

**'DISCOVERY POINT'
PROPOSED STAGE 1 DEVELOPMENT
WOLLI CREEK**

***Assessment of Traffic, Transport and
Accessibility Implications***

February 2011

Reference 10178

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1. INTRODUCTION

This report has been prepared to form part of a Project Application to the Department of Planning for Stage 1 of development under the Concept Plan for the uncompleted part of the 'Discovery Point' site at Wolli Creek (Figure 1).

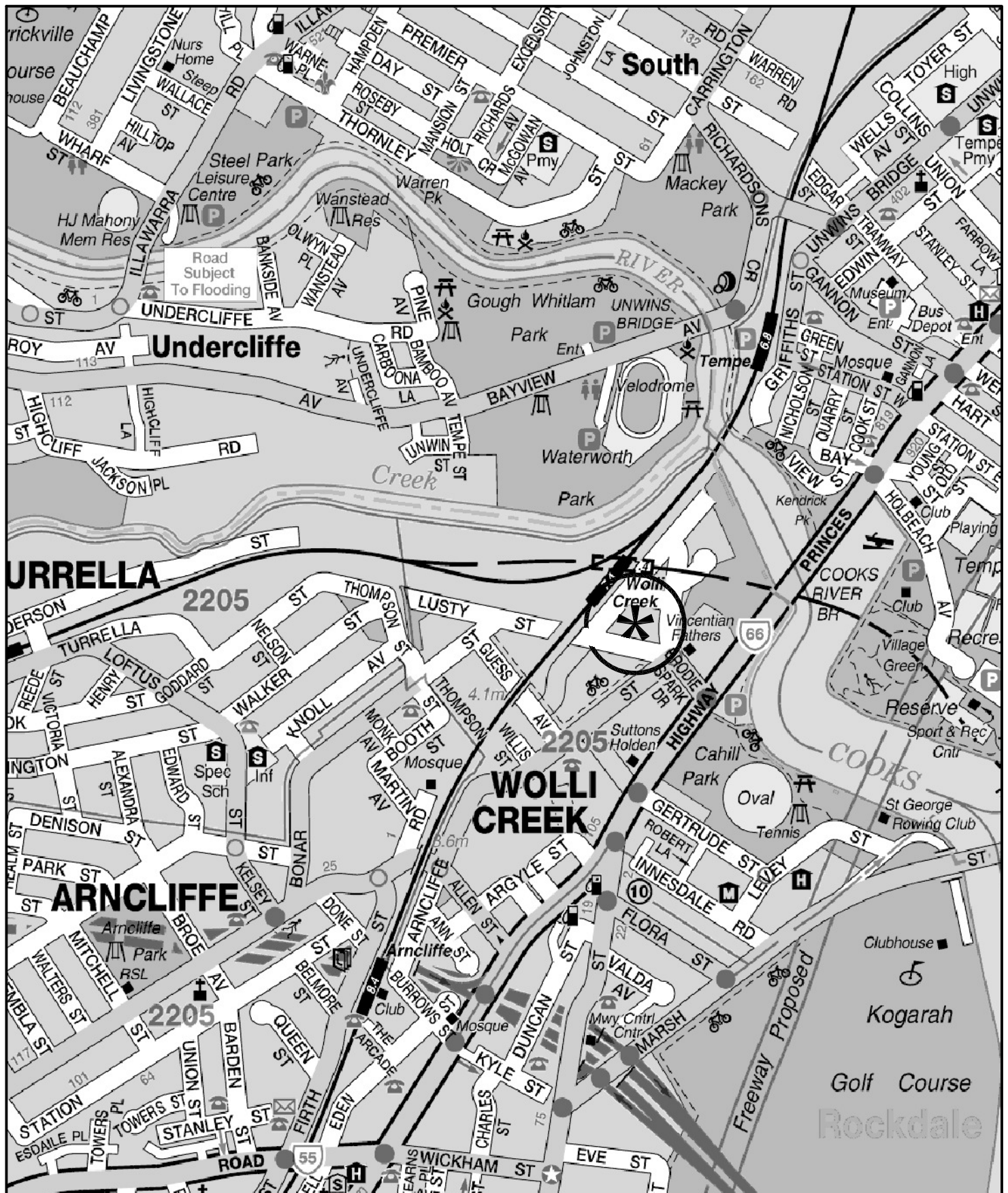
The Wolli Creek Redevelopment Area (WCRA) comprises a large precinct of existing and former industrial lands extending to the south of Cooks River and Wolli Creek. The precinct, which spans the Princes Highway and the railway lines, has already been the subject of some significant redevelopment activity for residential apartments and ancillary commercial uses.

Planning for the site is guided by the Part 3A Concept Approval. The prominent 'Discovery Point' site is bounded by Princes Highway, Brodie Spark Drive/Magdalene Terrace, Cooks River and the Railway Line and a number of building elements have already been constructed (or commenced). A Concept Plan has been lodged with the Department of Planning for the redevelopment of Discovery Point in relation to the uncompleted part of the site.

The proposed Stage 1 development comprises:

- * Building 1B – 9 residential apartments and some 1,500m² GFA retail
- * Building 1C – 121 residential apartments and some 700m² GFA retail
- * Construction of the access road system including:
 - Discovery Point Place
 - Spark Lane (southern part)
 - Brodie Spark Drive (modification and extension of central section).

The requirements to be addressed for this assessment are specified in the relevant Director General's Requirements and Statement of Commitments summarised in the following:



LEGEND



LOCATION

FIG 1

Director General's Requirements

The EA shall provide a Traffic and Accessibility Impact Study prepared in accordance with RTA's Guide to Traffic Generating Developments, considering:

- traffic generation and any required road/intersection upgrades (including but not limited to the intersection of Princes Highway/Brodie Spark Drive)
- the adequacy of on-site carparking for the proposal having regard to local planning controls, RTA guidelines and the high public transport accessibility of the site (Note: the Department supports reduced carparking rates in areas well served by public transport)
- the ability of buses to maintain services during construction and once completed
- access, loading dock(s) and service vehicle movements
- the potential for implementing a location specific sustainable travel plan (eg 'Travelsmart' or other travel behaviour change initiative)
- the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling) and the provision of facilities to increase the non-car travel share, including bicycle connections from the site to the surrounding bicycle network and bicycle parking in both residential and commercial/retail portions of the proposed development including the provision of amenities for cyclists) and
- how the proposal integrates with the Wolli Creek Railway Station and how the proposal would impact upon the operation of the existing railway lines.

Statement of Commitments

Parking Rates

- Parking rates to be utilised across the development in subsequent Project/Development Applications are:
 - Maximum 1 space per studio and one-bedroom units
 - Minimum 1 space and maximum of 2 spaces per two-bedroom units
 - 2 spaces per three+ bedroom units
 - Minimum 1 visitor space per 20 residential units
 - Minimum 1 space per 50m² of non-residential GFA (commercial)
 - Minimum 1 space per 35m² of non-residential GFA (retail).

Road Access and Traffic

- The detailed design of access points will comply with the design criteria of AS 2890.1 and AS 2890.2.
- Traffic statement to deal with detailed design issues eg loading docks, sight lines etc.

Director General's Requirements

N/A for Stage 1 Project Application.

Statement of Commitments

N/A for Stage 1 Project Application.

The purpose of this report is to:

- * describe the site, the existing development, the Concept Plan and the proposed Stage 1 development scheme
- * describe the road network serving the site and the prevailing traffic conditions as well as the planned road network upgrade
- * assess the potential traffic implications
- * assess the appropriateness of the proposed parking provision
- * assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements
- * assess the facilitation of bus services and railway station access as well as the implications for non-car travel modes including the provisions during the construction process.

2. PROPOSED DEVELOPMENT SCHEME

2.1 SITE AND CONTEXT

The Concept Plan site is the southern part of the total Discovery Point site (Figure 2) which is bounded by Cooks River, Princes Highway, Brodie Spark Drive/Magdalenene Terrace and the railway line and includes the historic Tempe House, St Magdalen's Chapel and the surrounding open space precinct (Discovery Point Park). The Wolli Creek Railway Station intrudes into the central part of the total site as does the temporary access cul-de-sac for buses and emergency vehicles.

The lands to the east and west comprise parkland which extend along the banks of Cooks River and its Wolli Creek tributary while to the south there are some remnant industrial and automotive uses as well as new apartment buildings. The major Sydney Airport Precinct is located further to the east while the Arncliffe and Rockdale Centres are located further to the south.

2.2 EXISTING CIRCUMSTANCES

The Discovery Point precinct was subject to a Masterplan Consent (DA 500/01), which has subsequently been modified under a number of s96 Applications. This Masterplan comprised:

- * an envisaged total development outcome of:

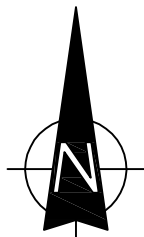
Residential	some 1,200 units (subject to final mix)
Retail	14,000m ² (RGFA)
Commercial	40,000m ² (RGFA)

RGFA refers to gross floorarea calculated in accordance with Rockdale LEP 2000

- * an indicative parking provision of some 2,210 spaces split into nominated 'southern' and 'northern' carpark areas.

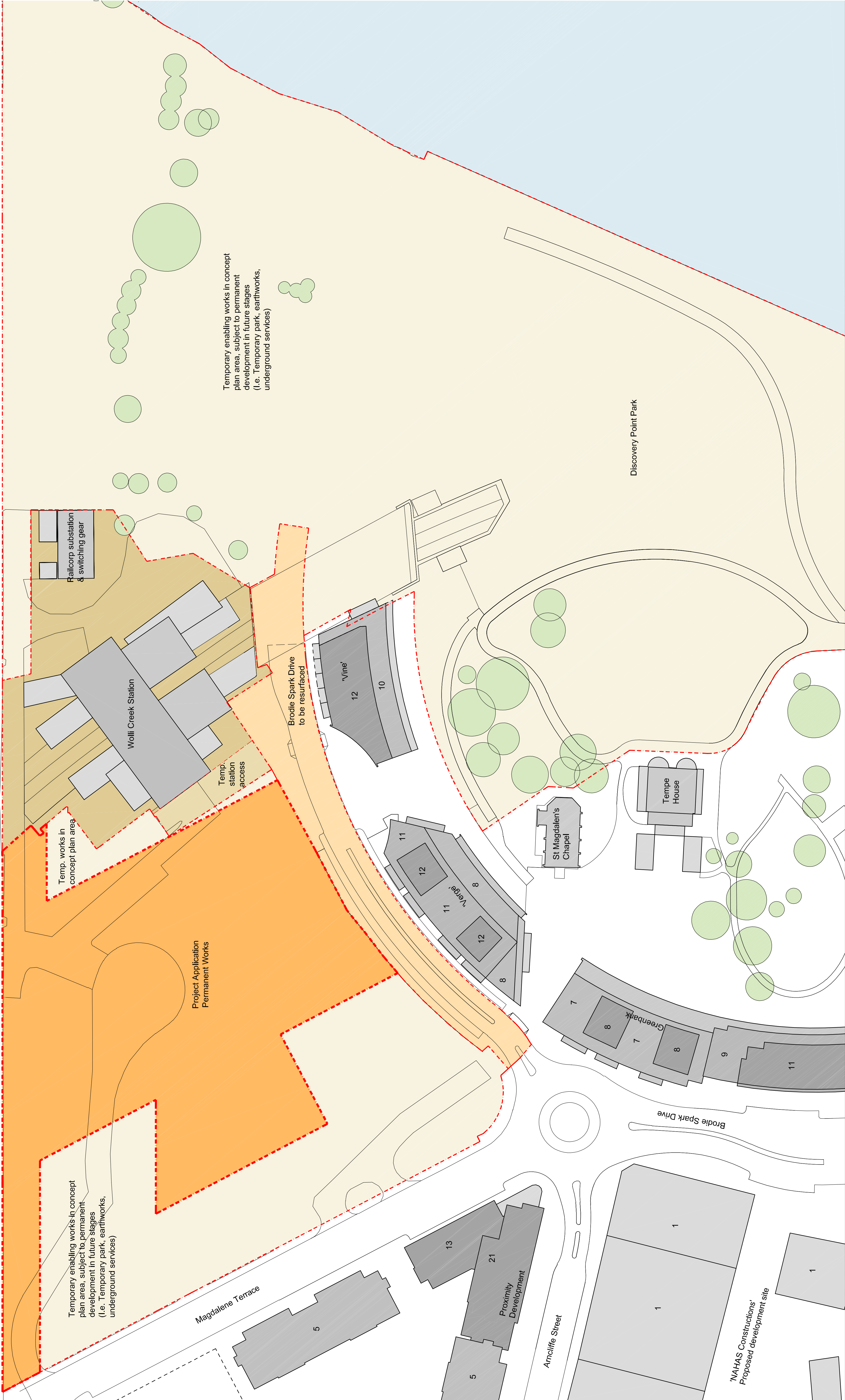


LEGEND



SITE

FIG 2



Temporary enabling works in concept plan area, subject to permanent development in future stages (i.e. Temporary park, earthworks, underground services)

Temporary enabling works in concept plan area, subject to permanent development in future stages (i.e. Temporary park, earthworks, underground services)

Temp. works in concept plan area

Project Application Permanent Works

Temp. station access

Brodie Spark Drive to be resurfaced

Discovery Point Park

- KEY
- Concept Plan Boundary
- Project application permanent works
- Brodie Spark Drive to be resurfaced
- Wolli Creek Station
- Temporary works to provide access to Wolli Creek Station
- Temporary enabling works in concept plan area, subject to permanent development in future stages (i.e. temporary park, earthworks, underground services)

Discovery Point, Wolli Creek

Stage 1

Location Plan

Scale	1:500 @ A1, 1:1000 @ A3
Drawn	AV
Project No.	S11191AA
Status	PLANNING
Pic Date	17/6/2011 2:54:14 PM
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Drawing No	DA1-001
Revision	C



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C	17.06.11	Park Works Excluded	ST	MA
B	16.03.11	Park Works Included	ST	MA
A	07.02.11	PROJECT APPLICATION	ST	MA
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A number of elements of the existing Masterplan have been completed or are currently being constructed. These include Buildings 1, 2 and 4 as well as sections of Brodie Spark Drive, Magdalene Terrace and basement areas as indicated on the plan overleaf.

These 3 buildings comprise:

	Site 1 'Greenbank'	Site 2 'Verge'	Site 4 'Vine'	Total
Apartments	135	88	88	311
Retail/commercial	1,133m ²	773m ²	-	1,906m ²
RGFA				
Parking spaces	147	92	104	343

The adjacent mixed use 'Proximity' development complex on the south-western corner of the Arncliffe Street/Magdalene Terrace intersection has been completed apart from the commercial office element.

The site (owned and to be developed by NAHAS) on the corner of the Princes Highway and Brodie Spark Drive has been declared a Part 3A project. A project application has been approved with Stage 1 comprising a supermarket and attached bottle shop with a permitted development 'lifetime' of up to 15 years. The Concept Plan application for the NAHAS site has yet to be lodged but the proposal is for intensified retail development below residential apartments.

2.3 CONCEPT PLAN

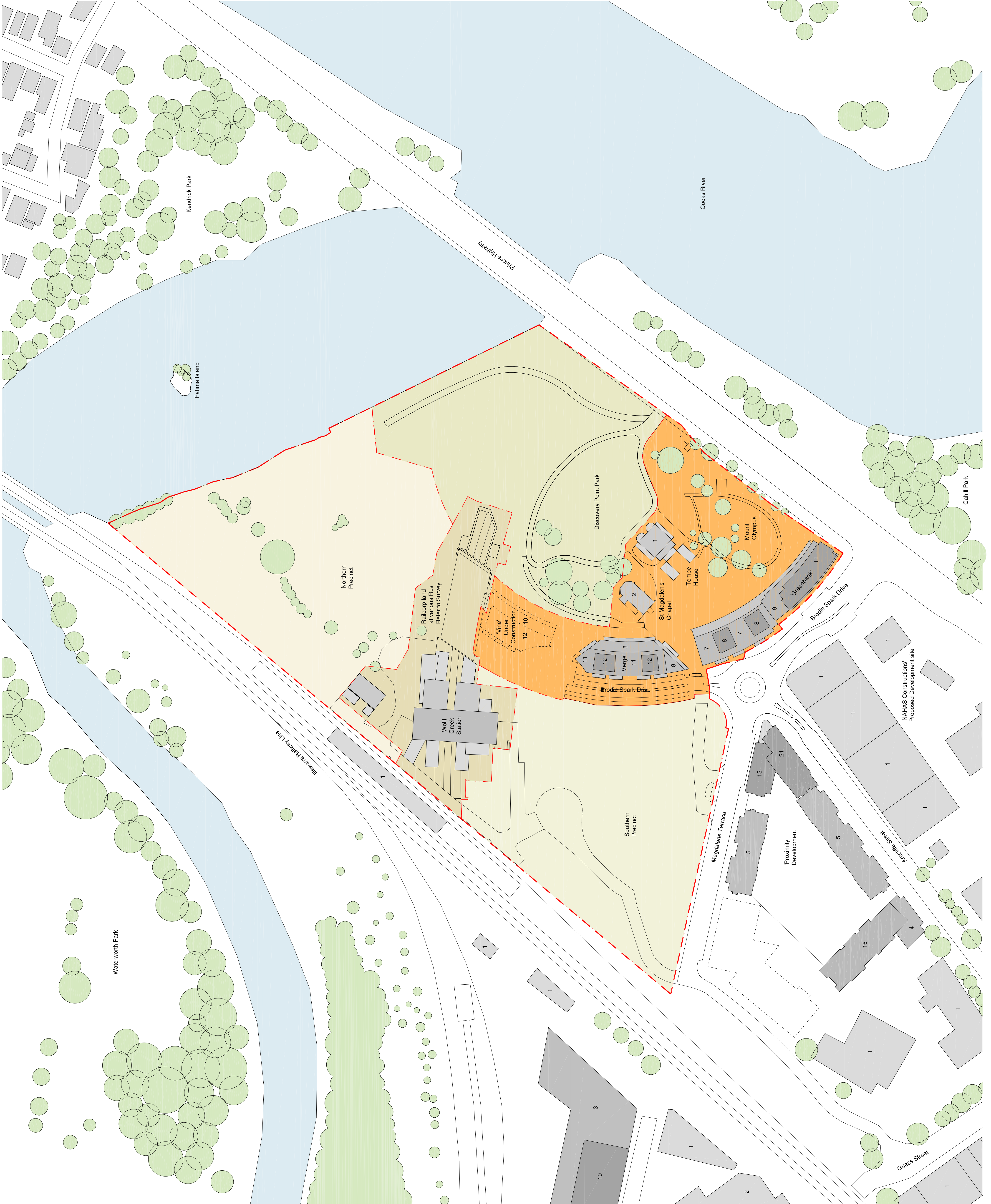
A Concept Plan application has been submitted to the Department of Planning for the remaining undeveloped portions of the Discovery Point site. It comprises the staged development of 14 sites (exclusive of the 3 sites completed or in progress) together with completion of the access road, pedestrian/cyclist and public transport networks.

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FOR APPROVAL

Key

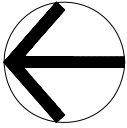
- Developed Part of Discovery Point excluded from concept plan application
- Discovery Point Park
- Rail Corp Land
- Southern Precinct
- Northern Precinct



Revision	Date	FOR APPROVAL	AV	MA
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Discovery Point, Wollongong Concept Plan Location Plan



Scale	1:1000 @ A1, 1:2000 @ A3
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Status	PLANNING
Plot Date	16/6/2010 9:44:33 AM
Plot File	S:\11100-11199\11191_austland_wollongong_mainconcept.dwg
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The Concept Plan provides for a total of 132,000m² SIGFA comprising:

- * Residential floorspace maximum of 123,000m² which is anticipated to result in 1,200 to 1,500 residential apartments depending on final mix.
- * Non-residential floorspace minimum of 9,000m².
- * Carparking:
 - Residential
 - o maximum 1.0 space per studio/one-bedroom unit
 - o maximum 2.0 spaces per two and three+-bedroom unit
 - o minimum 1 space per 20 apartments for visitors
 - Non-Residential:
 - o minimum 1 space per 50m² commercial floorspace
 - o minimum 1 space per 35m² retail floorspace.

The Concept Plan also includes development of the access road system with:

- * replacement the two-way north-south street (Mount Olympus Boulevard West) running between Magdalene Terrace and the northern corner of the site with a one-way road
- * deletion of the east-west street running between Brodie Spark Drive and Spark Lane.

2.4 PROPOSED STAGE 1 DEVELOPMENT

The Stage 1 site is located just to the south of the railway station extending between Brodie Spark Drive and Spark Lane being bounded to the north by the new Discovery Point Place road connection. The site comprises 2 building elements with a central north-south surface pedestrian corridor and basement level carparking which is integrated with the overall carparking sub-podium.

Building 1B is located on the central and western part of the site with the future Building 4 above while Building 1C is located on the eastern part. The buildings will comprise:

	1B	1C	Total
Residential Apartments			
One-bedroom	4	51	56
Two-bedroom	5	60	65
Three-bedroom	-	10	10
Total	9	121	130 apts
Retail	1,506m ²	691m ²	2,197m ² GFA

There will be a total of 246 parking spaces provided in the basement which along with a retail loading dock will have accesses located on Spark Lane. Details of the proposed development are provided on the plans prepared by Bates Smart Architects which accompany the Project Application and are reproduced in part overleaf.

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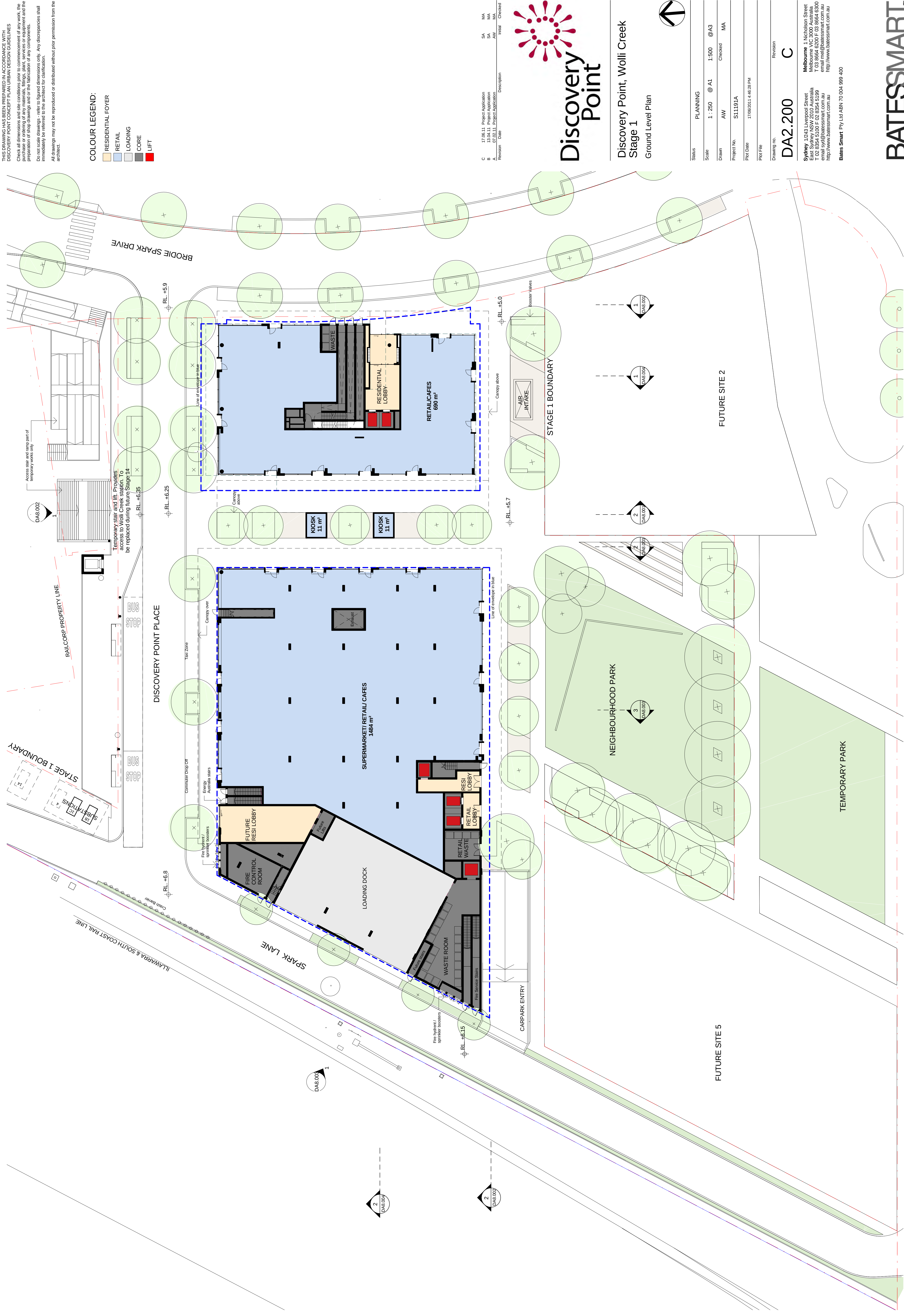
RESIDENTIAL FOYER

RETAIL

LOADING

CORE

LIFT



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C	17.06.11	Project Application	SA	MA
B	13.04.11	Project Application	SA	MA
A	07.02.11	Project Application	AW	MA



Discovery Point, Wollri Creek
Stage 1
Ground Level Plan



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Plot Date	17/06/2011 4:46:29 PM
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Drawing no.	Revision
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☐ UNUSED CARPARK FOR FUTURE STAGES
☐ EXISTING CARPARK



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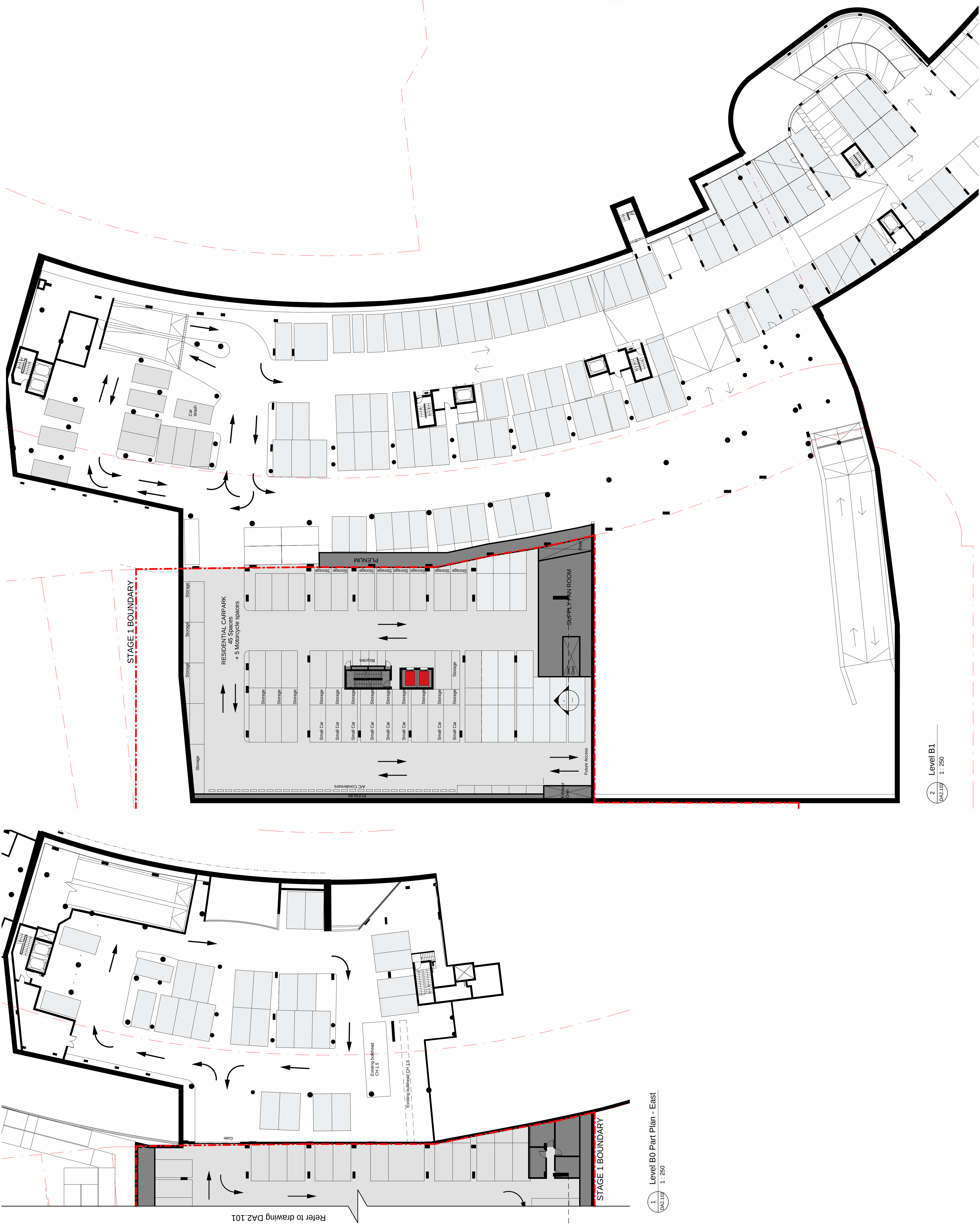
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Refer to drawing DA2.101

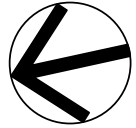
1 Level B0 Part Plan - East
DA2.102 1:250

2 Level B1
DA2.102 1:250

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Discovery Point, Wolli Creek
Stage 1
Basement Level B0 Part Plan (East) &
Basement Level B1 Plan



Status	PLANNING
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Project No.	S11191A
Plot Date	7/02/2011 5:03:37 PM
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Drawing no.	Revision
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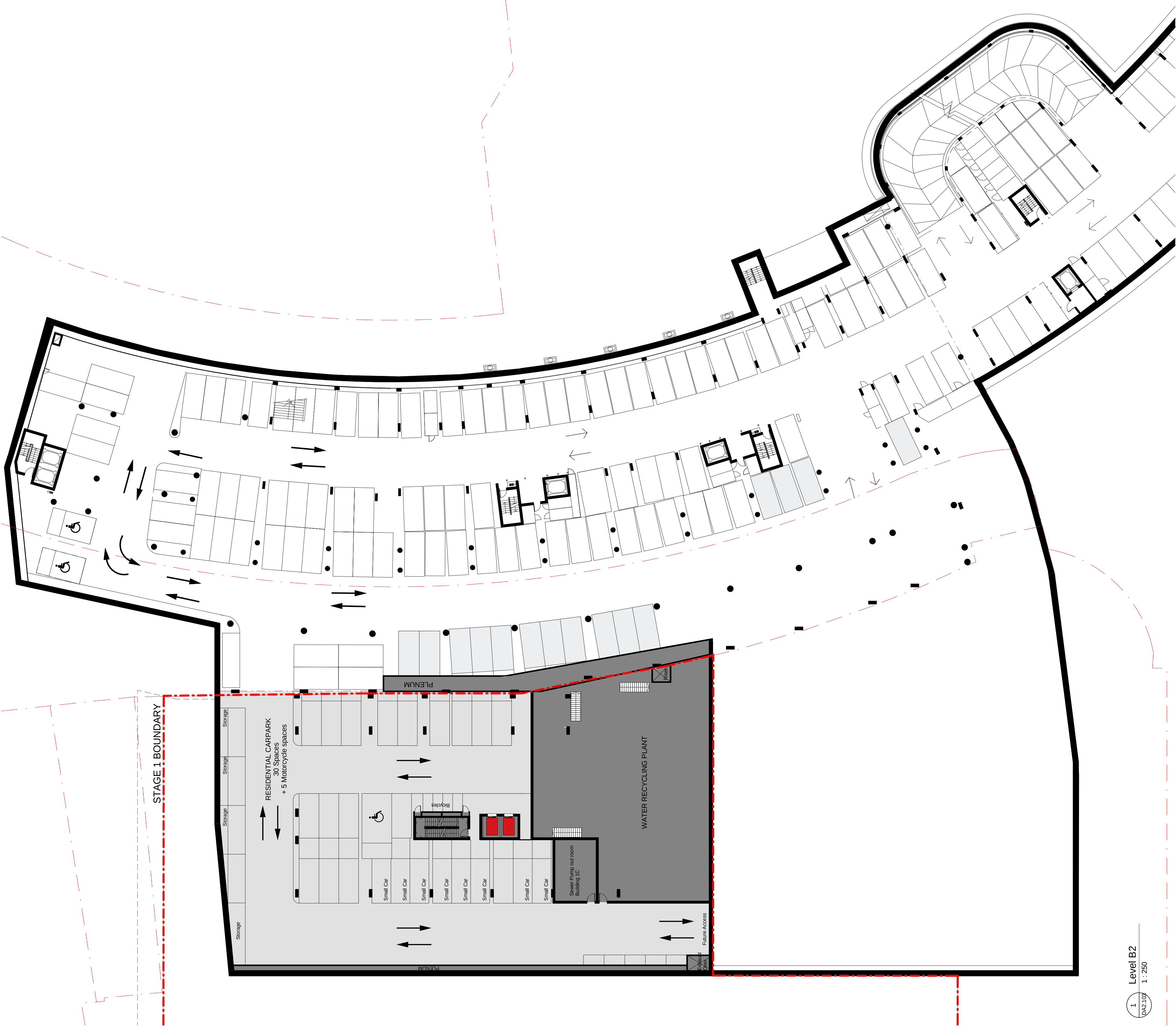
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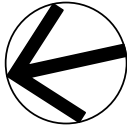
- CARPARK
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- EXISTING CARPARK



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Discovery Point, Wollie Creek
Stage 1
Basement Level B2 Plan



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Plot Date	7/02/2011 5:25:21 PM				
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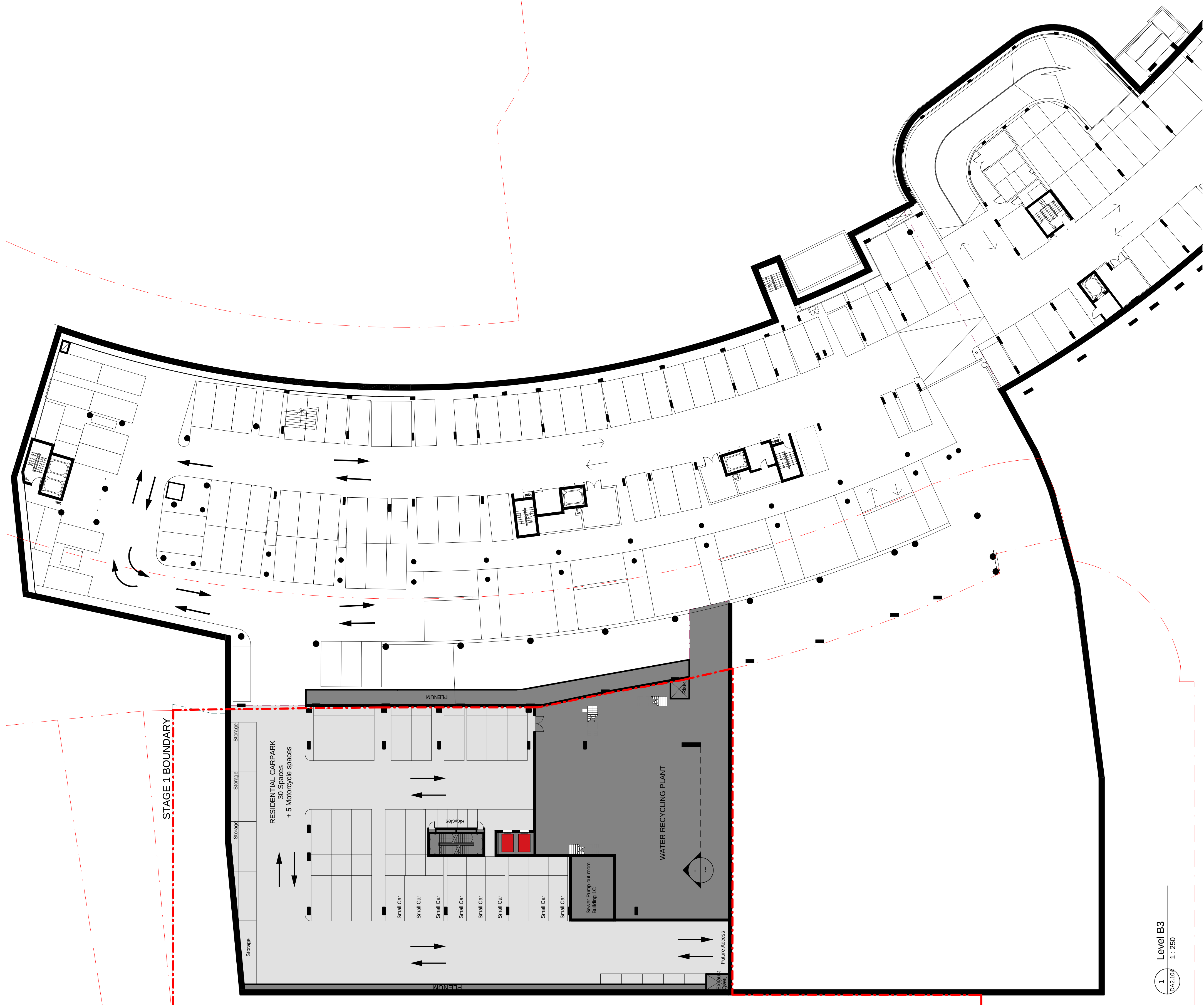
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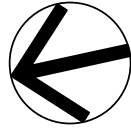
- CORE
- CARPARK
- EXISTING CARPARK
- UNUSED CARPARK FOR FUTURE STAGES



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Discovery Point, Wollie Creek
Stage 1
Basement Level B3 Plan



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Drawing no.	Revision
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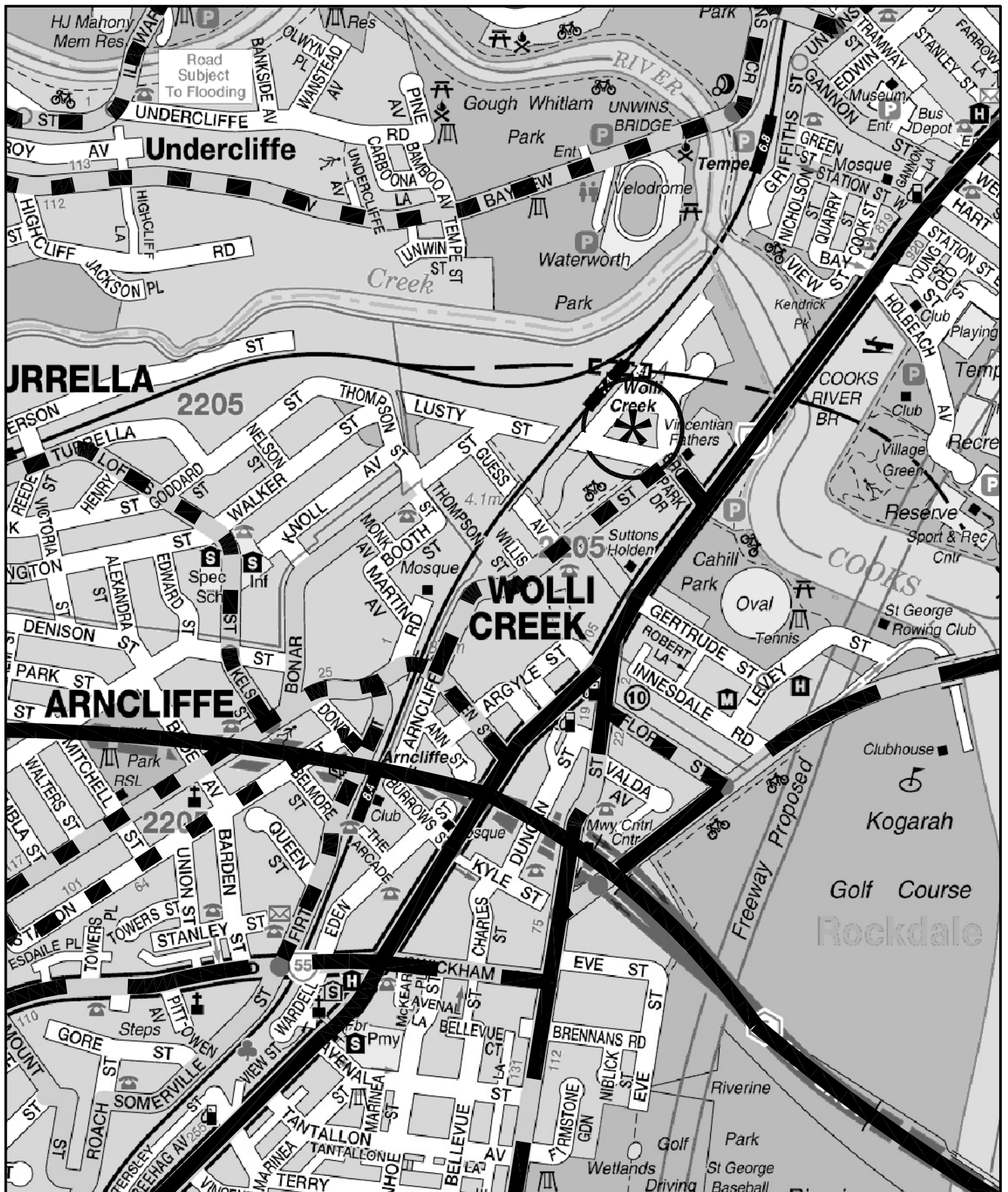
3. ROAD NETWORK AND TRAFFIC CIRCUMSTANCES

3.1 ROAD NETWORK

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

- * the *M5 East Motorway* which passes in tunnel beneath Arncliffe with portals located to the east of West Botany Street and an off-load ramp to the Princes Highway
- * the *Princes Highway* arterial route which crosses Cooks River just to the east of Discovery Point
- * the State Road and arterial route of *Forest Road, Wickham Street and Marsh Street*
- * the Regional Road and sub-arterial route of *West Botany Street*
- * the Regional Road and collector route of *Wollongong Road, Arncliffe Street and Brodie Spark Drive* between *Forest Road* and *Princes Highway*
- * the minor collector road route linking through Turrella and connecting to *Wollongong Road via Brodie Spark Drive and Arncliffe Street*.

The access road system is constrained to some extent by the railway lines as well as the Cooks River and Wolli Creek systems.



LEGEND

- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR



ROAD NETWORK

FIG 3

3.2 TRAFFIC CONTROLS

The existing traffic controls which have been applied to the road system in the vicinity of the site (Figure 4) comprise:

- * the traffic signals at the Princes Highway and Brodie Spark Drive intersection
- * the other traffic signals along the Highway at the Gertrude Street, West Botany Street, M5 Ramp, Burrows Street and Forest Road intersections
- * the large roundabout at the Brodie Spark Drive/Arncliffe Street/Magdalene Terrace intersection
- * the roundabouts at the Allen Street/Arncliffe Street and Wollongong Road/Firth Street intersections
- * the traffic signals at the Wollongong Road/Kelsey Street intersection
- * the CLEARWAY and NO STOPPING restrictions along the Highway
- * the NO STOPPING restrictions along Brodie Spark Drive
- * the 60 kmph speed restriction on the Highway and 50 kmph restriction on the local and collector roads
- * the central median islands along the Highway and Brodie Spark Drive.

3.3 TRAFFIC CONDITIONS

An indication of the existing traffic conditions on the road system in the vicinity of the site is provided by data¹ published by the RTA and traffic surveys undertaken as part of this assessment.

¹ *Traffic Volumes for Sydney Region
Roads and Traffic Authority of NSW*