PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT

HILLY STREET PRECINCT, MORTLAKE

Assessment of Traffic, Transport and Parking Implications

June 2012
(Revision B)

Reference 06273

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EXECUTIVE SUMMARY

The consolidated site that is the subject of the Preferred Project submission occupies a total area of 27,431m^2 within the Mortlake Industrial Area which is subject to ongoing redevelopment for residential apartments.

The Concept Development Scheme comprises:

- *a staged development process*
- *15 building elements with basement carparking*
- *a total of 391 residential apartments*
- *extensive streetscape upgrades as well as a waterfront corridor and through site links.*

An Environmental Assessment was submitted to the Department of Planning and Infrastructure and the Department reviewed the submissions received consequential to the exhibited application.

The Department has determined that a Preferred Project Report should be prepared addressing identified issues including:

- ***Traffic** – The proposal should consider traffic management, parking and vehicle movement impacts both within the development and on the local streets. This is required to address the potential level of impact locally and on the sub-regional road network, including performance levels of junctions and intersections. It should factor in the nearby Breakfast Point and Cabarita developments and future redevelopment of other industrial sites on the Mortlake Peninsula*

- ***Parking** – Parking provision should be clarified, including the proposed number of on-site and on-street parking spaces*

- *Submissions by RMS, transport NSW and Council*

The potential traffic implications of the proposed development have been assessed in the context of:

- *the traffic and parking issues identified*
- *the existing recently constructed residential apartments in the area*
- *the other already approved residential apartment developments in the area*
- *the traffic generation of the existing uses on the development site*

The assessment documented in this report responds to the Traffic and Parking issues identified by DP&I, RMS, Transport NSW and Council and concludes that:

- *the projected traffic generation of the proposed development will be significantly less than that of the existing uses on the site*
- *the access road system serving the site will function better than it does at present because the traffic generation of the site will be less than it is at present and large industrial trucks will be removed from the local road network*
- *the proposed measures to promote public transport usage and to encourage/ provide for the pedestrian and cyclist modes will be satisfactory*
- *the proposed parking provision will be adequate and appropriate to the objective of minimising reliance on travel by private motor vehicle*
- *the peer review Traffic Study undertaken for Council adopts an unduly high traffic generation rate for residential apartments which is contrary to RMS Guidelines and Definitions as well as the results of the findings of a detailed specific survey of comparable existing developments on the Peninsula. It fails to take account of the significant existing traffic generation of site. It is apparent therefore that the findings of this study are not realistic and do not provide an accurate reflection of the potential traffic implications of development*

1. INTRODUCTION

This report has been prepared to accompany a Preferred Project submission to the Department of Planning and Infrastructure for residential apartment development on a large consolidated site in the 'Hilly Street Precinct' at Mortlake (Figure 1).

A major ongoing transformation has been occurring for some time throughout the Metropolitan Area where superfluous industrial lands are being redeveloped for residential apartments. This landuse change is particularly evident in desirable waterfront areas along the Parramatta River such as Rhodes Peninsula, Meadowbank and Putney. The Mortlake area is also subject to this change where industrial sites such as Breakfast Point have been and are continuing to be redeveloped for residential apartments.

The consolidated development site which is subject to the current application involves total area of some 27,431m^2 located generally to the west of Hilly Street and to the north of Edwin Street. The envisaged development would comprise:

* a staged development process with 6 precincts (stages)
* 15 building elements with basement carparking
* a total of 391 residential apartments
* upgraded streetscapes
* shared pedestrian/cyclist provisions as well as through site linkages.

The purpose of this report is to:

* describe the site, the existing uses and the proposed development scheme as well as the other development circumstances in the area

* describe the road network serving the site and the prevailing traffic conditions

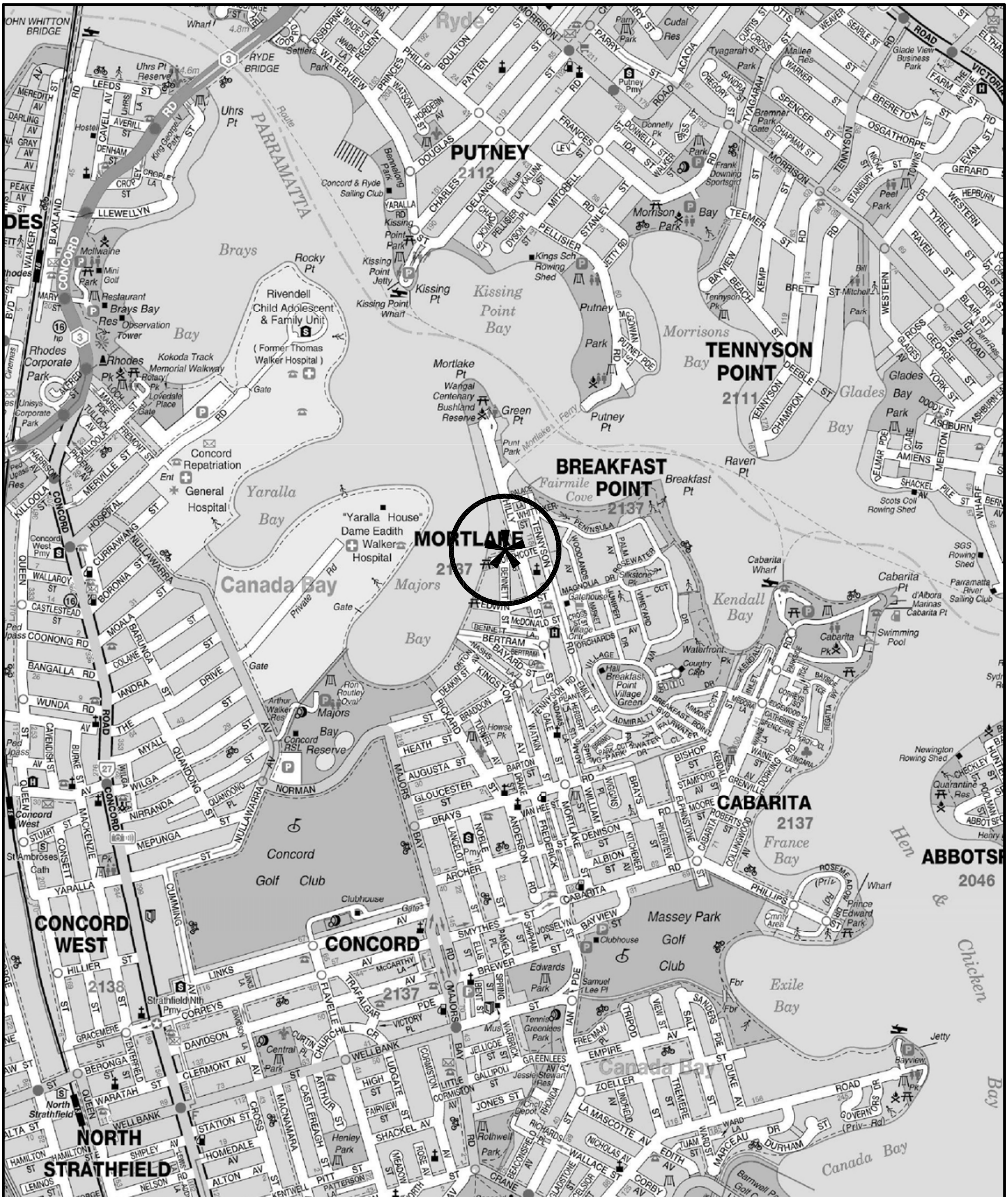
* assess the potential traffic implications of the proposed development

- assess the adequacy of the proposed parking provision

- assess the proposed provisions for pedestrians and cyclists

- assess the potential provisions to encourage and facilitate travel by public transport

- respond to the identified Traffic and Parking issues and the submissions from RMS, Transport NSW and Council



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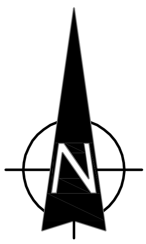


Location

Fig 1

2. PROPOSED MASTERPLAN

2.1 SITE, CONTEXT AND EXISTING USE

The development site (Figure 2) is a consolidation of 28 allotments occupying a total area of some 27,431m². The irregular shaped site extends easterly from Hilly Street (and northerly from Edwin Street) to the western shore of Majors Bay.

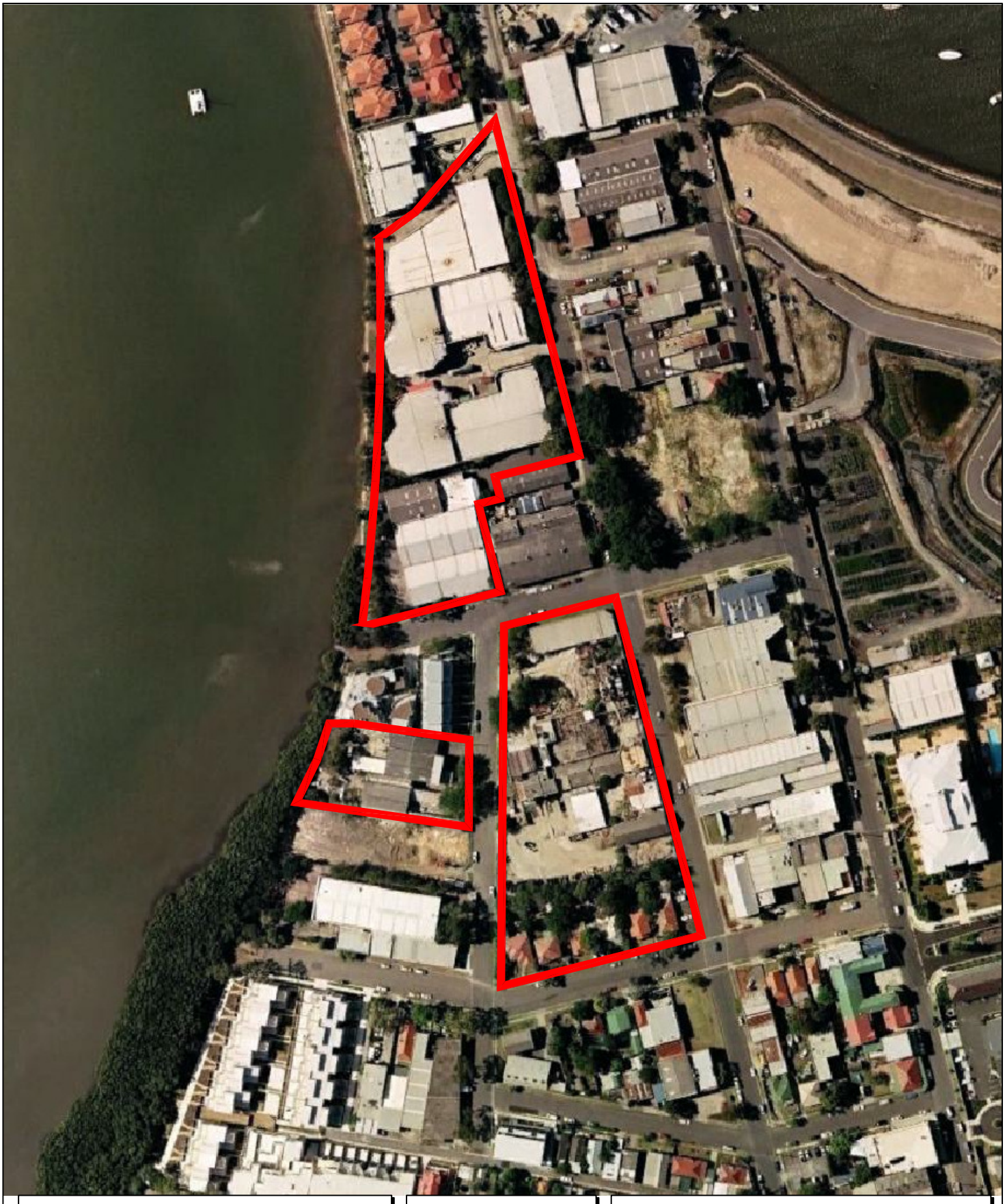
The site represents remnants of the Mortlake Industrial Area where a number of sites have been or are being redeveloped for residential apartments including the large 'Breakfast Point' site located just to the east. There are existing adjoining residential developments extending to the north along Hilly Street as well as other recently completed developments in the vicinity.

The development site is subject to a range of current and former industrial uses together with 6 'cottage' dwellings along the Edwin Street frontage. The existing uses are identified in the schedule provided in Appendix A and summarised in the following:

- 17,015m^2 GFA manufacturing/office
- 1,635m^2 GFA warehouse
- 242 employees/tenants
- 6 dwellings.

2.2 DEVELOPMENT SCHEME

The envisaged development scheme involves an arrangement of contemporary residential apartment buildings of various levels with basement carparking involving 6 stages of development. The development would retain the existing forms of the long established public roads with significant streetscape enhancements and provisions for pedestrian access and circulation. These enhancements will include 'through site' links and the envisaged 15 buildings will be surrounded by extensive



LEGEND

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SITE

FIG 2

public and private open space areas including a dedicated foreshore strip. The envisaged 'make up' of the development is as follows:

58 x one-bedroom
200 x two-bedroom
133 x three-bedroom
Total 391 apartments

Parking would be accommodated in basement levels with 7 separate access connections to the frontage roads.

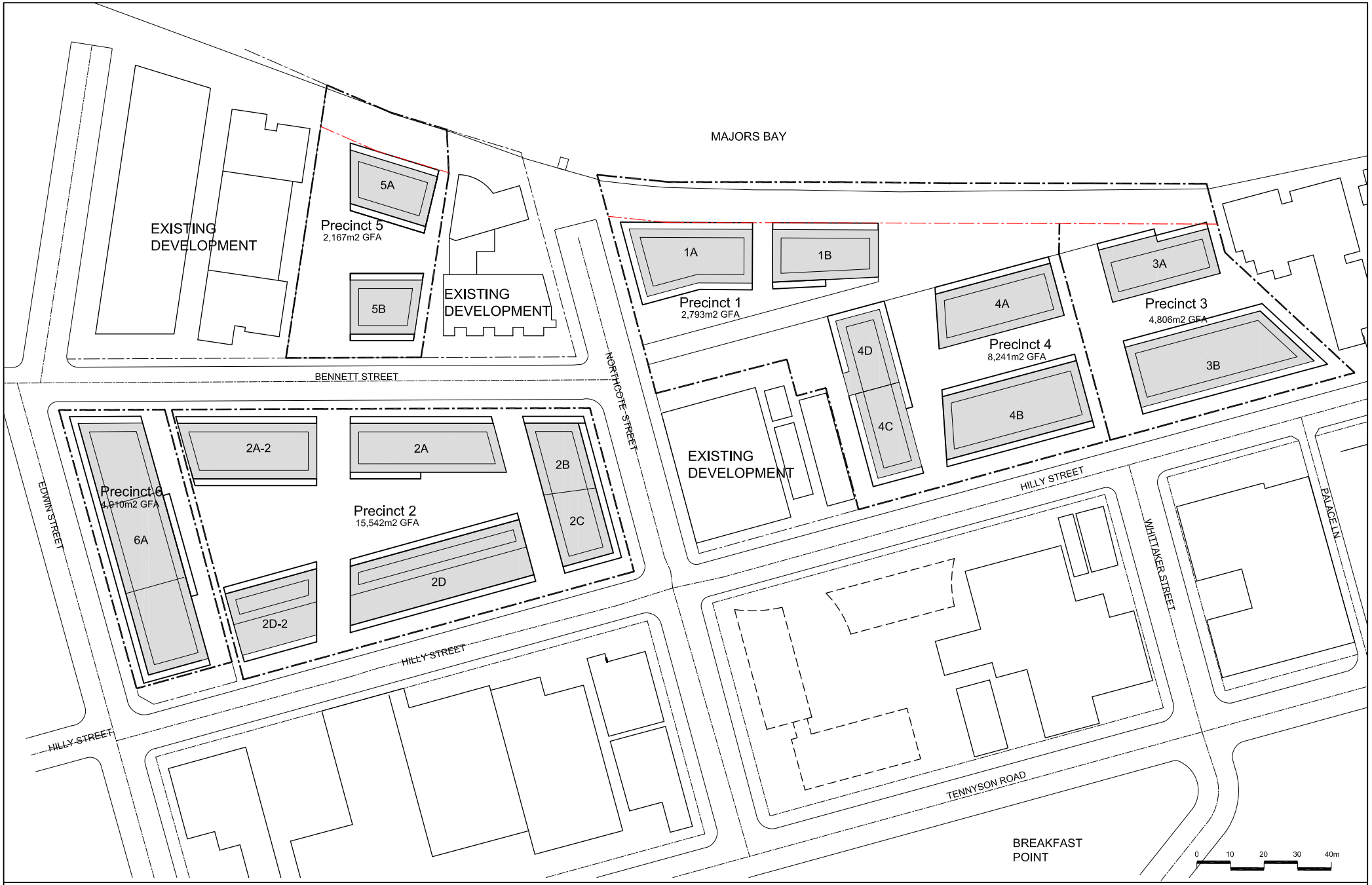
Details of the Concept Development Scheme are provided on the plans prepared by Cox Richardson Architects which accompany the application and are reproduced in part overleaf.

2.3 OTHER DEVELOPMENT CIRCUMSTANCES

There are other development circumstances in the Mortlake area and it is appropriate that assessment of the proposed development scheme has regard for the traffic implications of:

* developments which are approved and not constructed on individual sites (46 apartments)

* the remaining apartments to be constructed in the Breakfast Point development (880 apartments).



Majors Bay Development

for Mortlake Consolidated Pty Ltd

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SITE IDENTIFICATION PLAN

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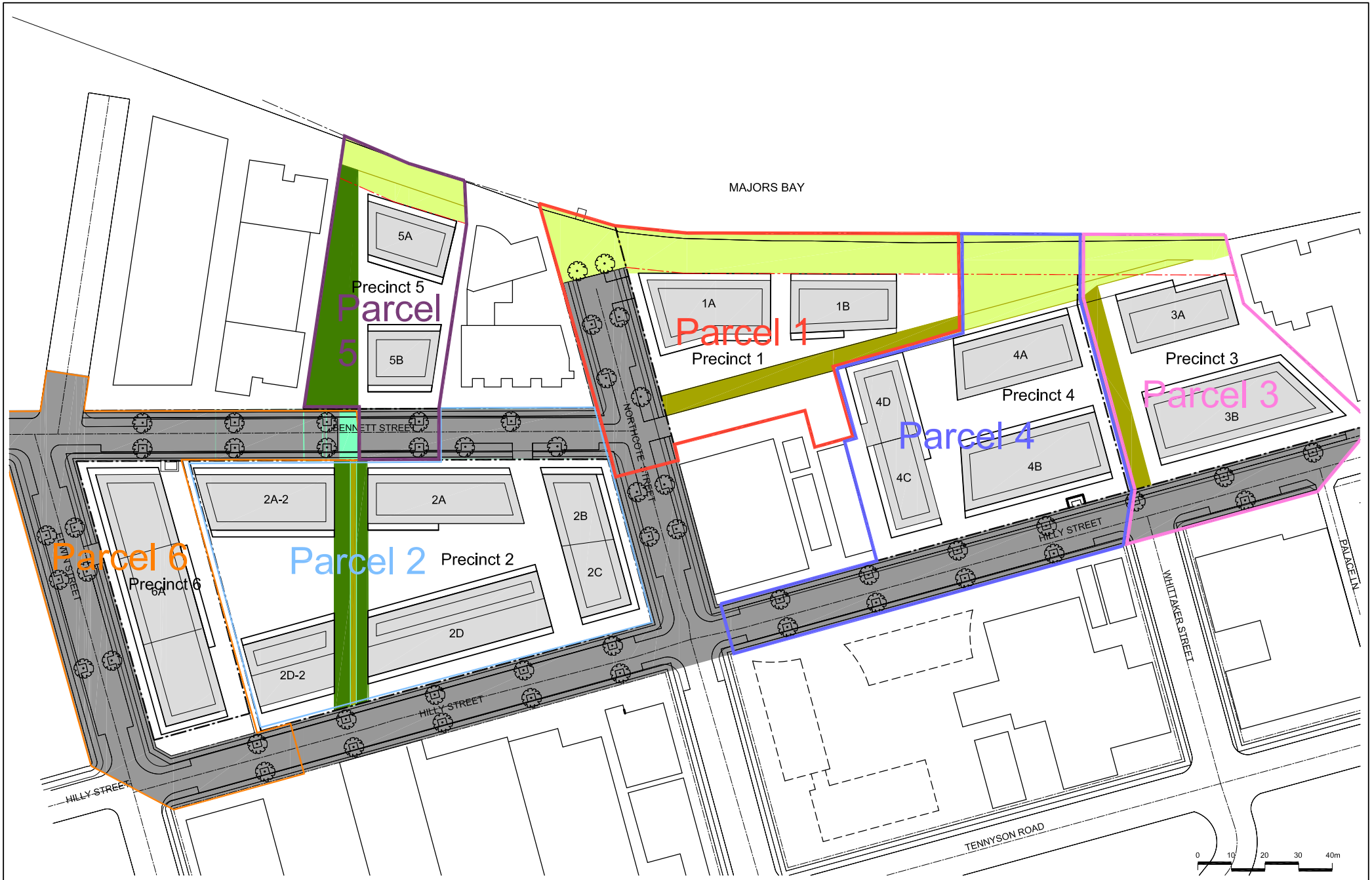
Date
October 2012



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INDICATIVE STAGING PLAN

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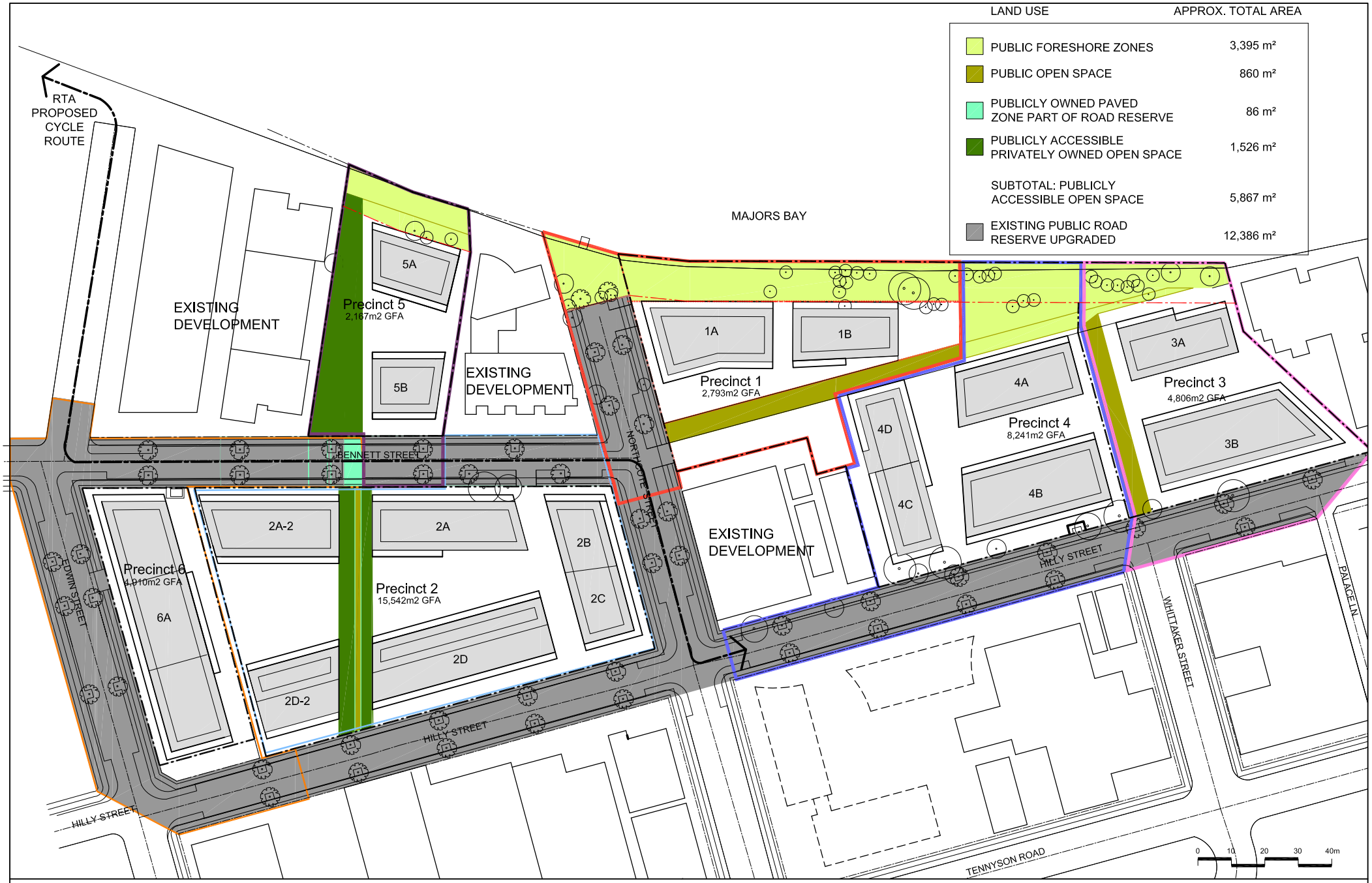

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PUBLIC DOMAIN PLAN

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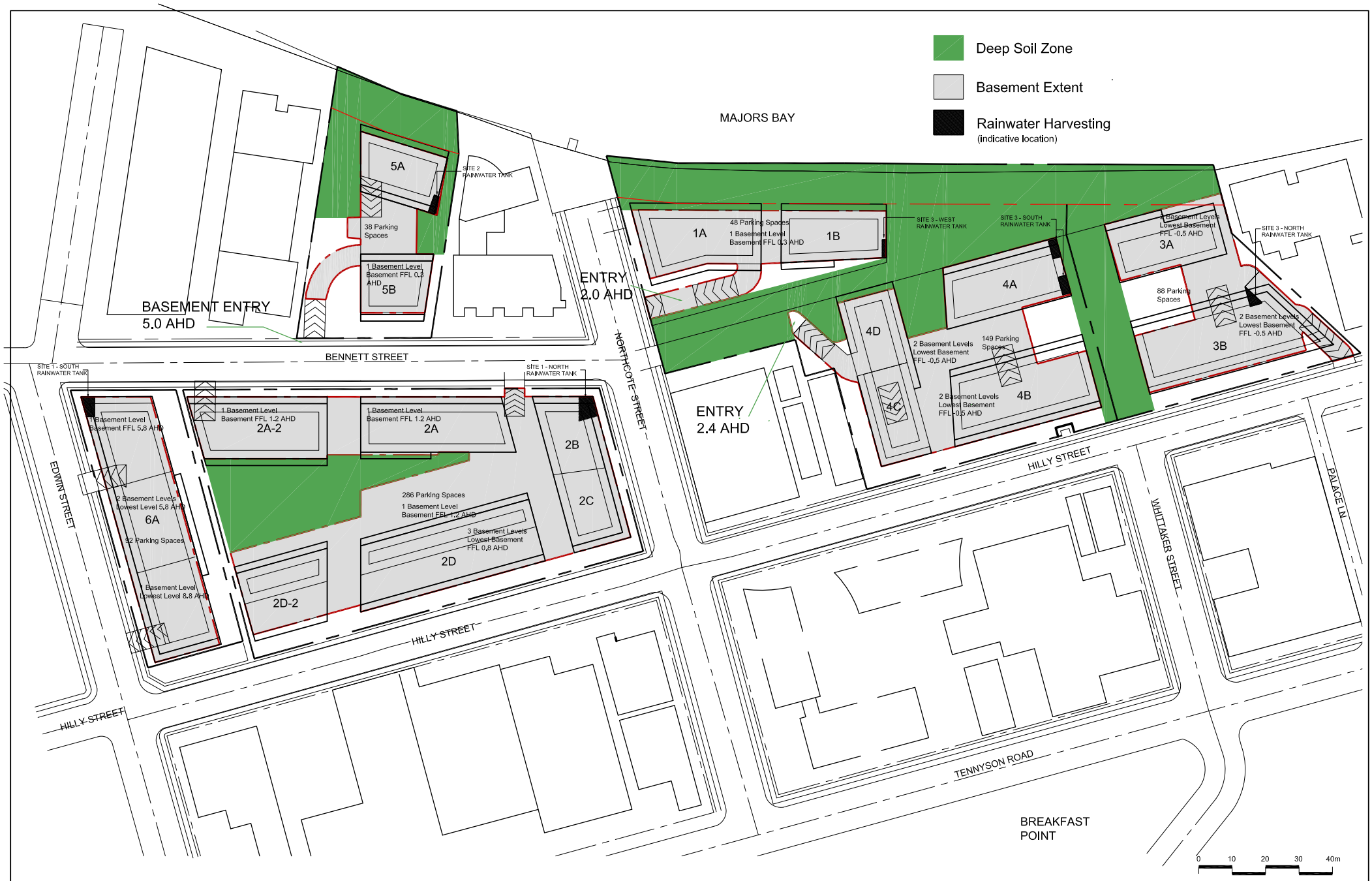

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BASEMENT EXTENTS

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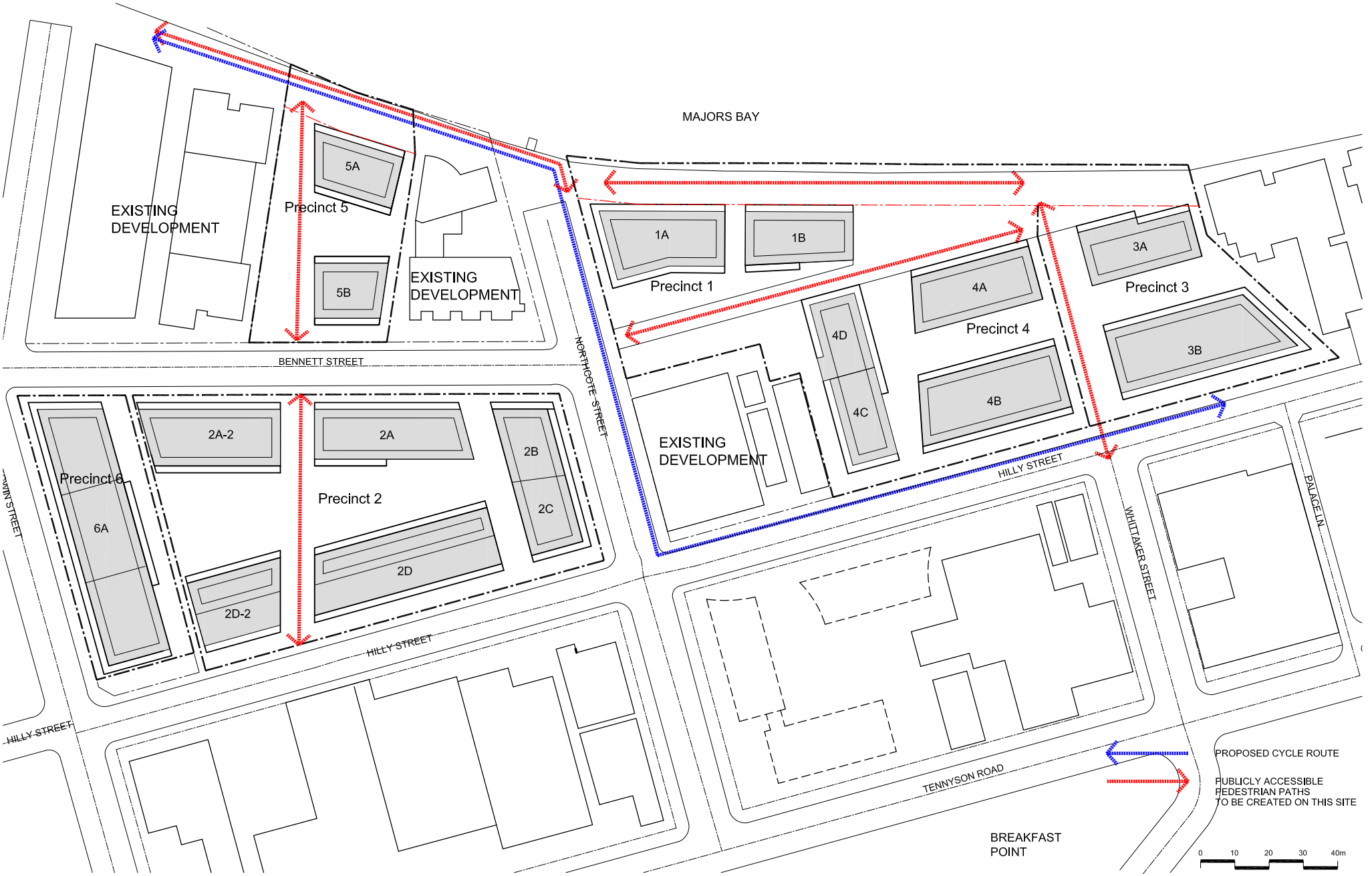

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PEDESTRIAN AND CYCLE NETWORKS

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3. ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

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

* *M4* Motorway – a private toll road and major arterial route connecting between Concord and Penrith

* *Great Western Highway (Parramatta Road)* – a State Highway and arterial route which connects between the City and the Blue Mountains crossing

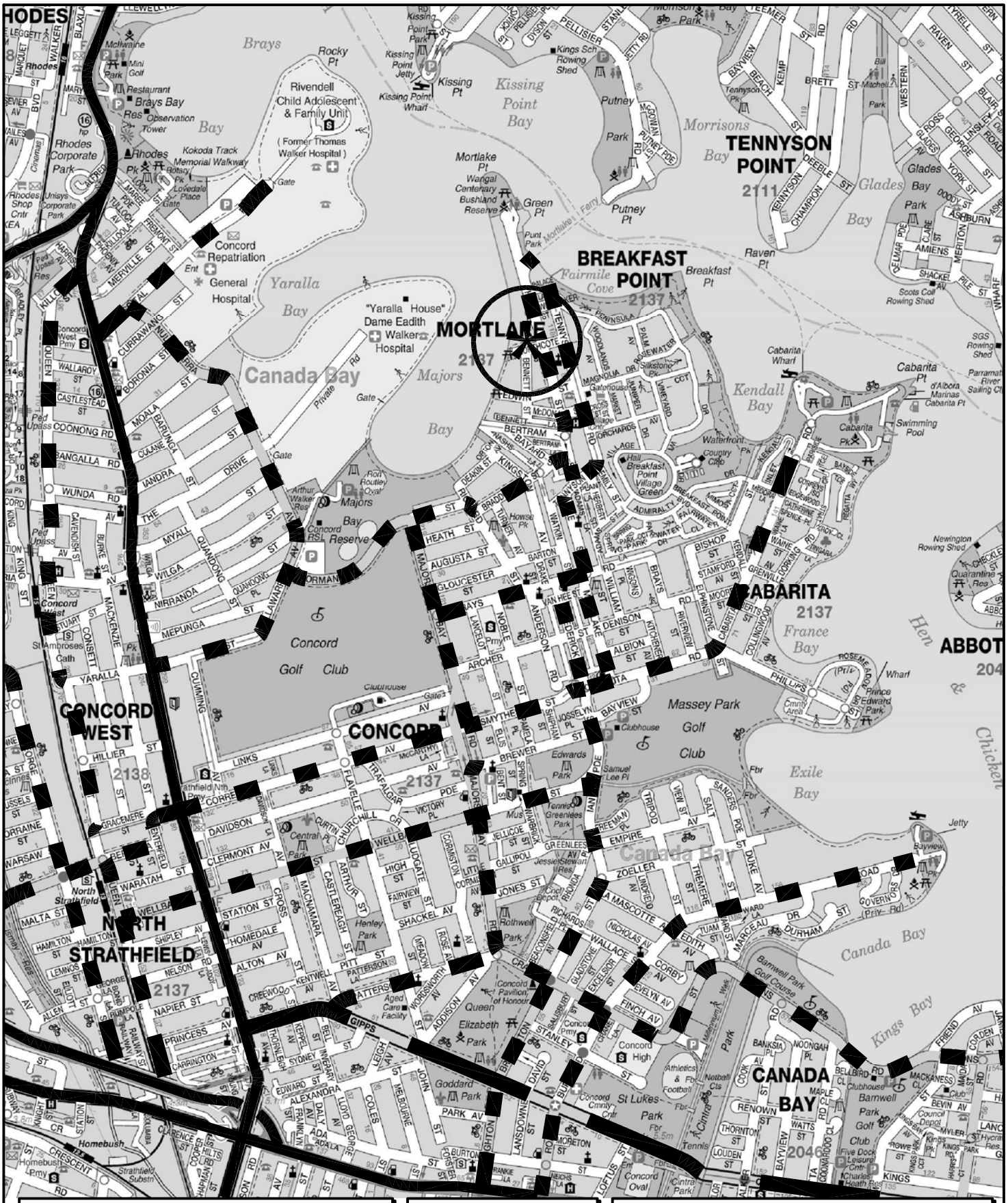
* *Homebush Bay Drive and Concord Road (north)* – a State Road and arterial route being part of METROAD 3 connecting north-south across the Metropolitan area

* *Concord Road (south)* – a State Road and sub-arterial route connecting between Strathfield and Rhodes

* *Patterson Street-Gipps Street-Queens Road* – a State Road and sub-arterial route running parallel to Parramatta Road between Strathfield and Five Dock

* the 'higher order' collector road system involving the Regional Roads of:

    - Nullawarra Avenue/Norman Street/Hospital Road
    - Majors Bay Road/Crane Street/Lyons Road
    - Lyons Road
    - Broughton Road
    - Burwood Road



LEGEND

- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR

N

ROAD NETWORK

FIG 3

* the 'lower order' minor collector road routes of:

    - Tennyson Road/Gale Street/Mortlake Street/Ian Parade
    - Correys Road/Smythes Street/Cabarita Road
    - Wellbank Street
    - Hilly Street/Braddon Street.

3.2 ROAD GEOMETRY

Hilly Street and Bennett Street are relatively level in the vicinity of the site while Northcote Street and Edwin Street have downgrades towards the west. The roadways in the vicinity of the site have the following dimensions:

	Total Reserve	Roadway	Footways
Hilly Street	16.0	10.6	2.7
Whittaker Street	20.0	13.0	3.5
Northcote Street	20.0	13.0	3.5
Bennett Street	16.0	10.6	2.7
Edwin Street	20.0	13.0	3.5

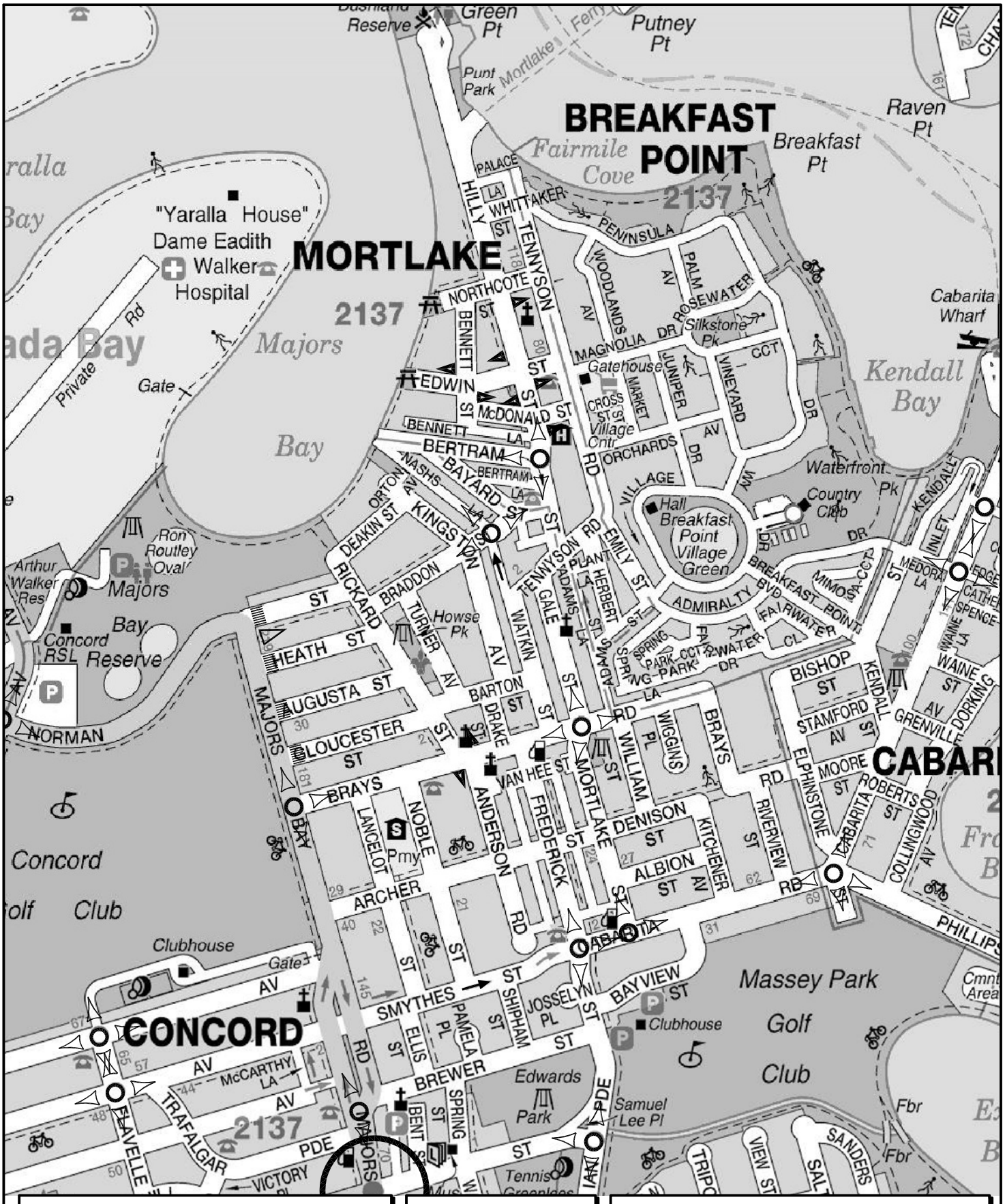
3.3 TRAFFIC CONTROLS

The traffic controls which have been applied to the road system relative to the site are depicted on Figure 4a (State and Regional Road controls) and Figure 4b (Precinct Controls). The major access controls comprise:

* the traffic signals along Concord Road including the Hospital Road, Correys Road, Wellbank Street and Paterson Street intersections

* the traffic signals along Parramatta Road including the Concord Road, Broughton Street and Burwood Road intersections

* the traffic signals at the Majors Bay Road/Wellbank Street intersection



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- TRAFFIC SIGNAL CONTROL
- ROUNDABOUT
- RESTRICTED TURNING MOVEMENT
- ONE WAY
- GIVE WAY
- LATM

TRAFFIC CONTROLS

FIG 4

* the traffic signals along Crane Street at the Broughton Street and Burwood Road intersections. Details of these intersection are provided on the traffic signal design plans reproduced in Appendix B

* the roundabouts at intersections along Flavelle Street, Majors Bay Road and Nullawarra Avenue

* the closure of road connections along the eastern section of Crane Street/Lyons Road

* the numerous right-turn prohibitions at intersections along the arterial routes.

The local precinct controls comprise:

* roundabouts at the intersections of:
    - Hilly Street/Bertram Street
    - Braddon Street/Watkin Street
    - Mortlake Street/Brays Road
    - Cabarita Road/Frederick Street
    - Cabarita Road/Phillips Street
    - Wellbank Street/Ian Parade

* GIVE WAY/SIGN signs at the following:
    - Northcote Street at Hilly Street
    - Edwin Street at Hilly Street
    - McDonalds Street at Hilly Street
    - Edwin Street at Bennett Street
    - Norman Street (east) at Majors Bay Road

* ONE-WAY restrictions on Smythes Street and Watkin Street

* LATM constraints along Frederick Street and the roads connecting with the northern section of Majors Bay Road

* the central median island along Tennyson Road across the Gale Street intersection.

3.4 TRAFFIC CONDITIONS

An indication of the existing traffic conditions on the road system in the vicinity of the site is provided by data[1] published by RMS and traffic surveys undertaken as part of this assessment.

The data provided by RMS is expressed in terms of Annual Average Daily Traffic (AADT) and the latest recordings are provided in the following:

	2005	**2002**	**1999**	**1996**
Concord Road north of Correys Road	24752	23405	26217	27668
Parramatta Road west of Walker Street	84732	84708	82062	81342
Lyons Road at Canada Bay	19248	18653	20400	17216
Queens Road west of Walker Street	25669	24764	26761	25632
Putney Punt	241	228	255	277
Burwood Road at Gipps Street	10315	11781	11342	11817
Correys Road at Concord Road	7082	6516	5323	4952
Broughton Road (southbound) at Parramatta Road	4250	3718	3934	3732
TOTAL	**176289**	**173773**	**176294**	**172636**

This traffic data indicates relatively stable traffic flow circumstances with some minor fluctuations over the past decade and prevailing flows which are generally very similar to those recorded in 1999.

Detail traffic surveys have recently been undertaken at intersections in the Mortlake area during the morning and afternoon peak periods and the results of those surveys are provided in Figures 5a and 5b. The additional recorded traffic flows at 3 of the principal collector road intersections during the peak periods are summarised in the following:

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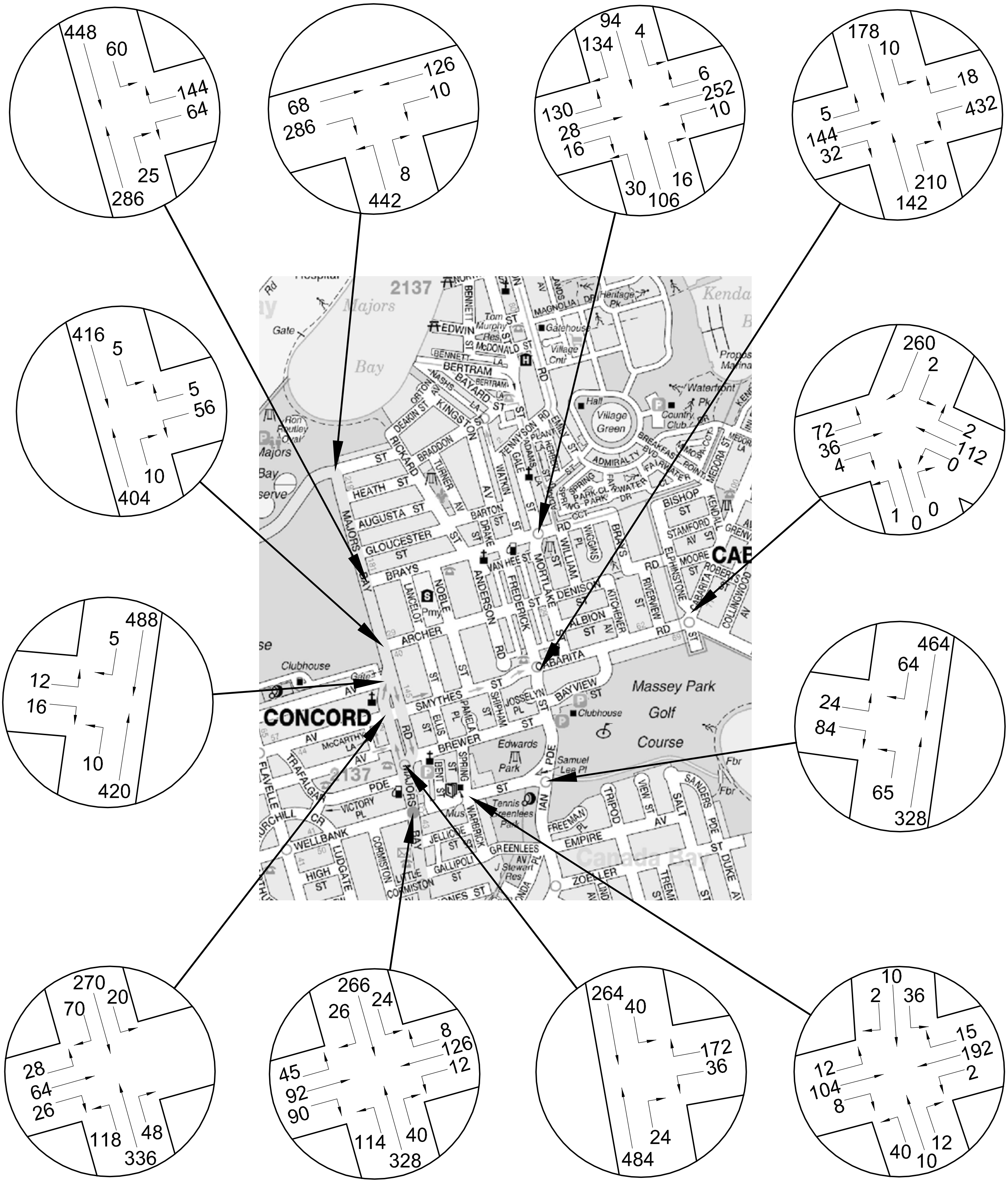
[1] *Traffic Volumes for Sydney Region*
Roads and Maritime Services



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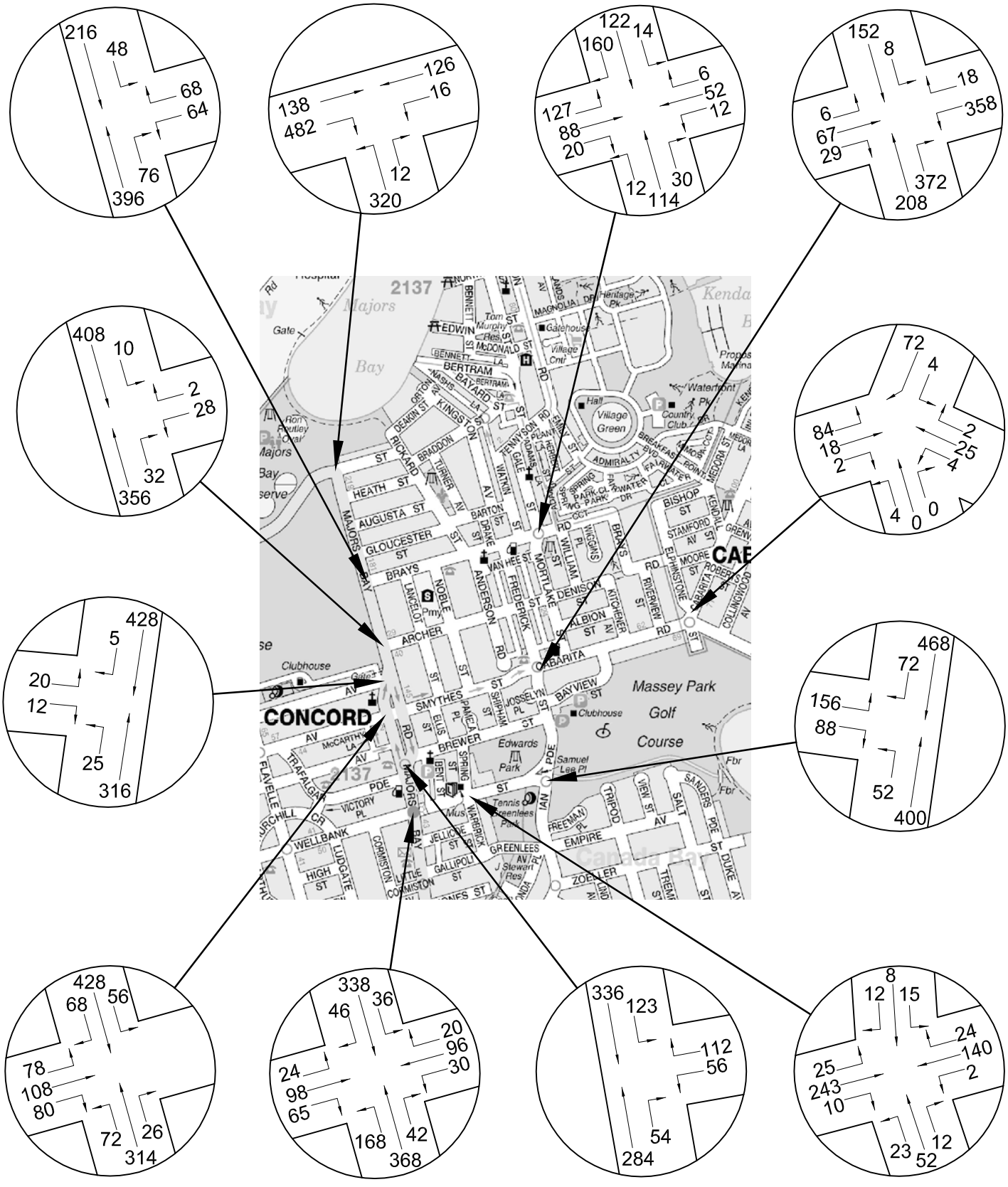
EXISTING MORNING PEAK TRAFFIC VOLUMES

FIG 5a



LEGEND

EXISTING AFTERNOON PEAK TRAFFIC VOLUMES

FIG 5b

		AM	PM
Burwood Road	Northbound	40	108
	Right-turn	91	97
	Left-turn	96	150
	Southbound	109	81
	Right-turn	9	10
	Left-turn	155	79
Crane Road	Eastbound	567	724
	Right-turn	147	203
	Left-turn	11	14
	Westbound	764	784
	Right-turn	35	148
	Left-turn	69	85
Broughton Road	Northbound	153	254
	Right-turn	67	114
	Left-turn	89	158
	Southbound	245	214
	Right-turn	6	15
	Left-turn	258	254
Crane Street	Eastbound	400	573
	Left-turn	6	13
	Westbound	593	553
	Right-turn	150	265
	Left-turn	126	126
Paterson Street	Eastbound	107	200
	Left-turn	24	41
Crane Street	Westbound	207	233
	Right-turn	448	459
Majors Bay Road	Right-turn	16	44
	Left-turn	279	391

The traffic flows (total two-way) along the principal access routes during the morning and afternoon peak periods are summarised in the following:

	AM	**PM**
Norman Street west of Majors Bay Road	922	1066
Ian Parade south of Wellbank Street	941	1088
Correys Road west of Majors Bay Road	306	406
Wellbank Street west of Majors Bay Road	493	497
Majors Bay Road south of Wellbank Street	850	1011

Peak hour traffic flows in urban areas traditionally represent some 10% of the AADT flow (Austroads Section 3) and on that basis the flows along the important collector road routes providing access to and through the area are provided in the following:

	AM/PM Peak
Burwood Road at Gipps Street	1000
Broughton Road at Parramatta Road	850
Correys Road at Concord Road	700
Lyons Road at Canada Bay	1900

The traffic flows on these collector roads are quite significant, however it is relevant that the flows contain a substantial element of ‘regional’ flows which are bypassing the congested Parramatta Road arterial route and connecting intersections.

4. PUBLIC TRANSPORT AND BICYCLE NETWORKS

Public Transport

The Mortlake area has public transport services which comprise:

Bus Services

The bus services are operated by Sydney Buses and details of these routes are Shown on Figures 6a and 6b and comprising:

Route 439 AND L39 - operate between Mortlake and the City along Hilly Street and Tennyson Road with a 30 min. peak frequency

Route 460 – A daily daytime service between Five Dock, Burwood, Concord and Concord Hospital along a route including Majors Bay Road

Route 462 – A daily early morning and evening service between Mortlake, Burwood (Railway Station), Croydon Park and Ashfield (Railway Station).

Route 464 – A daily daytime service between Mortlake, Burwood (Railway Station), Croydon Park and Ashfield (Railway Station).

Route 466 – A daily daytime service between Cabarita Wharf, Burwood (Railway Station), Croydon Park and Ashfield.

Route 463 – A weekday daytime service between Cabarita Wharf, Cabarita Junction and Burwood (Railway Station).

Between 7.00am and 9.00am there are 10 buses departing from Mortlake (Whittaker Street) while between 7.00am and 9.00am there are 10 buses departing from Cabarita Wharf. Thus, there is a total of 20 buses departing from Cabarita junction

LEGEND

BUS SERVICES

FIG 6

(Frederick Street/Cabarita Road intersection) during the 2 hour morning period with a similar number returning during the 2 hour afternoon peak.

Route 502 – A weekday peak hour service between Bayview Park and Wynyard.

The existing bus stops in the Mortlake area are devoid of any supplementary facilities except for the shelter which is provided on the eastern side of Tennyson Road at Breakfast Point.

Ferry Services

Ferry services operate from Cabarita Wharf with 7 services departing to Darling Harbour and Circular Quay between 7.30am and 9.30am in the morning and 6 services returning between 5.30 and 7.30pm in the afternoon.

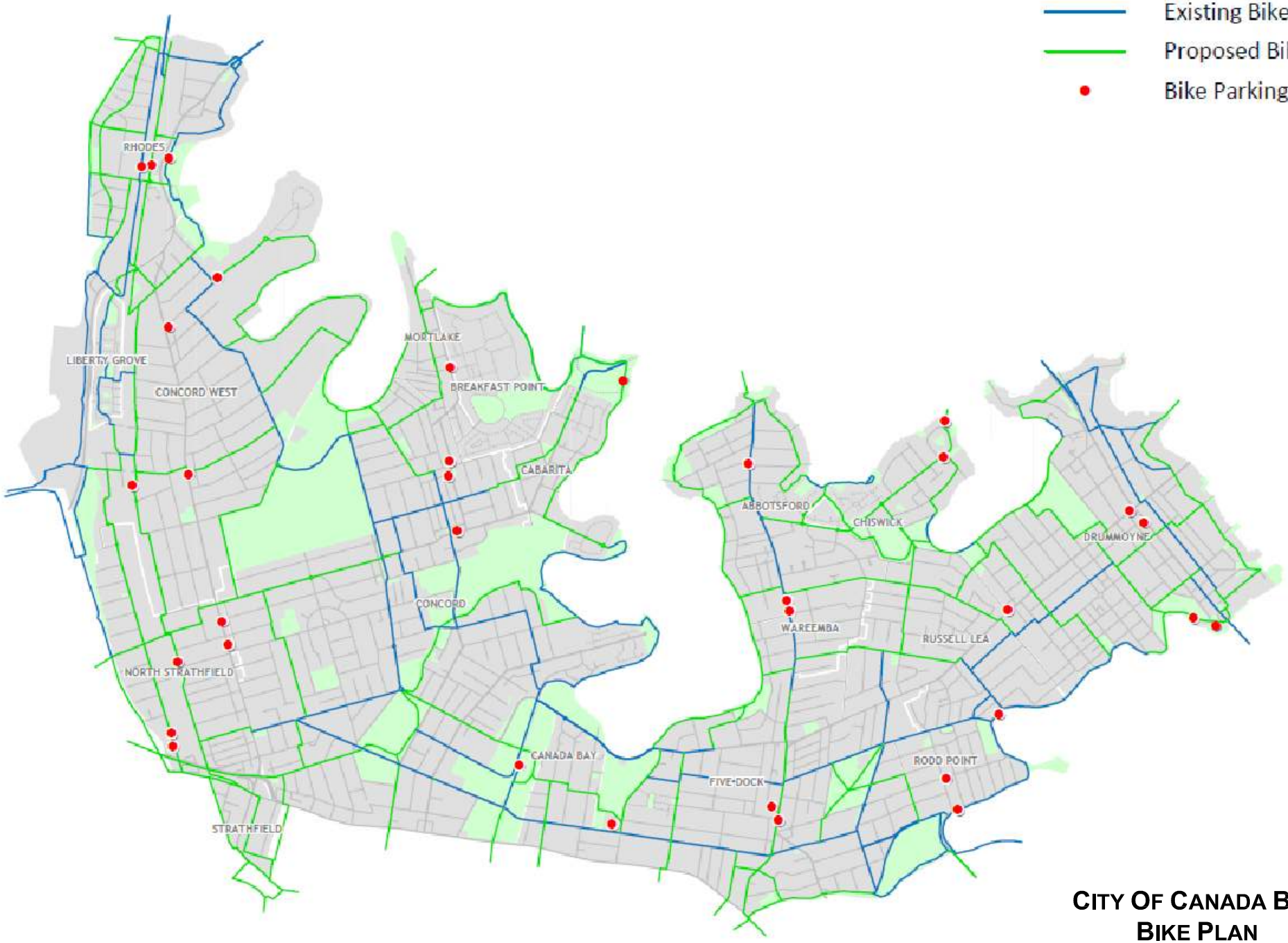
Rail Services

Rhodes and Concord West Railway Stations are located some 3 kms to the west and can be accessed by kiss'n'ride travel while Burwood and Ashfield Railway Stations can be accessed by the STA bus services.

Bicycle Network

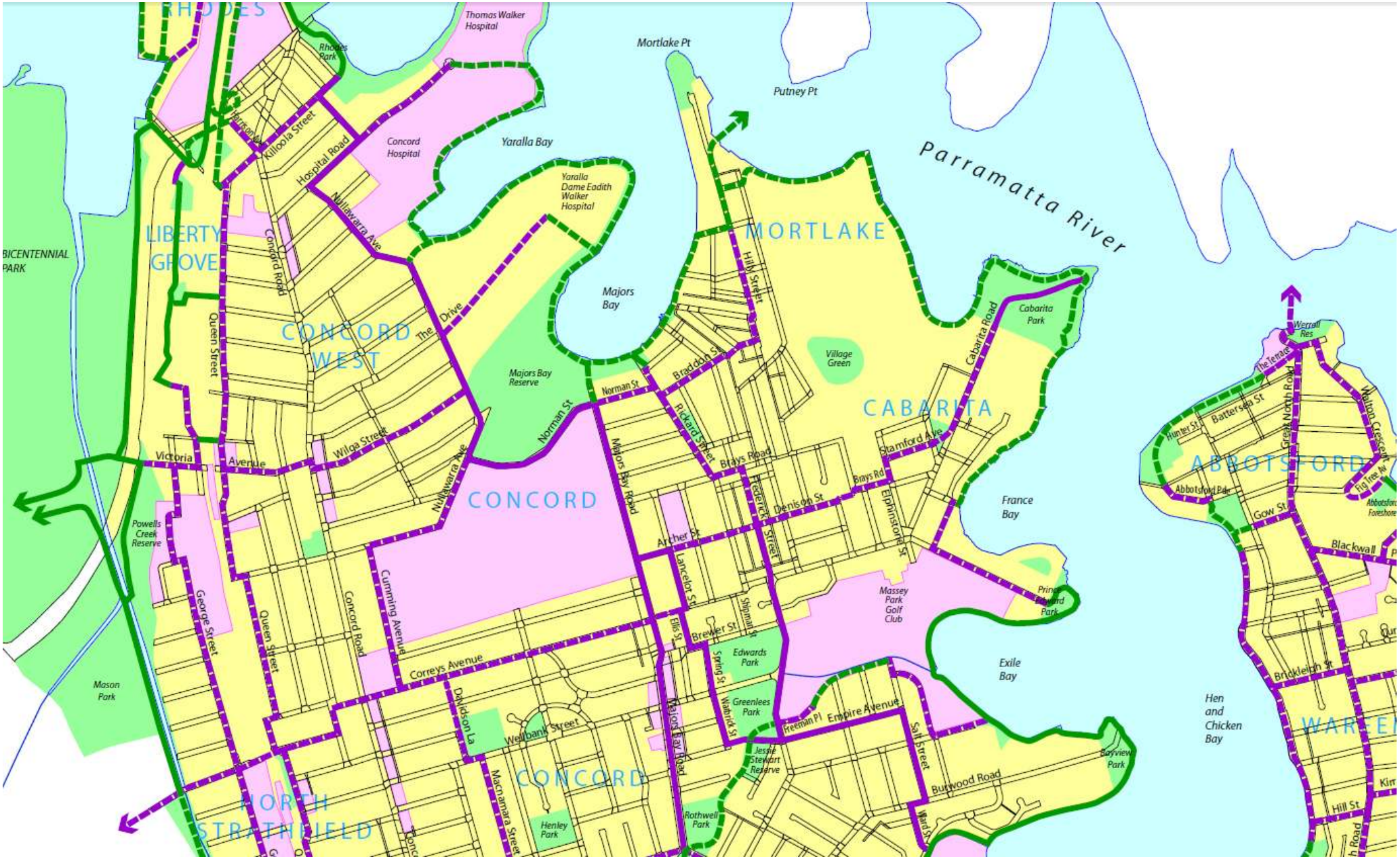
Details of Council's existing and proposed bicycle route provision are identified on the diagrams overleaf. There are no existing routes in the Mortlake area, however future routes are proposed along the shore of Majors Bay (where the development of the subject site will make a significant contribution) with linkage to the existing route along Majors Bay Road and Norman Street.

Another link route is proposed along Hilly Street and along the Breakfast Point foreshore.



CITY OF CANADA BAY
BIKE PLAN

Scale 1 : 25,000 @ A4


RHODES
Thomas Walker Hospital
Rhodes Park
Mortlake Pt
Putney Pt
Parramatta River
Killoola Street
Hospital Road
Concord Hospital
Yaralla Bay
Yaralla Dame Eadith Walker Hospital
Nullawarra Ave
LIBERTY GROVE
BICENTENNIAL PARK
Concord Road
Queen Street
The Drive
CONCORD WEST
MORTLAKE
Majors Bay
Majors Bay Reserve
Norman St
Hilly Street
Braddon St
Rickard Street
Village Green
Cabarita Road
Cabarita Park
CABARITA
Werrell Res
The Terrace
Great North Road
Hunter St
Battersea St
Welton Crescent
ABBOTSFORD
Abbotsford Pde
Fig Tree Pde
Gow St
Blackwall
Victoria Avenue
Wilga Street
Powells Creek Reserve
CONCORD
Majors Bay Road
Arthur St
Lancelot St
Frederick Street
Denison St
Brays Road
Stamford Ave
Elphinstone St
France Bay
Massey Park Golf Club
Prince Edward Park
George Street
Queen Street
Concord Road
Cumming Avenue
Correys Avenue
Brewer St
Ellis St
Shipman St
Spring St
Edwards Park
Greenlees Park
Exile Bay
Hen and Chicken Bay
Brickleigh St
Mason Park
Davidson La
Wellbank Street
Macnamara Street
Henley Park
Majors Bay Road
Freeman Pl
Empire Avenue
Jessie Stewart Reserve
Rothwell Park
Salt Street
Bayview Park
Burwood Road
Ward St
Hill St
NORTH STRATHFIELD

Job No:
4774

Date:
10/7/2004

Land-use

- Council area
- Public open space
- Trip generators (schools, recreation, retail, industry etc)

Bicycle network route types

- Off-road (physically separated) existing
- Off-road (physically separated) future
- On-road (bicycle lanes) existing
- On-road (bicycle lanes) future

5. ACCESS

5.1 ACCESS ROAD SYSTEM

The principal immediate access route to/from the development site will be the existing collector road route of Mortlake Street, Gale Street and Tennyson Road linking to Hilly Street, Edwin Street, Northcott Street and Bennett Street (where the site accesses will be located). There will be some movement to/from the Norman Street/Nullawarra Avenue collector route and via the other collector routes of Hospital Road, Correys Road and Wellbank Street while Majors Bay Road/Ian Parade/Broughton Street and Burwood Road/Crane Street will make up the collector road distribution.

The access roads adjacent to the site would be upgraded while retaining their existing general form. This upgrading will involve:

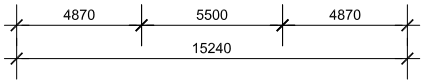
* widened footways and pathways
* indented parking bays (by kerb extension)
* street trees
* lighting.

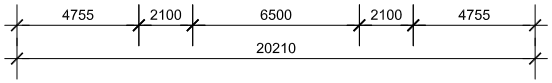
Because of the existing relatively narrow road reserves it will not generally be possible to provide dedicated on road bicycle lanes, however there will be footways 2.5 metres wide providing for shared pedestrian/bicycle use. Details of the proposed street sections are provided on the drawings provided overleaf.

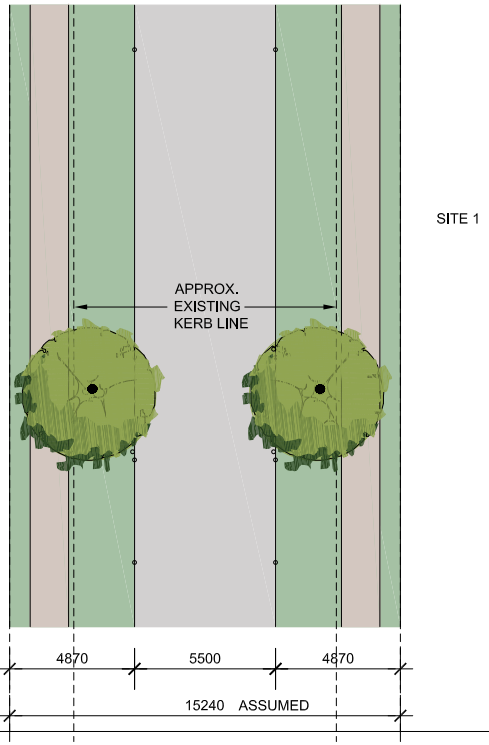
5.2 SITE ACCESS

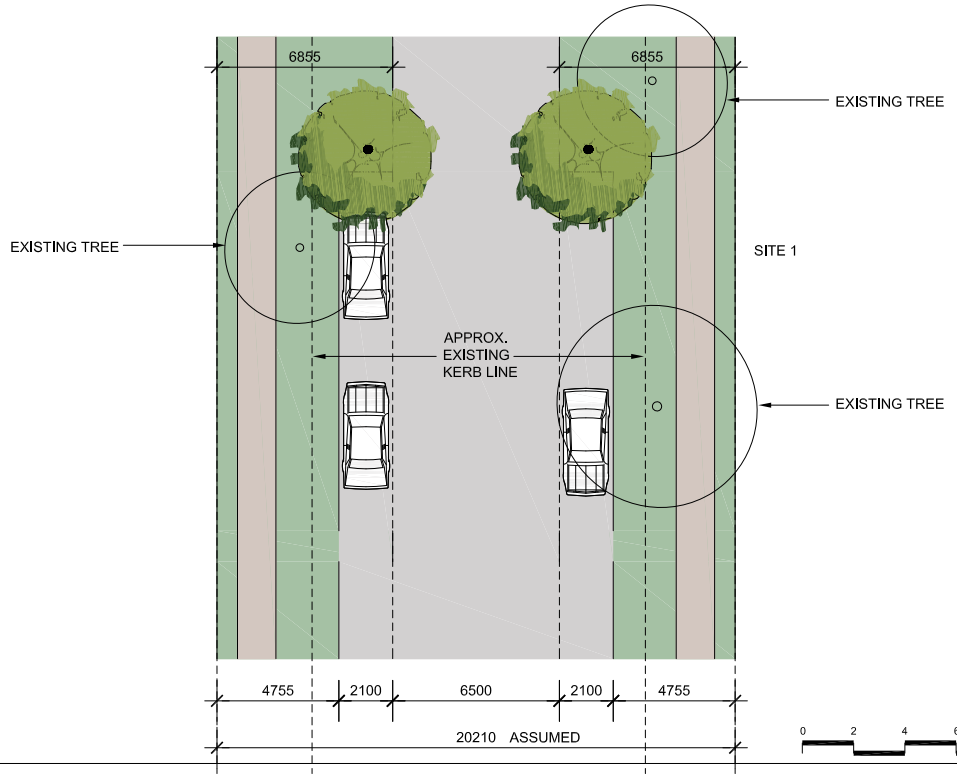
Vehicle access for the envisaged 15 individual buildings would involve 7 separate access driveways and the principles which have been followed in deriving these access points are as follows:

* minimal access on the Hilly Street collector route









Majors Bay Development for Mortlake Consolidated Pty Ltd

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STREET SECTIONS

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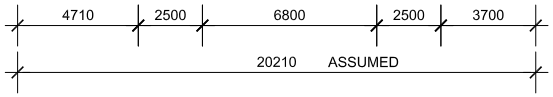
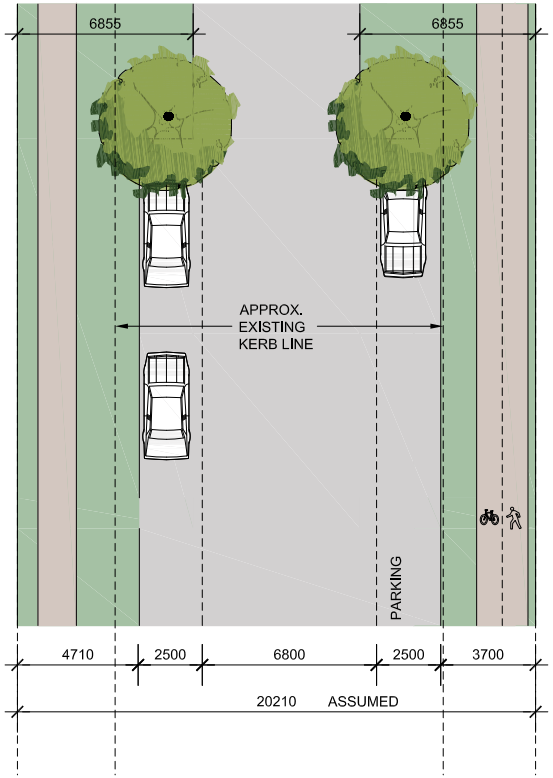
Date
October 2012

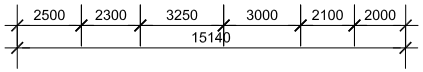
SITE 3



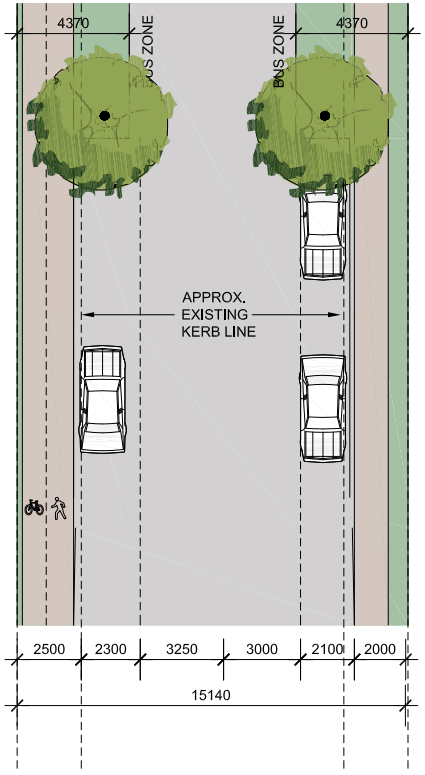


SITE 3

SITE 1



SITE 1



Majors Bay Development for Mortlake Consolidated Pty Ltd

COX mecone

PROPOSED STREET SECTIONS

Drawing Number_REV
CP_02_16_02

Date
October 2012

* combined building accesses where possible.

The identified vehicle access points will:

* avoid concentration of access movements
* provide flexibility of access routes
* ensure that vehicles can enter and depart accesses in a forward direction.

6. TRAFFIC

6.1 TRAFFIC GENERATION

The Roads and Maritime Services Guide to Traffic Generating Developments contains criteria relevant to 'high density' residential apartment buildings. This data was established by survey of some 20 buildings located in various Metropolitan areas including some near railway stations (eg Chatswood) and some away from good public transport (eg Brighton-Le-Sands). The RMS criteria for residential (high density) apartments is 0.29 vtph per apartment during the morning and afternoon on-street peak periods.

In order to establish the intrinsic traffic generation characteristics of residential apartments in the Mortlake area surveys were undertaken of 5 fully occupied apartment blocks in the Breakfast Point Precinct. These surveys involved recording the vehicle movements IN and OUT during the morning and afternoon peak periods for:

'Mulberry Hill'	60 apartments
'Celeste'	40 apartments
'Rosewood'	40 apartments
'Ascot'	20 apartments*
'Carolina'	40 apartments*
Total	**200 apartments**

** common access*

The results of those surveys are provided in Appendix C and summarised in the following:

TOTAL ACCESS MOVEMENTS

AM		PM	
IN	**OUT**	**IN**	**OUT**
8	52	47	7
60 vtph		**54 vtph**	

These results indicate average generation rates per apartment of:

AM - 0.30 vtph
PM - 0.27 vtph

The results of these surveys are entirely consistent with the RMS Development Guideline criteria of 0.29 vtph and validates the applicability of using the RMS High Density Residential criteria.

6.2 MODE SPLIT AND DISTRIBUTION

In order to establish the intrinsic travel mode split and car route distribution for apartment occupiers in the Mortlake area questionnaires were delivered to some 200 existing occupied apartments in Breakfast Point. Details of the questionnaire are provided in Appendix E and the results of the responses are provided in the Supplementary Papers and summarised in the following:

Mode Split

Car	71% (includes car to train)
Bus	12%
Ferry	12%

Retiree 3%

Work at Home 2%

Vehicle Access Point

A.	Hospital Road at Concord Road	23%
B.	Correys Road at Concord Road	21%
C.	Wellbank Street at Concord Road	9%
D.	Paterson Street at Concord Road	1%

E.	Broughton Street at Parramatta Road	5%
F.	Burwood Road at Parramatta Road	1%
G.	Queens Road	2%
H.	Lyons Road	18%
I.	Putney Punt	20%
	Total	**100%**

6.3 TRAFFIC IMPACT

The potential traffic implications of development have been considered in relation to the existing development on the subject site and approved redevelopment on other sites in the vicinity.

a) Subject Site – Existing Development vs Residential Development

The proposed development of 391 apartments, on the basis of the established generation characteristics, would generate the following traffic movements in the morning and afternoon peak periods:

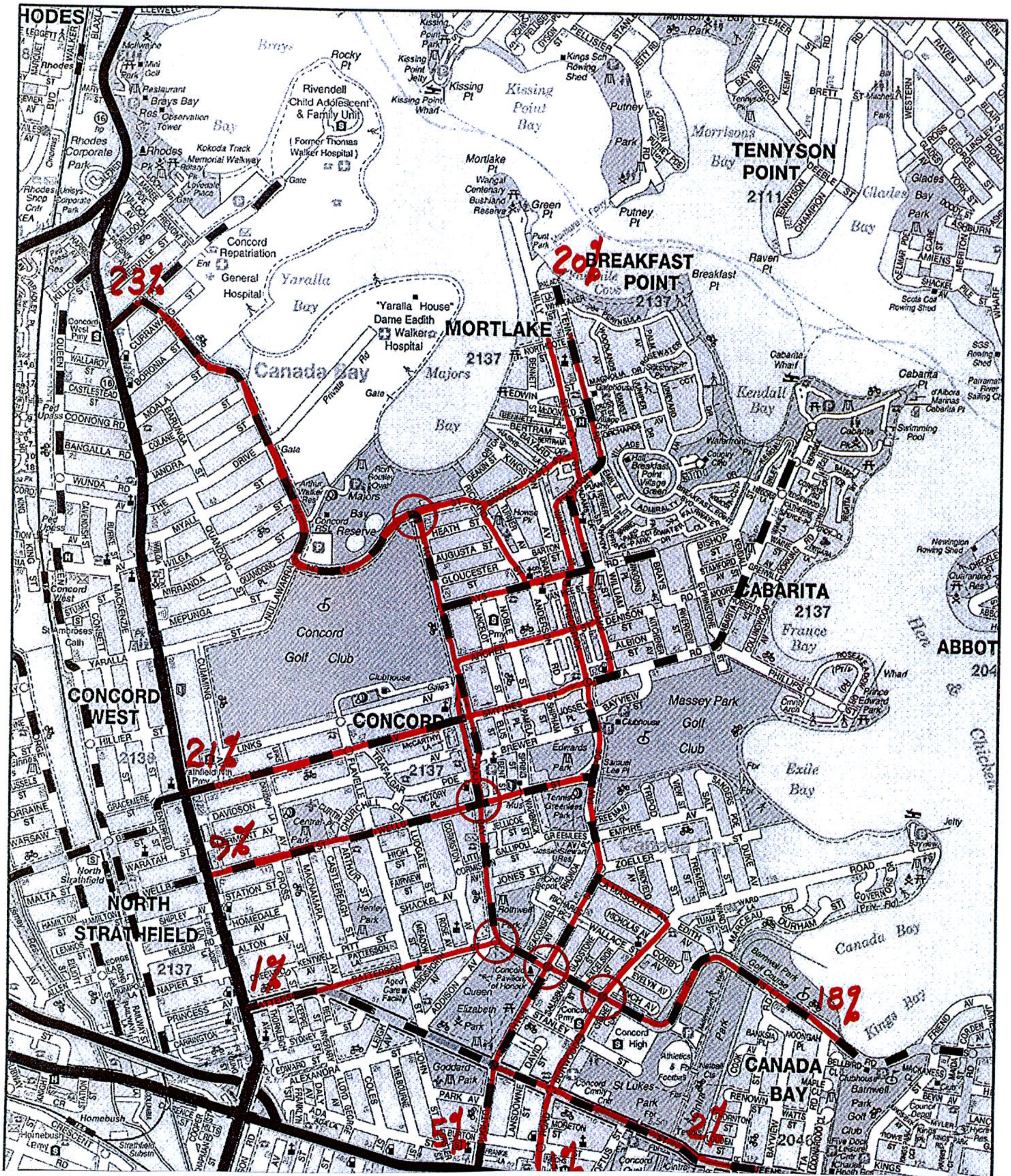
@ 0.30 vtph in AM	118 vtph
@ 0.27 vtph in PM	106 vtph

The existing industrial uses on the site (as depicted in Appendix A) comprise:

- 17,015m^2 GFA of industry/office
- 1,635m^2 GFA warehouse/storage
- 6 dwellings
- 242 employees

Application of the traffic generation criteria contained in the RMS' Development Guidelines to these existing uses would indicate the following morning and afternoon peak traffic generation.

17,015m^2 Industry/Office @ 1.0 vtph per 100m^2	-	170 vtph
1,635m^2 Warehouse/Storage @ 0.5 vtph per 100m^2	-	8 vtph
6 dwellings @ 0.85 vtph	-	5 vtph
Total	**-**	**183 vtph**



LEGEND

TRAFFIC DISTRIBUTION

FIG 7

This can be compared with an employee based assessment of:

242	-	10% public transport
218	-	1.1 per car
198 vehicle trips + deliveries/service vehicles say 220 vt		
220	-	0.75* IN 1 hour
Total	**-**	**165 vtph**

** 75% arrive/depart in peak hour*

It is therefore apparent that the traffic generation of the proposed apartment development on the site will be significantly less than that of the existing traffic generation of the site.

b) Subject Site in conjunction with Approved Development of other sites in the Mortlake area.

In regard to the context of the subject site in relation to the landuse and development circumstances in the Mortlake area there are 2 scenarios, namely:

A. Site traffic generation for continuing or upgraded industrial use (RMS rates) of subject site

B. Site traffic generation for the proposed residential apartment development of subject site

Comparison of the traffic generation outcomes for each of those scenarios in terms of vehicle trips per hour during the morning and afternoon peak periods is provided in the following:

A.	**AM**	**PM**
Subject Site (industrial)	183	183
926 apartments*	278	251
Total	**461 vtph**	**434 vtph**

B.	**AM**	**PM**
Subject Site (391 apartments)	118	106
926 apartments*	278	251
Total	**396 vtph**	**357 vtph**

** other sites approved in the Mortlake area*

It is apparent that the difference between the outcome under industrial development on the site and the proposed residential development scheme in conjunction with the other approved residential developments in the Mortlake area is as follows:

Industrial	**Proposed**
AM 461 vtph	396 vtph (- 65)
PM 434 vtph	357 vtph (- 77)

The existing traffic generation of the site uses (and potential upgraded industrial uses) is very much ingress during the morning peak and egress during the afternoon peak. The traffic generation of residential apartments is largely the opposite, although there is some 20% in the reverse direction.

All of the principal access points on the arterial and major collector roads are controlled by traffic signals which operate with cycle lengths of 120 – 140 seconds in peak periods. Because the proposed development will result in a decreased traffic generation compared to that currently generated by the site (only a directional change) the difference will not be perceptible and would not be identifiable on any traffic modelling. As a consequence there will not be any deterioration to the operational circumstances in the morning and afternoon peak periods.

7. PARKING AND SERVICING

Parking

Because the proposal is for a 'staged' development process there is the potential for the apartment 'mix' to vary in the future and it is desirable to maintain some flexibility in the rate of parking provision. Council's DCP specifies the following parking provision in relation to residential apartments:

	Minimum
Small	1 space per dwelling
Medium	1.5 spaces per dwelling
Large	2.0 spaces per dwelling
Visitors	0.5 spaces per dwelling

This provision is not entirely in accordance with the Department's principle for reduced carparking rates, certainly the provision for visitors would appear to be highly unusual when the criteria specified in the RMS Development Guidelines for 'High Density Residential' is 1 space per 5 – 7 dwellings (as compared to 1 space per 2 dwellings in the DCP). In accordance with the guiding principles the proposed parking criteria for the development is as follows:

Small (one-bedroom	1 space
Medium (two-bedroom)	1.5 spaces
Large (three-bedroom)	2 spaces
Visitors	1 per 5 apartments

The proposed parking provision will be:

58 One-Bed Apartments @ 1.0 per	-	58 spaces
200 Two-Bed Apartments @ 1.5 per	-	300 spaces
133 Three-Bed Apartments @ 2.0 per	-	266 spaces
Visitors for 391 Apartments @ 1 per 5	-	78 spaces

There will be 15% accessible apartments and an appropriate quantum of accessible parking spaces and the previous proposal for an indicative range provision has been deleted.

In addition, provision for motorcycle parking will be made in the basement areas on the basis of 1 space per 20 apartments. Disabled parking for residents and visitors will be made in the basement areas in accordance with AS 2890.6 and there will be 1 formal disabled driver space provided in Northcote Street to facilitate access to the public foreshore.

Servicing

There will not be a need to provide access for large service vehicle access into the basement carpark areas. Small service vehicles (service personnel) including vans and SRV's etc will be able to use the visitor spaces. Provision will be made for garbage trucks to access the garbage storage areas within the sites (adjacent to the access driveways).

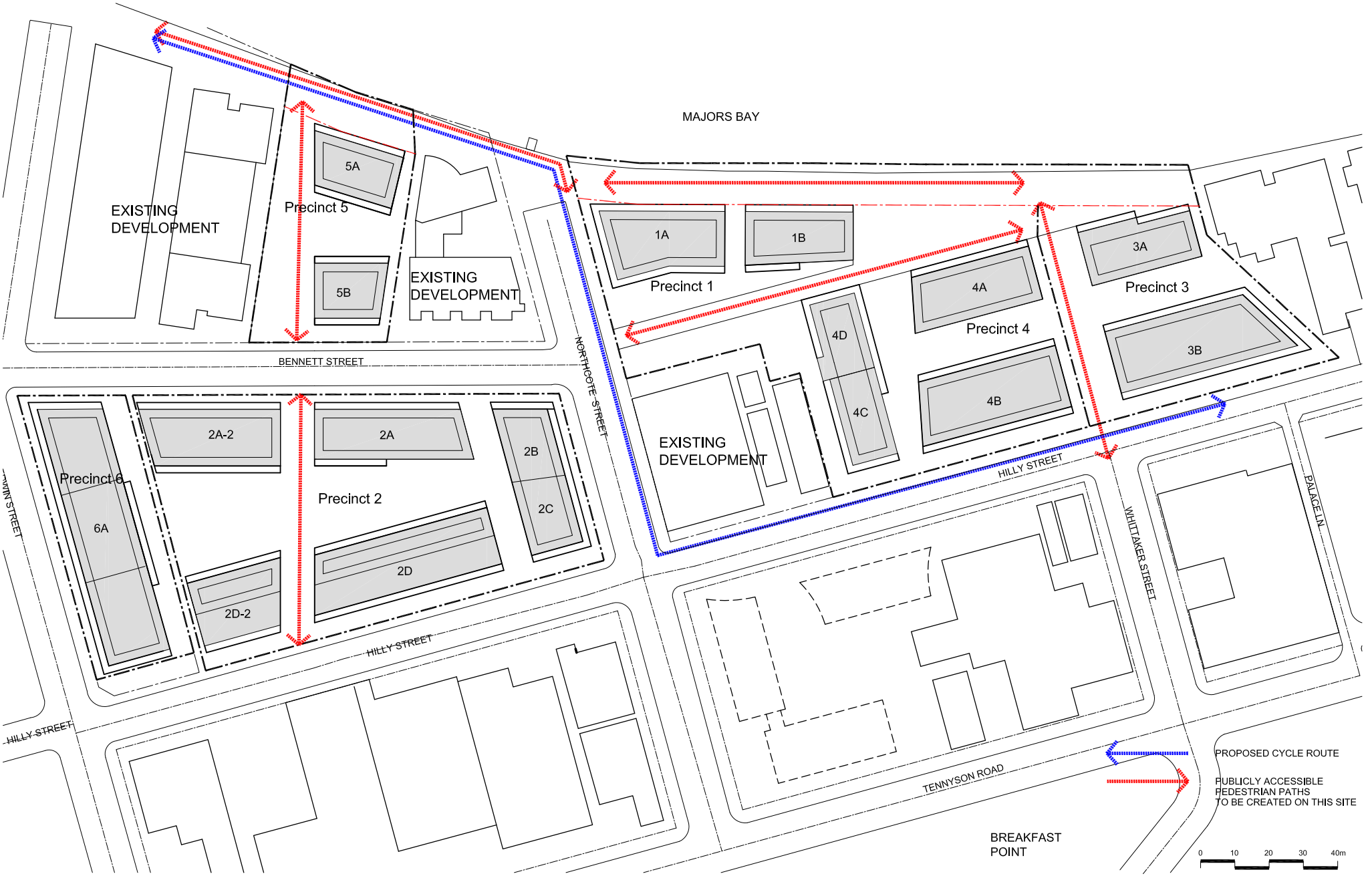
8. PEDESTRIANS AND CYCLISTS

The proposed development scheme would make very conspicuous and tangible provision for pedestrians and cyclists. These provisions include:

* upgraded footways with shared path provision in accordance with Councils planned bicycle network including the waterfront link
* various 'through site' linkages
* considerate location of vehicle access points
* significant open space areas.

Provisions will also be made for bicycle storage within the buildings in accordance with Council's DCP criteria of:

* Residents: 1 space per dwelling
* Visitors: 1 space per 12 dwellings.



Majors Bay Development for Mortlake Consolidated Pty Ltd

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PEDESTRIAN AND CYCLE NETWORKS

Drawing Number_REV
CP_04_01_04

Date
October 2012

9. PUBLIC TRANSPORT SERVICES

It is a fortuitous circumstance where the development site is able to take full advantage of the existing STA bus services being at the 'service commencement' point where full capacity is available. These buses provide for direct travel to/from the City and connection to rail services at Burwood (as well as the City).

Transport NSW has no proposals at present to augment these services, however they:

* will respond to increased patronage demands as development takes place in the area

* will expect that facilities are provided as part of the ongoing development in order to accommodate and encourage travel by bus.

At present the Whittaker Street bus stop has no supplementary facilities and it would be proposed to upgrade this facility with:

- shelter
- seats
- lighting
- paving (including tactile)
- service information

It would also be possible to alter the Route 460 service so that it accessed into the Mortlake high density residential precinct and extended to terminate at Rhodes Railway Station with more frequent services. This would provide a far more expedient rail connection than the current bus services connections available to Burwood Railway Station.

It is proposed to pursue and promote this change with Transport NSW.

10. ISSUES AND SUBMISSIONS

Traffic

"Consider the traffic impact of the proposed development on the local and subregional road network including performance of intersections including the implications of current and future developments in the area."

The proposed development is unique in that the traffic generation outcome will be significantly less traffic after development than with the existing uses and there will be less industrial truck activity. The existing peak morning and afternoon traffic generation of the site uses in 165 to 183 vtph whereas the generation at these times after development will be 106 to 118 vtph. This is a very significant reduction of some 36% and it is quite apparent that despite the fact that the industrial and residential peaks are in "different directions" the implications for local and subregional access intersections is that there will be improved performance. In this unusual circumstance there is no necessity for detailed impact assessment particularly as the diverse access routes taken by traffic generated by the existing residential apartments in the area has been identified in detail.

Parking

"Parking provision should be clarified, including number of on-site and on-street parking spaces".

It is proposed to provide parking for residents in accordance with the Council criteria and parking for visitors in accordance with RMS criteria in the basement levels of the buildings (within the nominated criteria).

Submission

Sydney Regional Development Advisory Committee

Point 1: Vehicle accesses not identified
This is incorrect, the accesses are clearly identified on the architectural plans provided with the application as reproduced in the report

Point 2: No STOPPING signs
Agreed, subject to Council approval

Point 3: Upgrading of BUS STOP
Agreed

Point 4: Swept Path for Trucks Accessing Site
Trucks will not access the site, refuse will be collected from the street

Point 5: Parking
See "Issues"

Point 6: Parking Design
Agreed, this will be a pre-requisite of DA documentation

Point 7: Pedestrians and Cyclist
Agreed, a comprehensive provision will be made for pedestrians and cyclists including provision of shared footway paths which accord with Councils Bicycle Plan

Point 8: Provision of a TAG
Agreed

Point 9: Additional Buses
Agreed, a submission will be made to Transport NSW and STA in regard to bus routes and frequencies

Point 10: Driveway/Ramp design
Agreed

Point 11: Sight Lines
Agreed

Point 12: Entry/Exit Direction
Agreed

Point 13: Contained Onsite
Agreed

Point 14: Construction Traffic Management
Agreed

Point 15: Cost of Facilities
Agreed

Transport NSW

Point 1: Provision for Bus Movements
The bus movement is northwards along Hilly Street and the proposed road arrangement will provide a 3.2m wide lane which is wider than the existing provision and wider than the southbound provision. Street tree planting and street furniture will have full regard for bus requirements.

Point 2: Bus Noise
An acoustic assessment will accompany the DA and will have regard of the bus and bus terminus activity.

Point 3: Bus Noise
The responsibility of Transport NSW is noted as is the reference to a 2007 trial. However there will be significantly changed population circumstance at Mortlake when the subject development is completed along with other residential developments in the area.

Point 4: Changed Bus Routes
Noted and corrected

Point 5: Car Parking
Agreed

Point 6: Cycle Pedestrian Network
This is proposed

Point 7: Location of Bicycle Storage
Noted

Canada Bay Council

The Councils submission as contained in the GSA Planning document relies entirely on the assessment commissioned by Council from Transport and Urban Planning. A previously prepared critique and response to that document is provide in Appendix E and it is very clear from this response that the assertions and findings of TUP are not valid or realistic.

The simple fact is that the proposed development will generate significantly less traffic than that of the existing development on the site which is evidenced in clear and indisputable detail in the Traffic Assessment.

Councils Engineering Comments

Shared Zone: Agreed - The proposal for a shared zone has been deleted

Public Road: Councils existing road (Hilly Street) does not comply with RMS, Austroads or its own standards nor do a number of other roads in the area which service existing industrial uses. The proposal is to re-arrange the cross section within the existing road reserve which extends for some distance to the north and south of the site.

The proposed arrangement will provide:

* a 2.5m shared path on the western side in accordance with Councils Bicycle Plan

* a 3.25m northbound lane for buses, a 3.0m southbound lane

The provisions for on-street carparking spaces comply with the design minimum (Austroads and AS2890.1) as does the width of the eastern footway however this is all that the existing road reserve can provide for. However the traffic volumes and speeds along Hilly Street are low and will continue to be so while the existing industrial truck traffic will be removed.

11. CONCLUSION

The development scheme for the Hilly Street precinct at Mortlake reflects a contemporary residential apartment complex replacing industrial uses in a sensitive waterfront environment. Assessment of the scheme has concluded that:

- the potential traffic generation of the site under the proposed development scheme will be less than that which occurs at present under the industrial uses and will not have any unsatisfactory implications or require any upgrading to roads or intersections

- the proposed provisions for pedestrians, cyclists and public transport will encourage travel by these modes and will be quite suitable and appropriate

- the proposed parking provisions will reflect the Council (resident) and RMS (visitor) criteria and will respond to the principle of constrained parking provision

APPENDIX A

EXISTING SITE USES

Mortlake Areas

				AREA BY TITLE		Building size	Building	Building	Historical Use	No.of staff	Current use	No. of Staff
Number	Street	Lot	DP	Area By Title	Sub-Totals	Est. Total area	Est. Warehouse Area (m^2)	Est. Office Area (m^2)		*Historical*		*Current*
SITE 1												
31	Edwin	5	309043	455.3	455.3	182.12	House		Residential		Residential	I
29	Edwin	4	309043	448.9	448.9	179.56	House		Residential		Residential	I
27	Edwin	3	309043	385.7	385.7	154.28	House		Residential		Residential	I
25	Edwin	2	309043	417.3	417.3	166.92	House		Residential		Residential	I
23	Edwin	1	309043	379.4	379.4	151.76	House		Residential		Residential	I
21	Edwin	63	1937	177	↓	↓	↓	-	↓	↓	↓	I
21	Edwin	64	1937	177	354.0	141.6	House		Residential		Residential	↓
Carpark	Edwin	8	227984	164.4	164.4	65.76		-				
Dunny Lane	Edwin	13	747109	152.8	152.8	61.12		-				
15-23	Bennett	A	356064	550.1	I	I	I		I	I	I	I
15-23	Bennett	B	356064	1062	I	I	I		I	I	I	I
15-23	Bennett	15	Sec 4/1559	765.1	I	I	I		I	I	I	I
15-23	Bennett	16	Sec 4/1559	752.5	I	I	I		I	I	I	I
15-23	Bennett	17	Sec 4/1559	708.2	I	I	I		I	I	I	I
15-23	Bennett	18	Sec 4/1559	682.9	I	I	I		I	I	I	I
15-23	Bennett	19	Sec 4/1559	657.6	I	I	I		I	I	I	I
15-23	Bennett	20	Sec 4/1559	626	I	I	I		I	I	I	I
15-23	Bennett	3	31644	575.4	I	I	I		I	I	I	I
15-23	Bennett	4	31644	404.7	↓	↓	↓		↓	↓	↓	↓
15-23	Bennett	1	588807	1258	8042.5	6500	4000	2500	Paint Factory	120	Recycling & Dumper depot	20
SITE 2												
16-18	Bennett	1	124953	1518	1518	800	800	0	Paint Factory	25	Storage & distribution	7
20-22	Bennett	1	812692	1393	1393	835.8	670	165	Manufacturing	15	Storage & distribution	5
SITE 3												
1	Northcote	4	210632	739.8	I	I	I		I	I	I	I
1	Northcote	6	210632	942.2	I	I	I		I	I	I	I
1	Northcote	1	661962	335.1	↓	↓	↓		↓	↓	↓	↓
1	Northcote	1	570384	374	2391.1	2000	1600	400	Manufacturing	47	Manufacturing & Distribution	35
14	Hilly	101	610982	1684	1684.0	1050	700	350	Manufacturing	25	Research & Development	60
16	Hilly	21	733003	3718	3718.0	2974.4	1215	1760	Manufacturing & Office	85	Research & Development	20
18	Hilly	200	774260	3246	3246.0	2596.8	1215	1380	Manufacturing & Office	60	Storage & Office	45
20-22	Hilly	102	635035	2998	2998.0	2398.4	1678	720	Manufacturing & Office	65	Manufacturing & Office	50
TOTAL:				27,748.40	27,748.40	20,258.52	11,878	7,275		442		242

APPENDIX B

INTERSECTION DETAILS


CRANE STREET AND BURWOOD ROAD
©2009 Google


CRANE STREET AND BROUGHTON STREET
© 2009 Google


MAJORS BAY ROAD AND NORMAN STREET


MAJORS BAY ROAD AND SMYTHES STREET
©2009 Google


MAJORS BAY ROAD AND WELLBANK STREET
Google

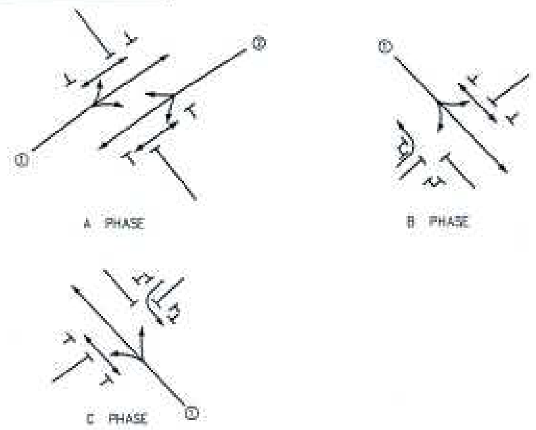

MAJORS BAY ROAD AND PATTERSON STREET
©2009 Google

7000.093.VV.1125

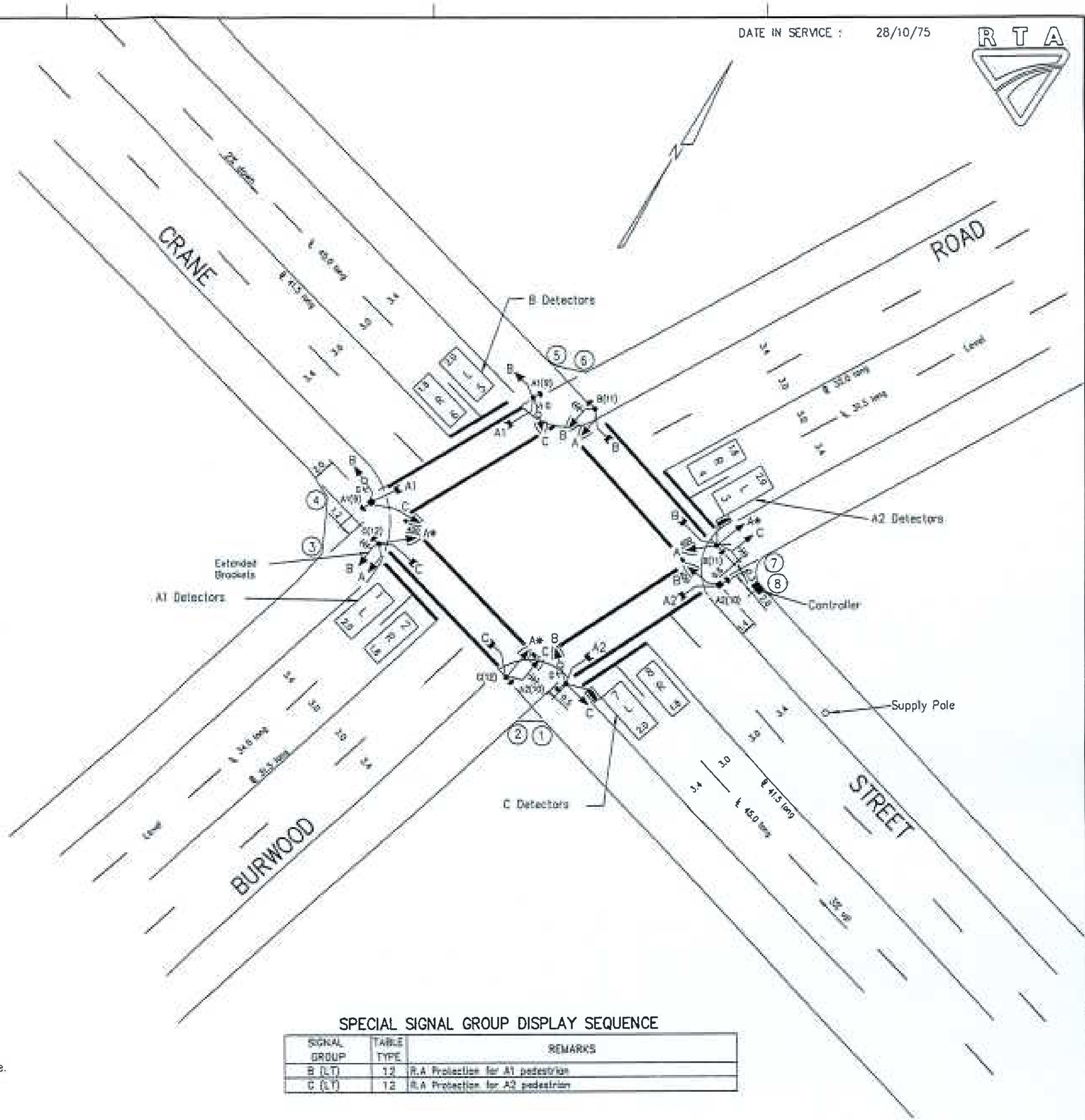
DRAWN BY CADD
DO NOT AMEND MANUALLY

DATE IN SERVICE : 28/10/75

RTA



MOVEMENT DIAGRAMS



DETECTOR SPECIFICATION

Detector		Specifications		
A1	FN	A(L)	A(E1)	
	SG/PS	A	A	
	DS	–	–	
A2	FN	A(L)	A(E2)	
	SG/PS	A	A	
	DS	–	–	
B	FN	B(L)	B(E1)	
	SG/PS	B	B	
	DS	–	–	
C	FN	C(L)	C(E1)	
	SG/PS	C	C	
	DS	–	–	
A1 P.B.	FN	A(PB)	C(L)	
	SG/PS	A1(WALK)	A.A1(WALK)	
	DS	–	B.C	
A2 P.B.	FN	A(PB)	B(L)	
	SG/PS	A2(WALK)	A.A2(WALK)	
	DS	–	B.C	
B P.B.	FN	B(PB)	A(L)	
	SG/PS	B(WALK)	B.B(WALK)	
	DS	–	A.C	
C P.B.	FN	C(PB)	A(L)	
	SG/PS	C(WALK)	C.C(WALK)	
	DS	–	A.B	

NOTES

1. SPECIAL POST DETAILS
   Post 1 is 4.1 long, type 2
   Post 2 is 4.0 long, type 1
   Post 4 & 8 is type 6.
2. All push buttons are audio tactile.

SPECIAL SIGNAL GROUP DISPLAY SEQUENCE

SIGNAL GROUP	TABLE TYPE	REMARKS
B (LT)	12	R.A Protection for A1 pedestrian
C (LT)	12	R.A Protection for A2 pedestrian

A ORIGINAL ISSUE

J Issue: Drawing converted to CADD format. For original signatures and previous issue details, refer to Sheet (7000.093.VV.1125) Issue I Cadvision Conversion Date: 18/07/02

K Issue: PLAN REVISED TO W.A.E. F.P./M.M. 16/6/06

APPROVED
NAME F. B. PIDO
POSITION MANAGER, PROJECT DESIGN SERVICES
DATE 5.8.75

THIS DRAWING IS RECOMMENDED FOR ACCEPTANCE
NETWORK OPERATIONS TEAM LEADER
DATE
ACCEPTED
DATE

Roads and Traffic Authority,N.S.W

BURWOOD ROAD &
CRANE STREET
CONCORD

DESIGN LAYOUT

TCS No. 1125

DESIGN OFFICE PARRAMATTA – PROJECT DESIGN SERVICES
CADD FILE: VV1125_1K.dgn
SCALE (1:200)
FILE 093 TS 119
ISSUE K
SUPERSEDES SHEET/ISSUE 11
REGN 7000.093.VV.1125
SHEET 1

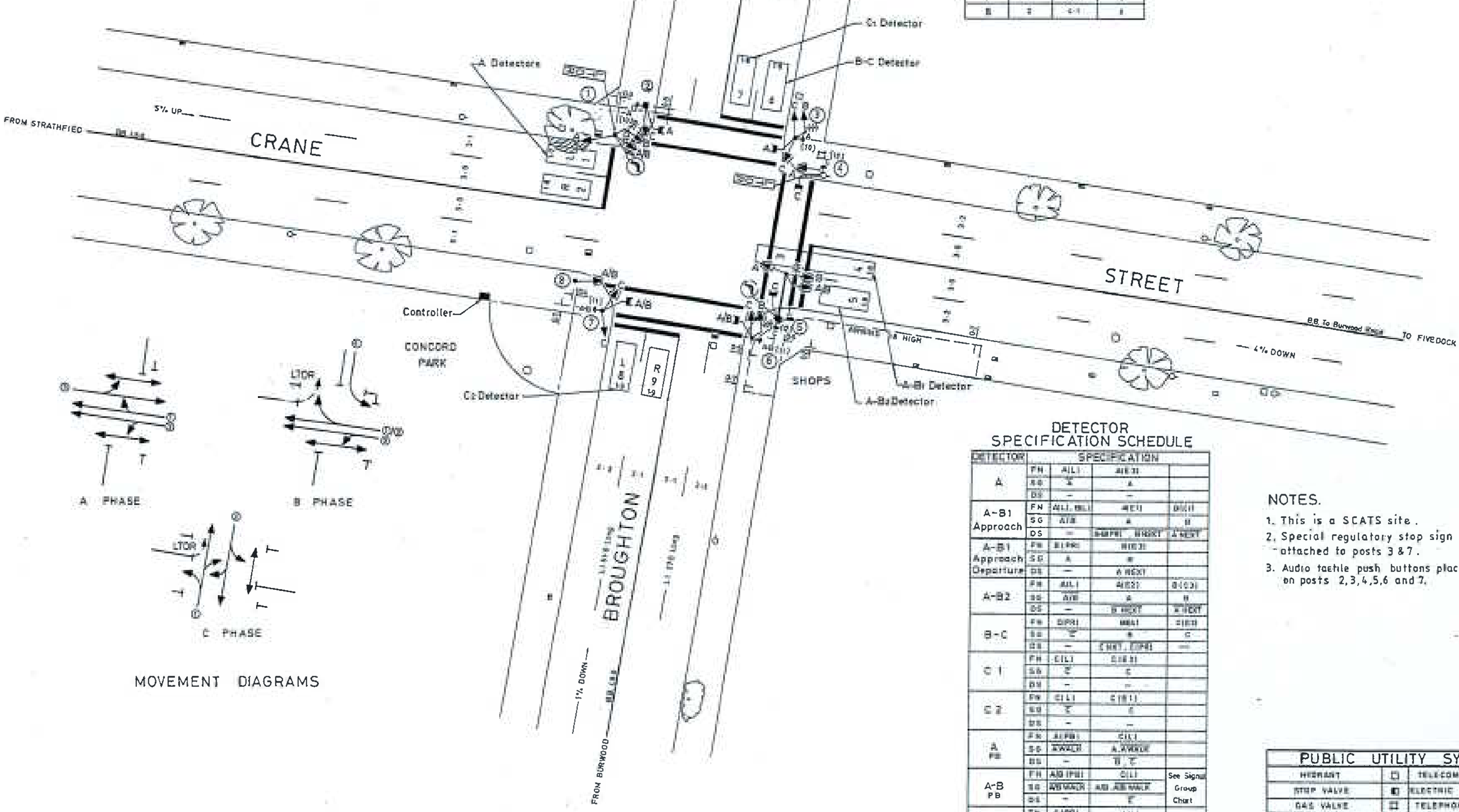
Date in Service: 2-8-90

SPECIAL SIGNAL GROUP DISPLAY SEQUENCE

SIGNAL GROUP	TABLE TYPE	REMARKS
A/B	3	—
B (RT)	5	NO RA PROTECTION FOR A PED
B (LT)	12	RA PROTECTION FOR C PED
A/B ped		(1) INTRODUCTION CONCURRENT WITH A/B GREEN (2) CLEARANCE DEL PERMITTED A/PB (3) TIMER TERMINATED EXCEPT UNDER MASTERLINK

POST CHART

POST	TYPE	LENGTH	REMARKS
1	2	4·1	EXISTING
2	4	—	"
3	2	5·1	"
4	E.L.P.		"
5	SL.MA.		"
6	2	4·1	"
7	2	4·1	"
8	2	4·1	"



DETECTOR SPECIFICATION SCHEDULE

DETECTOR		SPECIFICATION		
A	FN	A(L)	A(E3)	
	SG	A	A	
	DS	—	—	
A-B1 Approach	FN	A(L), B(L)	A(E1)	B(E1)
	SG	A/B	A	B
	DS	—	B(PR) B NEXT	A NEXT
A-B1 Approach Departure	FN	B(PR)	B(E3)	
	SG	A	B	
	DS	—	A NEXT	
A-B2	FN	A(L)	A(E2)	B(E3)
	SG	A/B	A	B
	DS	—	B NEXT	A NEXT
B-C	FN	D(PR)	M(L)	C(E3)
	SG	C	B	C
	DS	—	C NXT, D(PR)	—
C1	FN	C(L)	C(E3)	
	SG	C	C	
	DS	—	—	
C2	FN	C(L)	C(E1)	
	SG	C	C	
	DS	—	—	
A PB	FN	A(PB)	C(L)	
	SG	A WALK	A, A WALK	
	DS	—	B, C	
A-B PB	FN	AB (PB)	C(L)	See Signal Group Chart
	SG	AB WALK	AB, AB WALK	
	DS	—	C	
C PB	FN	C(PB)	A(L)	
	SG	C WALK	C, C WALK	
	DS	—	A, B	

NOTES.

1. This is a SCATS site.
2. Special regulatory stop sign attached to posts 3 & 7.
3. Audio tactile push buttons placed on posts 2, 3, 4, 5, 6 and 7.

PUBLIC UTILITY SYMBOLS

HYDRANT		TELECOM PILLAR	
STOP VALVE		ELECTRIC LIGHT POLE	
GAS VALVE		TELEPHONE POLE	
SEWER MANHOLE		TELEPHONE BOX	
TELECOM PIT		ELECTRICITY PIT	
DRAINAGE MANHOLE		BUS SHELTER	

DESIGN LAYOUT

A ORIGINAL ISSUE
B Issue JJ. 9V 2285 10-2-86 Post 8 tandem added B C detector logic altered 13-2-86
PLAN UPDATED 2-8-90
C ISSUE JI SYNABAB LTOR Posts 1 & 4 31-5-93
D Issue JI SE0724 Post 2 was type 2 TUPA 11/95
E ISSUE JI SV TRL 4/11/96 ADDED AUDIO TACTILE PUSH BUTTONS TO POSTS 2,3,4,5,6 AND 7. S.N. 10/12/96

REFERENCE PLANS			SURVEYOR	T. GLASS
			DATE	

THESE DRAWINGS HAVE BEEN TAKEN TO THE SITE OF THE WORK AND ARE RECOMMENDED
SUPERVISING ENGINEER
DATE 23/1/84

APPROVED
DIVISIONAL ENGINEER
DATE 23-1-84

ROADS AND TRAFFIC AUTHORITY OF NSW

MUNICIPALITY OF CONCORD
BROUGHTON STREET
AND
CRANE STREET,
CONCORD.

DIVISION: CENTRAL REGION
FILE Nº 93.TS.122
SHEET Nº 1
SCALE 1:200
Reg. Nº 7000.093VV.2534.

APPENDIX C

TRAFFIC GENERATION SURVEYS

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1684 Concord Traffic Counts
Day/Date :Tuesday 18th Marcl 08

MELBERRY HILLS Vehicles			
Time Per	IN	OUT	TOTAL
0700 - 0715	0	4	4
0715 - 0730	0	8	8
0730 - 0745	0	7	7
0745 - 0800	1	4	5
0800 - 0815	0	7	7
0815 - 1830	0	3	3
0830 - 0845	1	2	3
0845 - 0900	0	0	0
Period End	2	35	37

CELESTE Vehicles			
Time Per	IN	OUT	TOTAL
0700 - 0715	0	4	4
0715 - 0730	0	1	1
0730 - 0745	0	4	4
0745 - 0800	1	4	5
0800 - 0815	0	3	3
0815 - 1830	1	2	3
0830 - 0845	0	1	1
0845 - 0900	0	1	1
Period End	2	20	22

ROSEWOOD Vehicles			
Time Per	IN	OUT	TOTAL
0700 - 0715	1	3	4
0715 - 0730	0	1	1
0730 - 0745	0	2	2
0745 - 0800	1	4	5
0800 - 0815	0	5	5
0815 - 1830	1	2	3
0830 - 0845	1	3	4
0845 - 0900	1	1	2
Period End	5	21	26

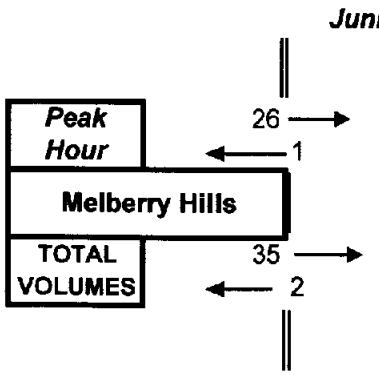
ASCOT & CAROLINA Vehicles			
Time Per	IN	OUT	TOTAL
0700 - 0715	0	1	1
0715 - 0730	0	1	1
0730 - 0745	0	5	5
0745 - 0800	0	5	5
0800 - 0815	1	3	4
0815 - 1830	0	3	3
0830 - 0845	1	4	5
0845 - 0900	1	4	5
Period End	3	26	29

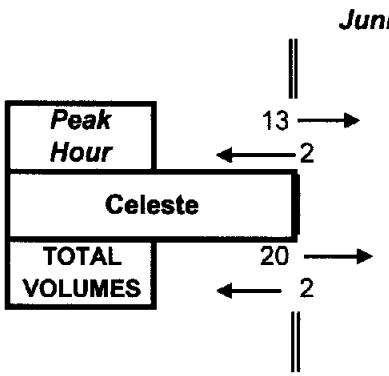
MELBERRY HILLS Vehicles			
Peak Per	IN	OUT	TOTAL
0700 - 0800	1	23	24
0715 - 0815	1	26	27
0730 - 0830	1	21	22
0745 - 0845	2	16	18
0800 - 0900	1	12	13
PEAK HR	1	26	27

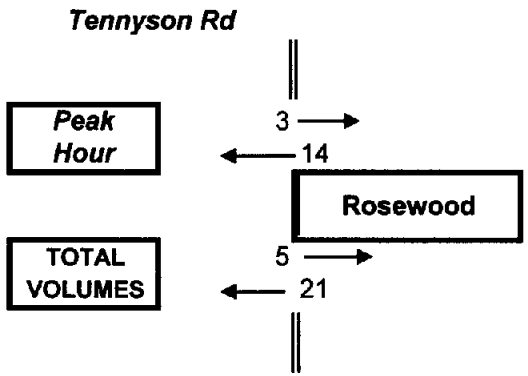
CELESTE Vehicles			
Peak Per	IN	OUT	TOTAL
0700 - 0800	1	13	14
0715 - 0815	1	12	13
0730 - 0830	2	13	15
0745 - 0845	2	10	12
0800 - 0900	1	7	8
PEAK HR	2	13	15

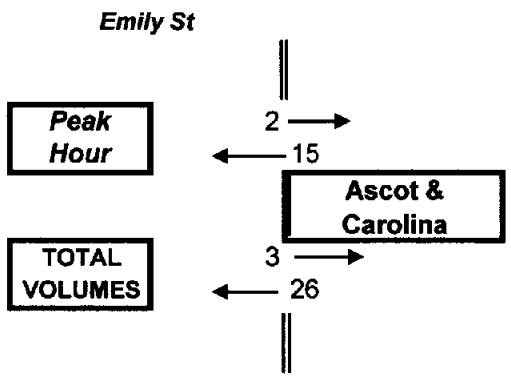
ROSEWOOD Vehicles			
Peak Per	IN	OUT	TOTAL
0700 - 0800	2	10	12
0715 - 0815	1	12	13
0730 - 0830	2	13	15
0745 - 0845	3	14	17
0800 - 0900	3	11	14
PEAK HR	3	14	17

ASCOT & CAROLINA Vehicles			
Peak Per	IN	OUT	TOTAL
0700 - 0800	0	12	12
0715 - 0815	1	14	15
0730 - 0830	1	16	17
0745 - 0845	2	15	17
0800 - 0900	3	14	17
PEAK HR	2	15	17









R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1684 Concord Traffic Counts
Day/Date :Tuesday 18th March 2008

	MELBERRY HILLS Vehicles		
Time Per	IN	OUT	TOTAL
1600 - 1615	2	2	4
1615 - 1630	1	0	1
1630 - 1645	1	0	1
1645 - 1700	1	0	1
1700 - 1715	2	0	2
1715 - 1730	8	0	8
1730 - 1745	0	1	1
1745 - 1800	3	0	3
Period End	18	3	21

	CELESTE Vehicles		
Time Per	IN	OUT	TOTAL
1600 - 1615	0	0	0
1615 - 1630	1	1	2
1630 - 1645	2	1	3
1645 - 1700	3	1	4
1700 - 1715	1	0	1
1715 - 1730	3	0	3
1730 - 1745	0	0	0
1745 - 1800	2	1	3
Period End	12	4	16

	ROSEWOOD Vehicles		
Time Per	IN	OUT	TOTAL
1600 - 1615	0	0	0
1615 - 1630	0	2	2
1630 - 1645	0	0	0
1645 - 1700	3	1	4
1700 - 1715	4	0	4
1715 - 1730	5	0	5
1730 - 1745	3	1	4
1745 - 1800	2	0	2
Period End	17	4	21

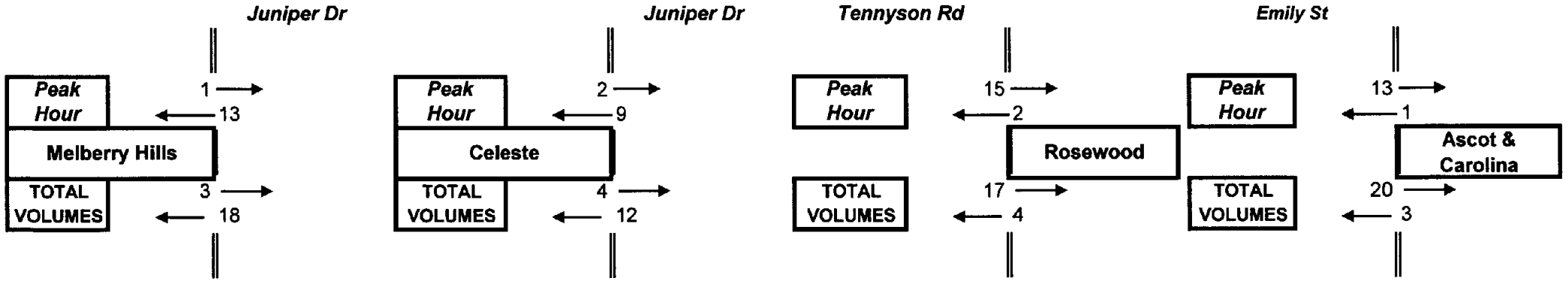
	ASCOT & CAROLINA Vehicles		
Time Per	IN	OUT	TOTAL
1600 - 1615	1	0	1
1615 - 1630	1	1	2
1630 - 1645	1	1	2
1645 - 1700	3	1	4
1700 - 1715	5	0	5
1715 - 1730	3	0	3
1730 - 1745	2	0	2
1745 - 1800	4	0	4
Period End	20	3	23

	MELBERRY HILLS Vehicles		
Peak Per	IN	OUT	TOTAL
1600 - 1700	5	2	7
1615 - 1715	5	0	5
1630 - 1730	12	0	12
1645 - 1745	11	1	12
[illegible]	13	1	14
PEAK HR	13	1	14

	CELESTE Vehicles		
Peak Per	IN	OUT	TOTAL
1600 - 1700	6	3	9
1615 - 1715	7	3	10
[illegible]	9	2	11
1645 - 1745	7	1	8
1700 - 1800	6	1	7
PEAK HR	9	2	11

	ROSEWOOD Vehicles		
Peak Per	IN	OUT	TOTAL
1600 - 1700	3	3	6
1615 - 1715	7	3	10
1630 - 1730	12	1	13
[illegible]	15	2	17
1700 - 1800	14	1	15
PEAK HR	15	2	17

	ASCOT & CAROLINA Vehicles		
Peak Per	IN	OUT	TOTAL
1600 - 1700	6	3	9
1615 - 1715	10	3	13
1630 - 1730	12	2	14
[illegible]	13	1	14
1700 - 1800	14	0	14
PEAK HR	13	1	14



APPENDIX D

TRAVEL QUESTIONNAIRE FORUM

A study is being undertaken in relation to potential further residential development in the Mortlake/ Breakfast Point Area. The study will address road/traffic, public transport, pedestrian, cyclist and other related issues and your response to this simple questionnaire will assist this study and the development of improvements for the area.

Question 1:

A principal issue is the travel routes being used to access the precinct to/from the arterial road system during the weekday morning and afternoon peak periods. If car travel is normally undertaken to/from this household in the morning and afternoon peak periods which entry/exit point is normally used (see attached map):

	A	B	C	D	E	F	G	H	I	
Morning	☐	☐	☐	☐	☐	☐	☐	☐	☐	(✓ as appropriate)
Afternoon	☐	☐	☐	☐	☐	☐	☐	☐	☐	(✓ as appropriate)

Question 2:

If not as above what other route is used:

External (arterial connection) .....

Internal (within map area) .....

(ie to school, shops, workplace, recreation)

Question 3:

If travel is normally undertaken from this household involving public transport in the morning and afternoon peak periods please specify:

Bus ☐ Where boarded .....

Ferry ☐

Train ☐ Where boarded .....

Clarification

(eg means of travel to/from train) .....

Question 4:

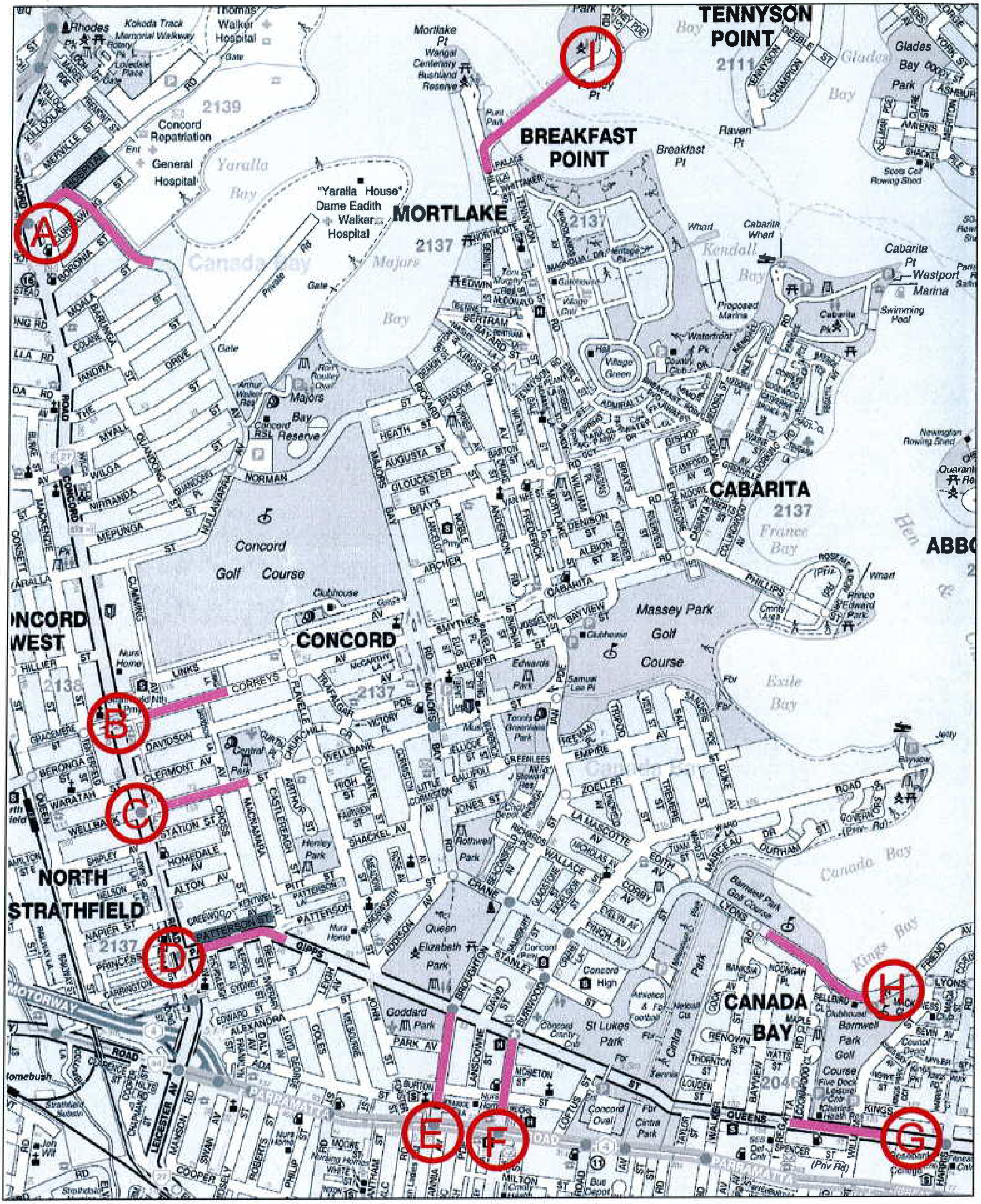
What changes or improvements would you like to see implemented in relation to traffic and transport for this area (please add separate sheet if necessary).

.....

.....

.....

.....



A
B
C
D
E
F
G
H
I
TENNYSON POINT
2111
BREAKFAST POINT
MORTLAKE
2137
CABARITA
2137
CONCORD
2137
CONCORD WEST
2138
NORTH STRATHFIELD
2137
CANADA BAY
2046
2139
Concord Repatriation General Hospital
"Yaralla House" Dame Eadith Walker Hospital
Concord Golf Course
Massey Park Golf Course
Queen Elizabeth Park
Goddard Park
St Lukes Park
Concord Oval
Majors Bay
Canada Bay
Yaralla Bay
Kendall Bay
France Bay
Exile Bay
Kings Bay
Cabarita Pt
Breakfast Pt
Raven Pt
Mortlake Pt
Rhodes
Homebush
PARRAMATTA ROAD
MOTORWAY

APPENDIX E

RESPONSE TO TUP REPORT

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

A division of Monvale Pty Ltd ACN 060 653 125
ABN 44 060 653 125

17 March 2011
Ref 06273

Response to Document Prepared for Council by Transport and Urban Planning (TUP) dated September 2010

Points of Contention

* TUP acknowledge the nature and quantum of the existing development on the site but:
  - do not assign a traffic generation factor to those existing historical uses
  - comment on the TTPA assessed traffic generation
  - more importantly do not discount this existing traffic generation from the projected generation of the envisaged development.

  This is a pre-eminent factor because TTPA established that the existing generation is somewhat greater than the projected generation.

* TUP acknowledge the established basis to the TTPA assessed traffic generation characteristics for residential apartments at Mortlake. TUP then goes on to quote RTA published criteria for Medium Density Residential Development and High Density Residential Development advocating that the former classification is appropriate to the area.

  TTPA in fact undertook and was the author of the RTA study which underlies the High Density criteria and are therefore well versed in the considerations.

Suite 502 Level 5 282 Victoria Avenue PO Box 1160 Chatswood NSW 2067 ph (02) 9411 5660 Fax (02) 9904 6622
Email ttpa@ttpa.com.au

The RTA definition for Medium Density (Guide to Traffic Generating Development Section 5.4.2) is 'a building containing between 2 and 20 dwellings being villas, townhouses, flats, semi-detached houses, terrace or row houses'.

The RTA definition for High Density (Section 5.4.3) is a 'building containing more than 20 dwellings generally 5 levels or more with basement carparking and located near public transport'. The proposed buildings at Mortlake range up to 9 levels, all have basement carparking, have access to public transport and all have substantially more than 20 dwellings in each.

The study undertaken for the High Density use included sites at Sans Souci and outer Bankstown well removed from rail and other high frequency/capacity public transport services and reflected a significant range of locational circumstances.

It is clear that the RTA 'High Density' traffic generation criteria is more appropriate to the circumstances than 'Medium Density' although the somewhat higher 'Mortlake' traffic generation characteristic was relied on by TTPA. The allegation that TTPA under estimated the traffic generation by up to 42% is therefore errant.

* TUP contended that the results of the TTPA questionnaire surveys may be distorted or inaccurate. There was a 26.5% response rate to the TTPA questionnaires and this exceeds the normally accepted response rate of 20% to such surveys. All the detail questionnaire responses are provided in the TTPA Supplementary Papers whilst the RTA criteria derived from the High Density Residential study was reliant on survey of just 20 sites in the Sydney Metropolitan area representing a sample some 1% or less.

* TUP contends that the TTPA Trip Distribution does not accord with a trip table provided by Council. The TTPA Trip Distribution was derived from the responses by existing residents of the Breakfast Pont development at Mortlake to the map provided in the questionnaire.

The questionnaire asked the residents to indicate on the map which intersection/s they used when ingressing and egressing the area and the trip distribution was derived from this data.

The basis to the Council data is not known but it relates to an LGA wide circumstances not a specific locational circumstance where trip distributions are determined by such factors as:

- road network constraints (ie Parramatta River and its bays, inlets and river crossings)

- proximity arterial routes (eg Mortlake as compared to North Strathfield or Canada Bay).

* TUP contends that the recommendation by TTPA to apply peak period NO STOPPING restrictions on existing collector roads and prohibit right-turn movements at key intersections will impact on resident amenity and cause traffic to divert onto local streets. TUP undertook a study for Council (Mortlake Redevelopment Traffic Impact Assessment August 2010) and amongst the recommendations in that study were:

  - 'implement a restrictive parking policy on collector roads in the study area'
  - Upgrade signalised intersections (additional lanes and intersection capacity)'

  A principal means of gaining intersection capacity is to prohibit minor right-turn movements.

* TUP contends that there is no likelihood of additional bus services being provided or for the STA to respond to requirements for additional services. The TUP study prepared for Council (August 2010) has a list of recommendations for ancillary improvement works. The first of those recommendations is 'provide new bus services through the development precincts'.