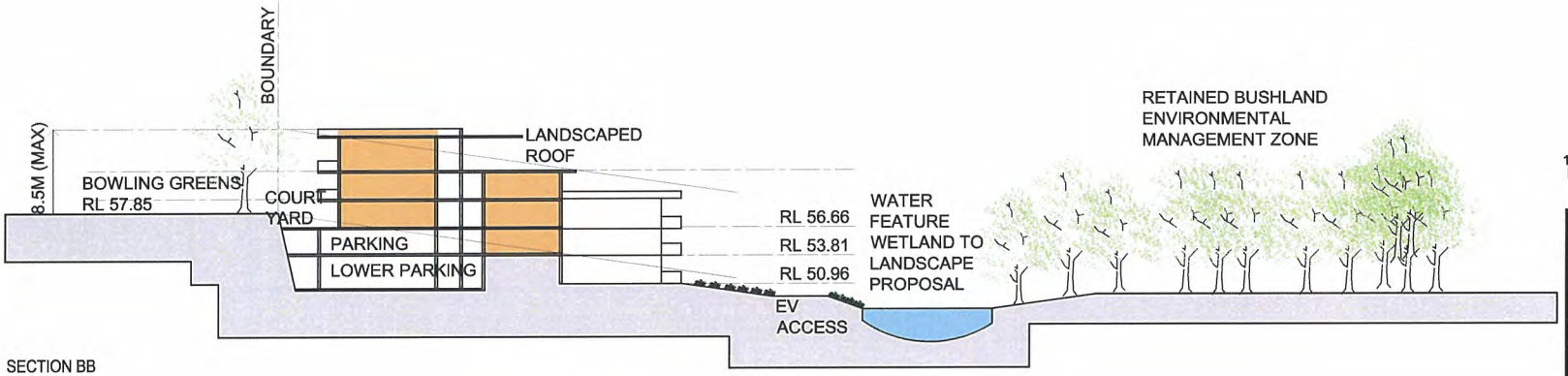
INDICATIVE PROPOSAL	
FORMER MOXHAM QUARRY 166A WINDSOR ROAD, NORTHMEAD , NSW	
ITLE:	FLOOR PLAN R.L. 62.36 APARTMENTS
DRAWING No. :	MQ – C 4
DATE :	JULY 2013
SCALE:	1:500@A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61- 411 115 868 E : jaysunnam@gmail.com ARB: 7090 IN ASSOCIATION JONES WILLIAMS M: +61-408806809 E:ben.jones@jonesewilliams.com.au



SECTIONAL ELEVATION FROM ACCESS ROAD



SECTION AA



SECTION BB

1M 5M 20M
2M 10M

INDICATIVE PROPOSAL	
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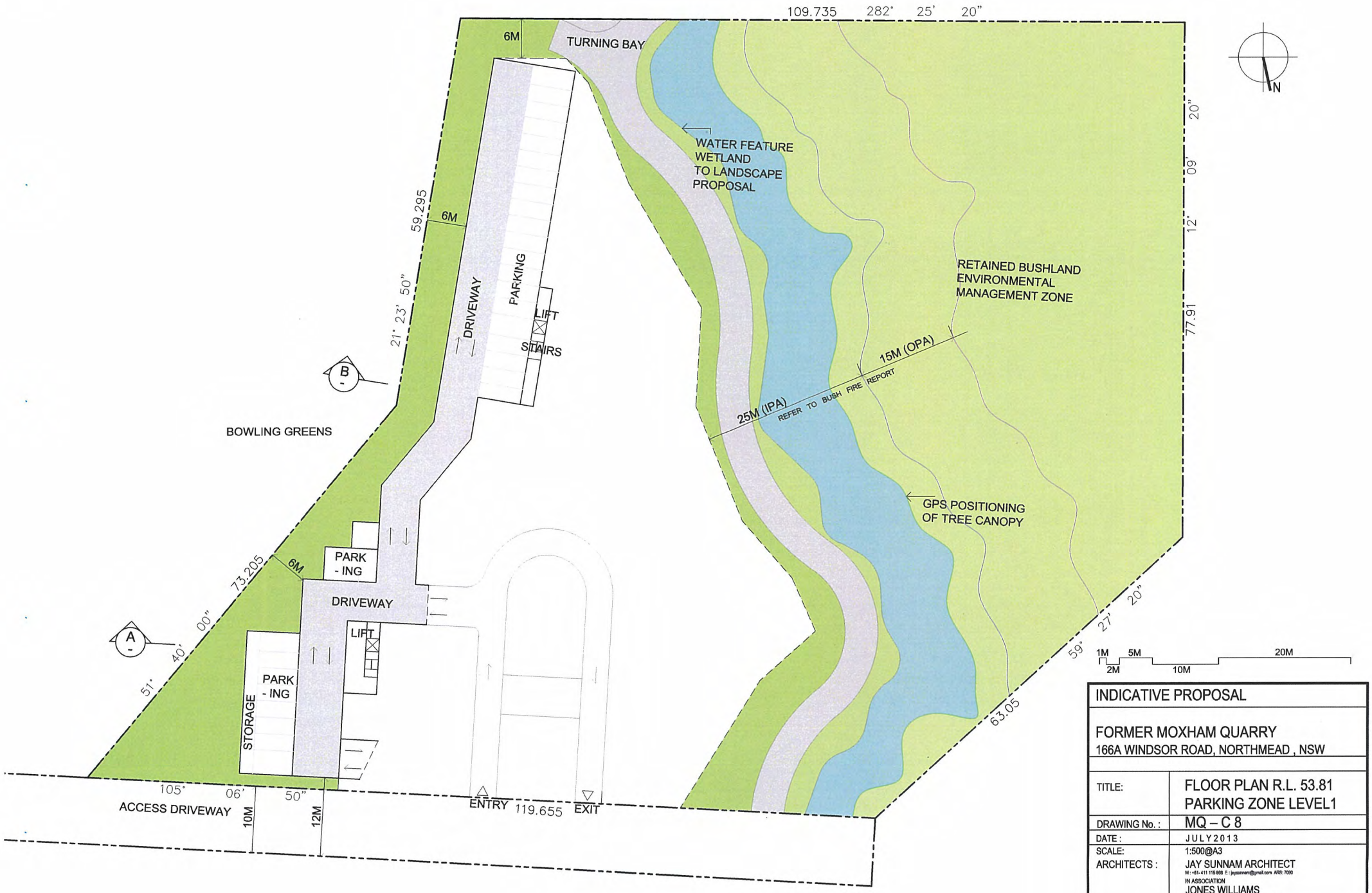
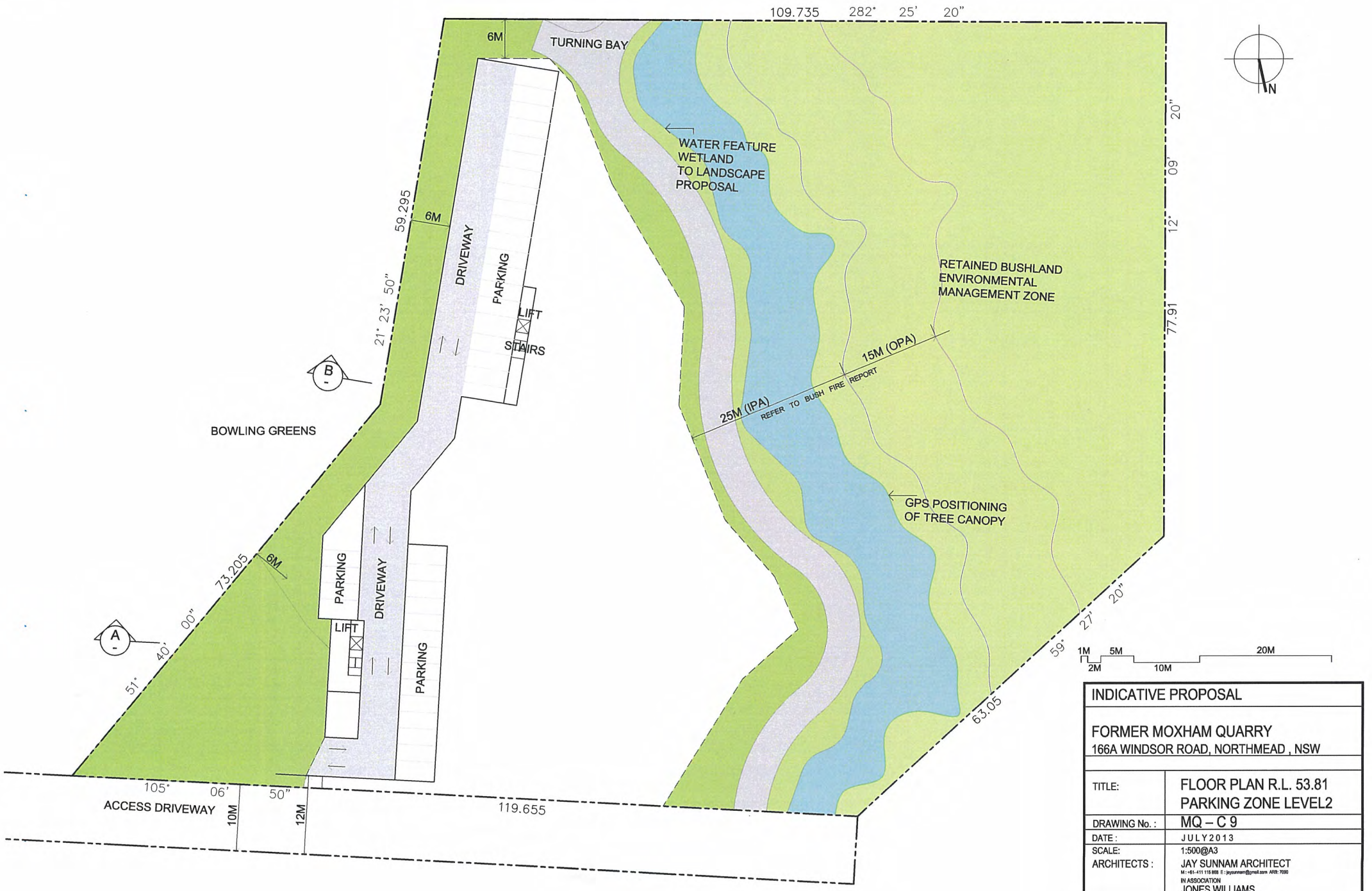
TITLE:	SECTIONS
DRAWING No. :	MQ – C 10
DATE :	JULY2013
SCALE:	1:500@A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61- 411 115 088 E : jaysunnam@gmail.com ARB: 7090 IN ASSOCIATION JONES WILLIAMS M: +61-405806809 E:ken.jones@jonesewilliams.com.au



INDICATIVE PROPOSAL	
FORMER MOXHAM QUARRY 166A WINDSOR ROAD, NORTHMEAD , NSW	
TITLE:	FLOOR PLAN R.L. 53.81 PARKING ZONE LEVEL1
DRAWING No. :	MQ – C 8
DATE :	JULY2013
SCALE:	1:500@A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61-411 115 888 E : jaysunnam@gmail.com ARB: 7000 IN ASSOCIATION JONES WILLIAMS M: +61-400000000 E:lan.jones@joneswilliams.com.au



INDICATIVE PROPOSAL	
FORMER MOXHAM QUARRY 166A WINDSOR ROAD, NORTHMEAD , NSW	
TITLE:	FLOOR PLAN R.L. 53.81 PARKING ZONE LEVEL2
DRAWING No. :	MQ – C 9
DATE :	JULY2013
SCALE:	1:500@A3
ARCHITECTS :	JAY SUNNAM ARCHITECT M : +61-411 115 868 E : jaysunnam@gmail.com ARB: 7090 IN ASSOCIATION JONES WILLIAMS M: +61-409808839 E:ben.jones@joneswilliams.com.au

3. EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

The existing road network serving the site (Figure 3) comprises:

* *O'Briens Road-James Ruse Drive (Cumberland Highway)* – a State Road and arterial route

* *Windsor Road-Church Street* – a State Road and arterial route leading to/from Parramatta CBD

* *North Rocks Road* – a Regional Road and major collector road route

* *Hammers Road* – a major collector road route linking between Windsor and Old Windsor Road

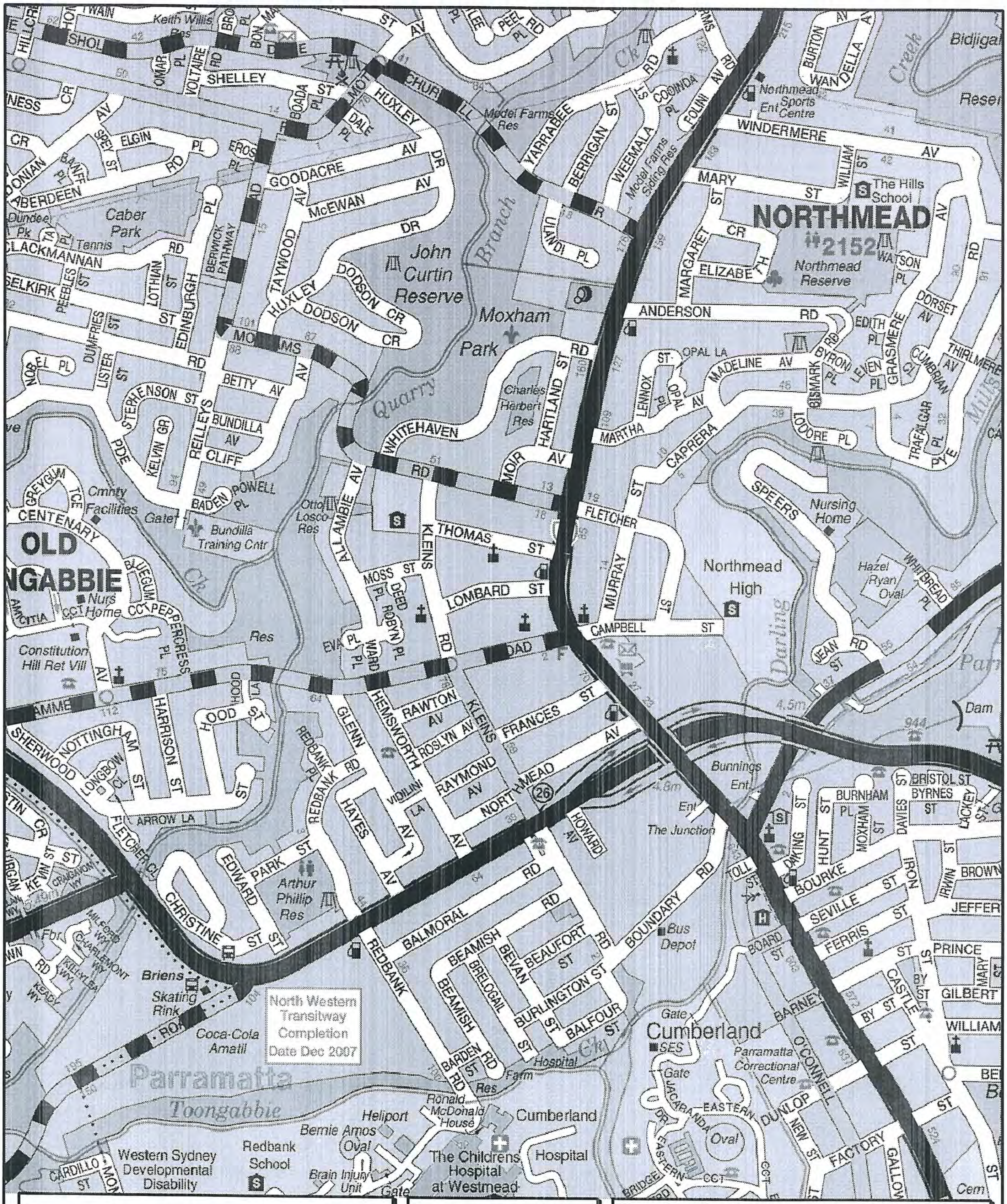
* *Moxhams Road-Fletcher Street and Murray Street –Caprera Road* – minor collector road routes.

Windsor Road is relatively straight with a slight downgrade towards the south (in the vicinity of the site) being some 12.8 metre wide with 4 traffic lanes.

3.2 TRAFFIC CONTROLS

The existing traffic controls on the road system surrounding the site (Figure 4) comprise:

* the traffic control signals at the Windsor Road/James Ruse Drive intersection



LEGEND

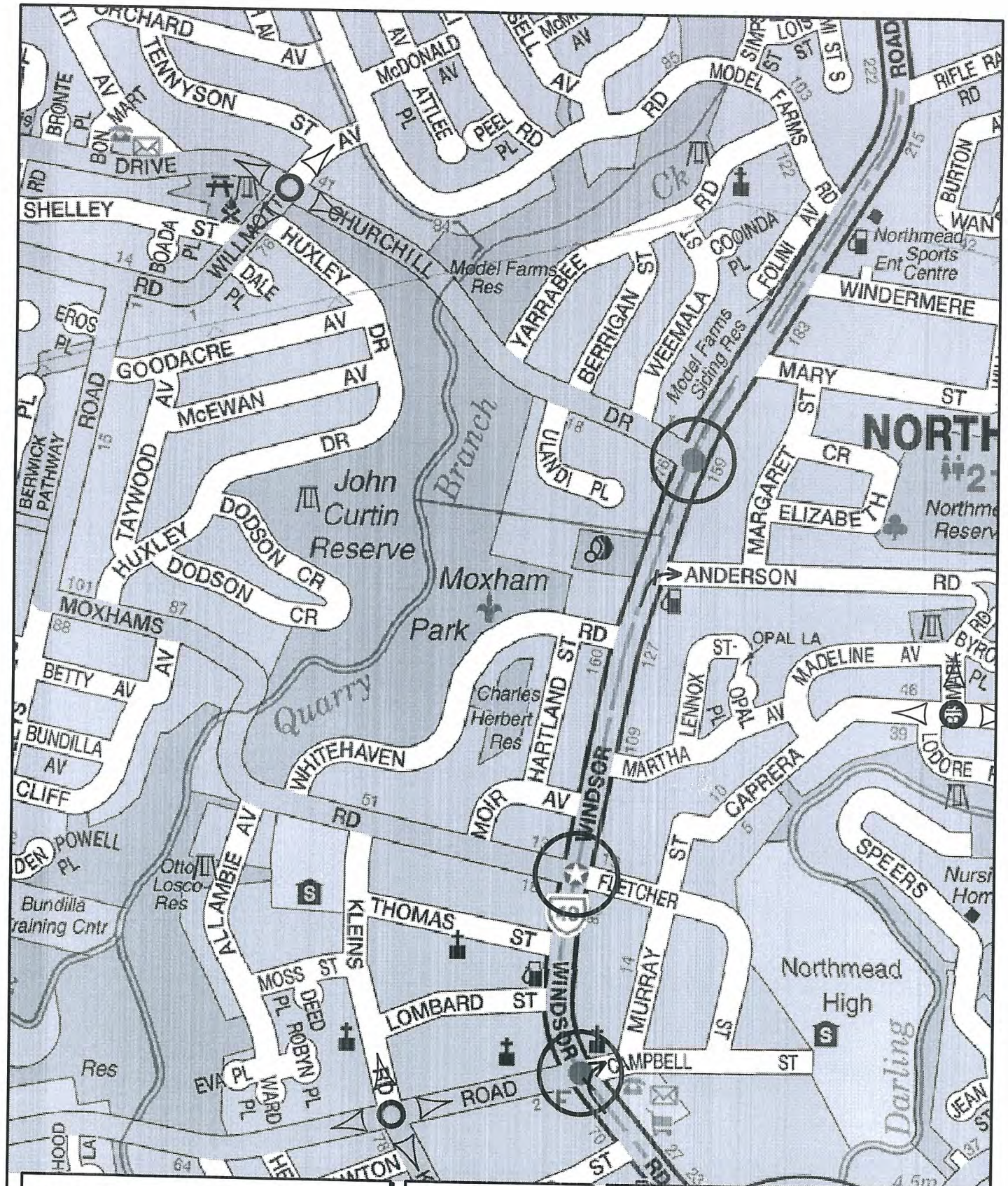
ARTERIAL

SUB-ARTERIAL

COLLECTOR

ROAD NETWORK

FIG 3



LEGEND

- TRAFFIC SIGNAL CONTROL
- ROUNDABOUT
- RESTRICTED TURNING MOVEMENT

TRAFFIC CONTROLS

FIG 4

* the morning peak tidal flow arrangement along Windsor Road using 'candy bars' (ie 3 lanes southbound and 1 lane northbound 7.00am – 10.00am Monday to Friday)

* the traffic control signals at the Campbell Street/Windsor Road/Hammers Road intersection

* the traffic control signals at the Fletcher Street/Windsor Road/Moxhams Road intersection

* the 60 kmph speed restriction on Windsor Road and 50 kmph on the local road system

* the CLEARWAY/NO STANDING restrictions along Windsor Road.

3.3 TRAFFIC CONDITIONS

An indication of the prevailing traffic conditions on the road system serving the site is provided by data published by RMS. This data is expressed in terms of Average Annual Daily Traffic (AADT) and the latest published data is summarised in the following:

Annual Average Daily Traffic Volumes

	2005
Windsor Road north of Hammers Road	51,006

Recent traffic surveys undertaken during the morning and afternoon peak traffic periods flows along Windsor Road.

	AM	**PM**
Northbound	1,238	2,540
Southbound	3,265	1,426

Gaps in the traffic flows along Windsor Road at the site frontage are provided by the operation of the existing traffic signals at the nearby Churchill Drive (to the north) and Moxhams Road (to the south) intersections. These gaps enable the ingress movements at other intersections and property accesses along this section of Windsor Road to occur satisfactorily despite the significant traffic flows.

3.4 TRANSPORTATION

Public transport serving the site is currently provided largely by bus services along Windsor Road operated by Westbus connecting Parramatta to Penrith, Baulkham Hills, Winston Hills, Kellyville and Liverpool. Several of the bus routes connect to railway stations such as Blacktown and Parramatta and the subject site is therefore considered to have good access to public transport facilities.

3.5 FUTURE CIRCUMSTANCES

The Windsor Road route is subject to a 'road widening' scheme and RMS has recently completed undertaking some road widening works to the south near the James Ruse Drive interchange. The road widening reservation is located along the western side across the Bowling Club frontage and the access 'handle' for the subject site.

Completion of the road widening along this section of Windsor Road will provide increased road capacity and provision for bus transit services to/from Parramatta CBD and bus/rail interchange (or some alternative transport models).

4. ACCESS

The existing vehicle access provision for the site involves a combined IN/OUT access driveway on Windsor Road and there is no other potential means of access. Whilst the advice from the former RTA (Appendix A) indicated that access would be preferable from Ulandi Place (or presumably Whitehaven Road) this cannot practically be achieved and would present traffic related environmental implications for these minor local access roads.

The Planning Proposal envisages retention of the existing vehicle access arrangement and with the future widening of Windsor Road the access movements will be restricted to left-turn IN/OUT by a central median island at that time.

Thus, in the future (or even in the short term) right-turn ingress/egress would be undertaken by 'round the block' movements taking advantage of the nearby traffic signal controlled intersections for access on Windsor Road.

For drivers who decide to undertake the right-turn access movements in the short term (prior to the widening of Windsor Road) the circumstances will be no different to that associated with access to the adjacent Bowling Club or service station (ie taking advantage of the available gaps in the Windsor Road traffic flows created by the operation of nearby traffic signals).

5. TRAFFIC

The site is conveniently located in relation to access to the arterial road system (ie Windsor Road/Church Street, Cumberland Highway, M2 etc) without requiring undue circulation along the local road system in the area. The proximity of the site to the Parramatta Centre and local services will also act to encourage walking, cycling and use of public transport (ie frequent buses along Windsor Road).

An indication of the potential traffic generation of the envisaged site development is provided by the recent RMS Technical Direction TDT 2013-04. The specified traffic generation rate for high density residential apartments is 0.19 vtph per dwelling during the morning peak period and 0.15 vtph in the afternoon peak. Having regard for the near city centre location and the proximity of public transport and other services application of this rate for the envisaged 57 apartments would indicate a peak generation consequential to site development as follows:

57 apartments
- 11 vtph AM peak
- 9 vtph PM peak

The projected distribution of traffic generated to/from the proposed development will be influenced by the inherent access constraints. The projected short term distribution of access movements (ie prior to the widening of Windsor Road) is as follows:

	AM		PM	
	IN	OUT	IN	OUT
	1	10	8	1
	AM		PM	
RT IN	-		4	
LT IN	1		4	
RT OUT	5		1	
LT OUT	5		-	

These access movements will be somewhat less than those which currently occur without any apparent difficulty at the adjacent Bowling Club and service station accesses on Windsor Road. In the future with the provision of the central median island in Windsor Road the potential for conflict will be significantly reduced by the enforced left-turn IN/OUT movements.

6. PARKING

Parking provision for the proposed development can be assessed in relation to Council's DCP 2011 document. That document specifies a parking provision as follows:

Residential Flat Buildings within 400 metres of Transit Corridor:

One/two-bedroom apartment	-	1 space
Three-bedroom apartment	-	1.2 spaces
Visitors	-	1 space per 4 apartments

Application of these requirements to the envisaged 57 apartment development would indicate the following provision:

9 x one-bedroom	-	9 spaces
41 x two-bedroom	-	41 spaces
7 x three-bedroom	-	9 spaces
Visitors (57 apartments)	-	15 spaces
Total	-	**74 spaces**

It is envisaged that some 80 spaces would be provided to ensure that there will be no overflow onto any nearby streets by residents or visitor vehicles.

7. INTERNAL CIRCULATION AND SERVICING

The internal circulation roadway 'Loop' will provide on site access for refuse collection and other service/delivery trucks as well as:

- access to/from the car parking areas
- set down and pick up of passengers (eg taxis)

Small service vehicles (eg service personnel etc) will also be able to use the visitor parking spaces.

8. TRAFFIC RELATED ENVIRONMENTAL IMPLICATIONS

There will not be any significant traffic related 'Environmental Capacity' issues with the envisaged development of the site as vehicle access will be directly onto the arterial road system rather than a local residential street. The only issue in relation to traffic related environmental implications is the vehicles which in the future will be required to 'circle' on the road system in order to enter the site from the north or egress to the south. These vehicle movements will be relatively minor and will generally use the Model Farms Road/ Churchill Drive loop to egress to the south and the Fletcher Street/Campbell Street loop to ingress from the north. Neither of these routes involves any minor local residential streets.

9. CONCLUSION

The site, which is the subject of the Planning Proposal, is ideal for residential apartment development due to its proximity to the Parramatta City employment centre and convenient proximity to the arterial road system and public transport services. The existing vehicle access arrangements for the site will be retained (as no others are available), however the future provision of a central median island in Windsor Road will act to preclude right-turn access movements.

This assessment has concluded that the envisaged development (subject to the rezoning process) will not result in any adverse traffic, parking or access implications.

APPENDIX A

LETTER FROM RTA

ID 2006-1210

James Hall

Jones Williams Architects
Suite 1209
No. 1 Sergeants Lane
St Leonards NSW 206

Attention: Mr Leonard Jones

PRE-DA RESPONSE: PROPOSED RESIDENTIAL DEVELOPMENT AT MOXHAM QUARRY

Dear Leonard,

I refer to your email correspondence of 9 December 2006 requesting pre-development application comments from the Roads and Traffic Authority (RTA) with regard to the access arrangements for a residential development on the Moxham Quarry.

I wish to advise that the current practice of the RTA is to limit the number of vehicular conflict points along the arterial road network to maintain network efficiency and road safety. This current practice is reflected in Section 6.2.1 of the RTA's current publication of the Guide to Traffic Generating Developments, which states 'access across the boundary with a major road is to be avoided wherever possible'.

In line with this current practice, the RTA would prefer that access to the proposed residential development be via Ulandi Place.

If it is not possible to obtain vehicular access to the development via Ulandi Place and vehicular access to the proposed development is via Windsor Road, the following requirements should be taken in to consideration, prior to submitting a development application to Council:

1. The driveway shall be a minimum of 6 metres in width and this 6 metre width shall extend in to the subject site (allowing for simultaneous 2 way movements in and out of the subject site), splaying out to 8 metres at the kerb line of Windsor Road.

2. It must be demonstrated that the largest vehicle accessing the proposed development can enter the site from the kerbside lane with a vehicle holding to leave the property. Turning paths should be provided on the plans submitted.

3. It should be noted that Windsor Road is subject to 'Tidal' flow conditions during the AM and PM peak times and therefore, access to and from the site in general will be restricted to left in /left out only.

4. All vehicles should be able to enter and exit the subject site in a forward direction.

5. The proposed development should be designed such that road traffic noise from Windsor Road is mitigated by durable materials, in accordance with EPA criteria for new land use developments (The Environmental Criteria for Road Traffic Noise, May 1999). The RTA's Environmental Noise Management Manual provides practical advice in selecting noise mitigation treatments.

   Where the EPA external noise criteria would not practically or reasonably be met, the RTA recommends that Council apply the following internal noise objectives for all habitable rooms under ventilated conditions complying with the requirements of the Building Code of Australia:

   - All habitable rooms other than sleeping rooms: 45 dB(A) $L_{eq(15hr)}$ and 40 dB(A) $L_{eq(9hr)}$ and
   - Sleeping rooms: 35 dB(A) $L_{eq(9hr)}$

6. All works associated with the development are to be at no cost to the RTA.

In addition to the above, I wish to advise that the subject property is partly affected by a road widening proposal in the manner illustrated by pink colour on the attached copy of DP 810441.

The RTA's policy does not favour the construction of any new building or substantial structures on land required for future road widening.

However, the Authority would raise no objections to the submitted proposal subject to no new structures or developments being constructed within the affected area.

It is emphasised that the comments provided above are informal and of a Pre-DA nature, they are not to be interpreted as binding upon the RTA and may change following formal assessment of submitted development application from the appropriate consent authority.

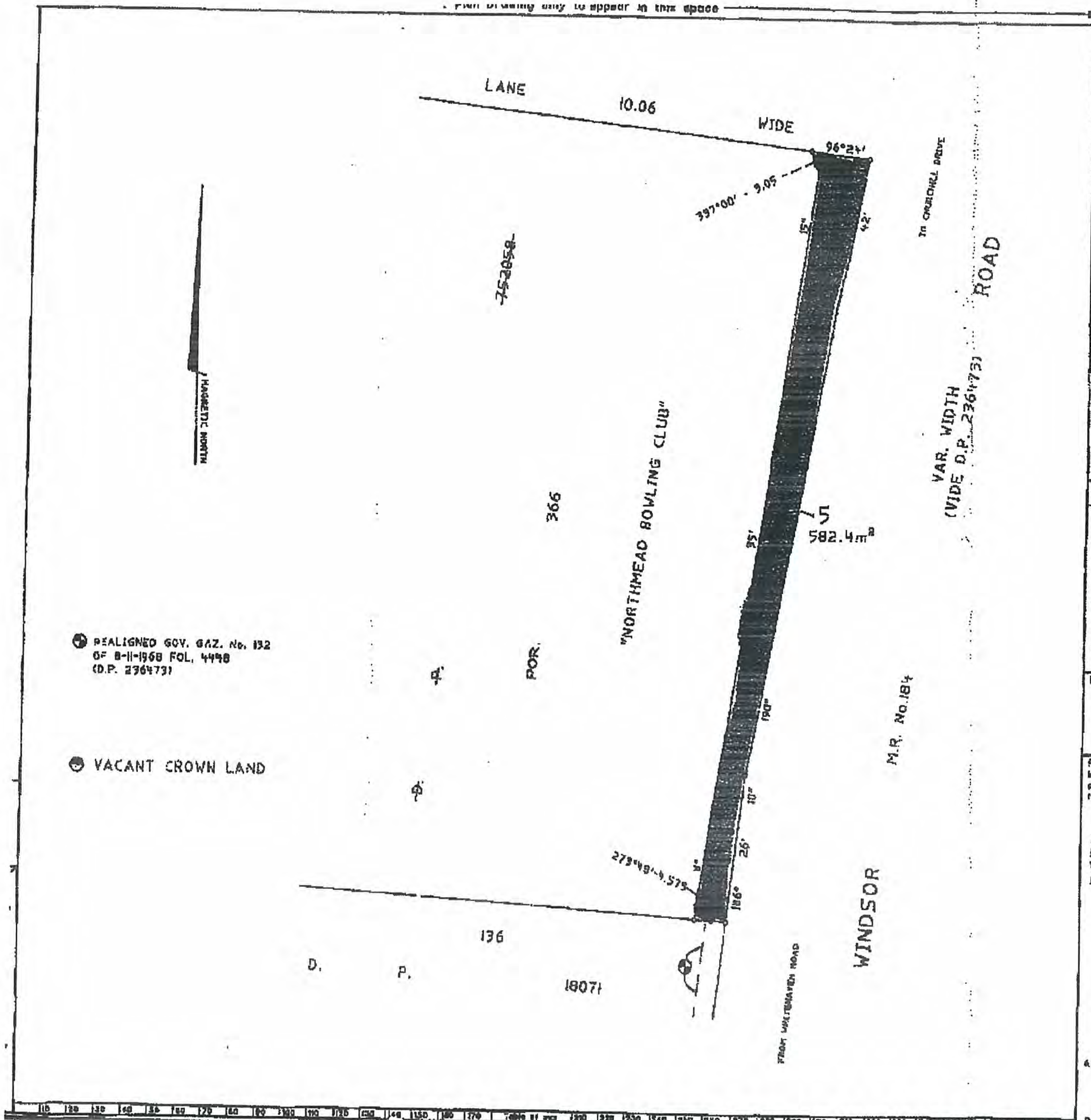
Any inquiries in relation to this matter can be directed to the undersigned on telephone 8814 2047 or facsimile 8814 2107.

Yours sincerely,

James Hall
Senior Traffic and Development Assessment Officer
Sydney Region

10 March 2006

Plan drawing only to appear in this space



* OFFICE USE ONLY

DP 810441

Registered 27-5-1991

Title System: CROWN LAND

Purpose: ACQUISITION

Ref. Map: U9160-94

Last Plan: ———

PLAN OF LAND TO BE ACQUIRED FOR THE PURPOSES OF THE STATE ROADS ACT, 1986.

Lengths are in metres. Reduction Ratio 1:1400

[redacted] City: PARRAMATTA
Locality: NORTHMEAD
Parish: ST. JOHN
County: CUMBERLAND

This is sheet 1 of my plan in ... sheets.

I, ROBERT JOHN PIERCE
of ROADS & TRAFFIC AUTHORITY, N.S.W.

Signature ... 12th April 1991

Plans used in preparation of survey/compilation
18184 3000
8633 2030

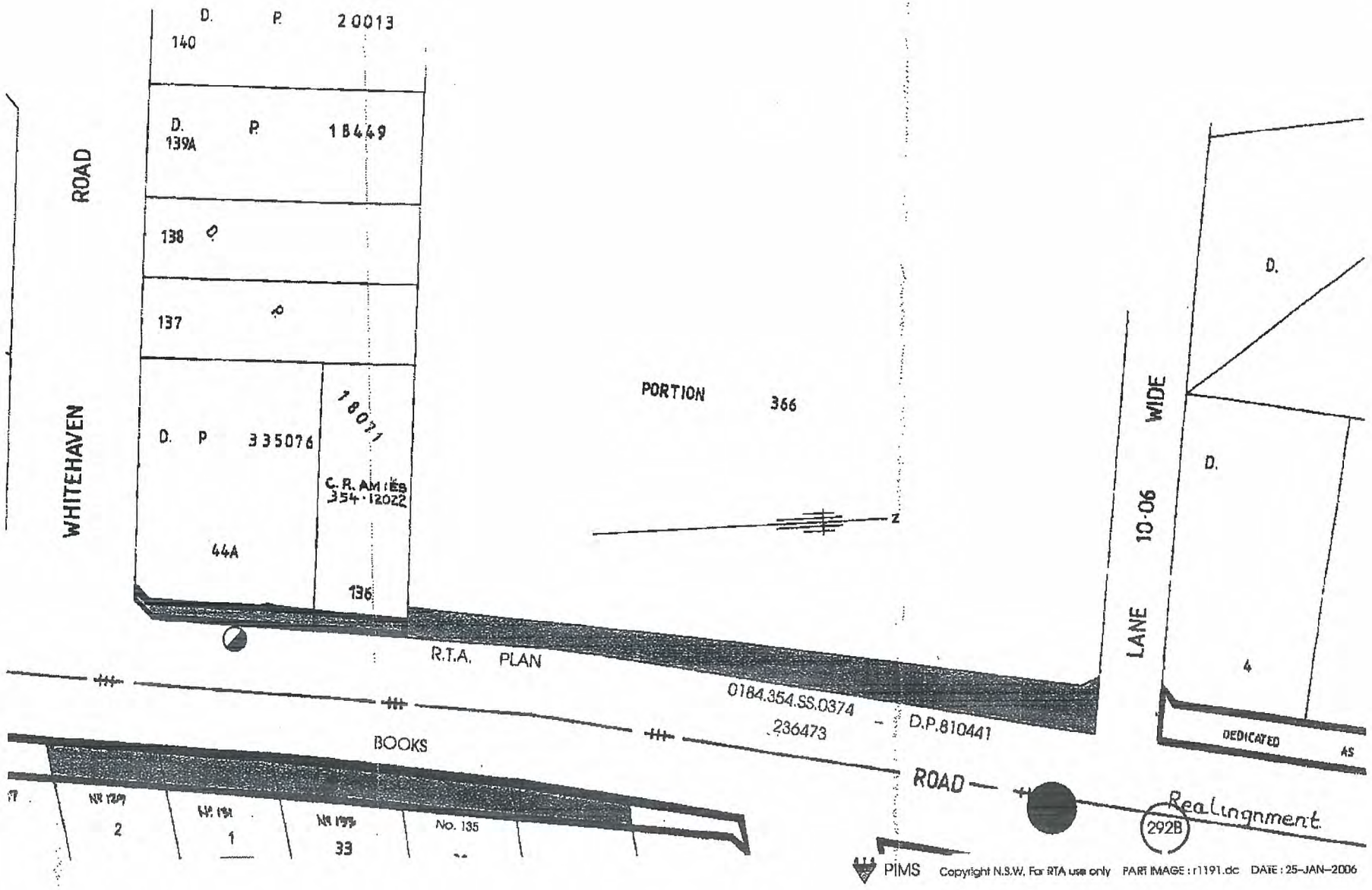
FD 109

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

LOT 5 IS REQUIRED FOR ROAD AND AFTER ACQUISITION AND REMOVAL OF IMPROVEMENTS WILL ULTIMATELY BE DECLARED PUBLIC ROAD.

APPROVED:
D. Enbeta
CHIEF SURVEYOR,
ROADS AND TRAFFIC AUTHORITY.

R.T.A. FILE : 31.1539
R.T.A. PLAN: 0184 394 SS 0374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D.
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ROAD
Realignment
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1
33
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Our Ref: L001-600356-CivilStructuralSupport
Contact: Cameron Vella

Cardno (NSW/ACT) Pty Ltd
ABN 95 001 145 035

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The Forum
203 Pacific Highway
St. Leonards NSW 2065

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Australia

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3rd April 2013

LHJ Pty Limited
1209/1 Sergeants Lane
St Leonards NSW 2065

By email: len.jones@joneswilliams.com.au

Attention: Leonard Jones

Dear Leonard

Re: Proposed Site Access, Lots 939 and 940 in DP1176567P, Windsor Road Northmead

Cardno, being reputable civil and structural engineers, have reviewed the proposal for the planned rezoning and development of Lots 939 and 940 in DP1176567P, Windsor Road Northmead, with particular focus on the sites topographical constraints. As part of this review we have viewed the recent site survey provided to us by the client which does not accord with the more general one provided by Council's planning department in their recent report to Council.

It is Cardno's opinion that access to the site for construction and permanent operation is achievable through competent engineering design and planned construction staging to meet all relevant standards and controls for the type of development contemplated on the site.

As is the usual practice, we assume the detailed design of the site access will be provided at the development application stage.

Yours sincerely

Cameron Vella
Manager, Urban Infrastructure
For Cardno
9496 7804
Cameron.Vella@cardno.com.au