

HOLDMARK

TRANSPORT ASPECTS OF
PLANNING PROPOSAL FOR
PROPOSED MIXED USE
DEVELOPMENT, 42-50 AND 52-60
RAILWAY PARADE, BURWOOD

OCTOBER 2016

COLSTON BUDD ROGERS & KAFES PTY LTD
ACN 002 334 296
Level 18 Tower A
Zenith Centre
821 Pacific Highway
CHATSWOOD NSW 2067

Telephone: (02) 9411 2411
Facsimile: (02) 9411 2422
Email: cbrk@cbrk.com.au

REF: 9704/3

TABLE OF CONTENTS

1. INTRODUCTION	1
2. TRANSPORT ASPECTS OF PLANNING PROPOSAL	3

I. INTRODUCTION

- I.1 Colston Budd Rogers and Kafes Pty Ltd has been retained by Holdmark to review the transport aspects of a planning proposal for a mixed use development on Railway Parade at Burwood. The site is at 42-50 and 52-60 Railway Parade, as shown in Figure 1.
 - I.2 The site is on both sides of Wynne Avenue, fronting Railway Parade. The east site at 42-50 Railway Parade is occupied by Burwood Plaza which provides some 13,000m² retail. The west site at 52-60 Railway Parade is occupied by two commercial office buildings which provide some 17,100m². There is also a public car park on the west site, south of the commercial buildings.
 - I.3 The planning proposal would provide for a mixed use development including some 28,500m² retail, 20,000m² commercial (including a hotel with some 100 rooms) and 1,044 residential units. This represents a FSR of some 10:1 for the site.
 - I.4 Council has prepared a Section 94 plan which includes measures to accommodate additional development in the Burwood town centre.
 - I.5 We have reviewed the transport aspects of the planning proposal in the following chapter.
-

2. TRANSPORT ASPECTS OF PLANNING PROPOSAL

2.1 The transport aspects of the planning proposal are reviewed through the following sections:

- o site location and road network;
- o potential scale of development;
- o policy context;
- o public transport, walking and cycling;
- o travel access guide;
- o parking provision;
- o access, servicing and internal layout;
- o traffic generation; and
- o summary.

Site Location and Road Network

2.2 The site is in two parts, on both sides of Wynne Avenue, at 42-50 and 52-60 Railway Parade, south of the railway line at Burwood, as shown in Figure 1. The east site at 42-50 Railway Parade is occupied by Burwood Plaza which provides some 13,000m² retail. The west site at 52-60 Railway Parade is occupied by two commercial office buildings which provide some 17,100m². There is also a public car park on the west site, south of the commercial buildings.

2.3 Vehicular entry to parking at Burwood Plaza is provided from Wynne Avenue, with exit to Belmore Street. The plaza loading docks are accessed from Wynne Avenue. Access to the west site is provided from Wynne Avenue.

- 2.4 Surrounding land use includes other commercial, retail and residential development in the town centre. Burwood railway station is east of the site, on the corner of Railway Parade and Burwood Road. There are community facilities and the council offices west of the site.
- 2.5 The road network in the vicinity of the site includes Burwood Road, Railway Parade, Wynne Avenue, Belmore Street, Clarendon Place, Conder Street and Hornsey Street.
- 2.6 Burwood Road is an important north-south road through the town centre, connecting Parramatta Road and areas to the north with the Hume Highway, Georges River Road and areas to the south. It includes a connection under the railway line through the town centre, and generally provides a four lane undivided carriageway with one traffic lane and one parking lane in each direction, clear of intersections. Major intersections on Burwood Road in the town centre are signalised, including Railway Parade and Belmore Street. There are 40 kilometre per hour speed restrictions through the town centre.
- 2.7 Railway Parade runs parallel to and south of the railway line, through the town centre. It forms part of a connection between Croydon and Ashfield in the east and Strathfield in the west. Through the Burwood town centre it provides a four lane carriageway, with two traffic lanes in each direction. There are bus stops on both sides of the road, including indented bus bays on the northern side. There is a 40 kilometre per hour speed limit on Railway Parade.
- 2.8 Wynne Avenue connects Railway Parade with Belmore Street in the south. It provides for one traffic lane and one parking lane in each direction, clear of intersections. There are traffic signals at the intersection of Wynne Avenue with Railway Parade, and a roundabout at Wynne Avenue/Belmore Street.
-

-
-
- 2.9 Belmore Street is south of the site. It provides access to commercial, retail and residential development in the town centre. It provides for one traffic lane and one parking lane in each direction, clear of intersections. The intersection of Belmore Street with Burwood Road is controlled by traffic signals.
- 2.10 Clarendon Place runs south from Railway Parade on the eastern side of Burwood Plaza. It provides for two-way traffic and provides access to the rear of properties fronting Burwood Road. There are pedestrian crossings in Clarendon Place at Railway Parade and at the Burwood Plaza pedestrian access.
- 2.11 Conder Street is west of the site. It runs south from Railway Parade on the western side of the town centre. The intersection of Conder Street with Railway Parade is controlled by a roundabout. Conder Street provides for one traffic lane and one parking lane in each direction, clear of intersections.
- 2.12 Hornsey Street connects to Conder Street and provides access along the southern side of the council offices and community facilities. It provides access to parking areas south of the site and provides a pedestrian connection between Conder Street and Wynne Avenue.
- 2.13 Observations made during peak periods indicate that a number of intersections in the town centre are operating near capacity at peak times, particularly along Burwood Road.

Potential Scale of Development

- 2.14 The planning proposal would provide for a mixed use development including some 28,500m² retail (including a cinema complex), 20,000m² commercial (including a hotel with some 100 rooms) and 1,044 residential units. This represents a FSR of some 10:1 for the site.
-
-

- 2.15 The proposed increase in FSR generally relates to the potential for increased residential floor space on the site. By comparison, the project architect has advised that a development under the existing controls could provide a similar quantum of retail and commercial space, with some 300 residential apartments. The proposed increase in FSR is therefore equivalent to some 740 additional apartments.

Policy Context

- 2.16 There are a number of strategic state policies which are relevant to future development in the Sydney metropolitan area. The policies include NSW: Making It Happen, A Plan for Growing Sydney and The NSW Long Term Transport Master Plan. These policies are discussed below.

□ NSW: Making It Happen

- 2.17 NSW: Making It Happen has 30 priorities, including:

- Strong budget and economy
 - make NSW the easiest state to start a business;
 - be the leading Australian state in business confidence;
 - increase the proportion of people completing apprenticeships and traineeships to 65 per cent by 2019;
 - halve the time taken to assess planning applications for state significant developments;
 - maintain the AAA credit rating;
 - expenditure growth to be less than revenue growth;
- Building infrastructure
 - 90 per cent of peak travel on key road routes is on time;

- increase housing supply across NSW – deliver more than 50,000 approvals every year;
 - o Protecting the vulnerable
 - successful implementation of the NDIS by 2018;
 - increase the number of households successfully transitioning out of social housing by five per cent over three years;
 - o Better services
 - increase the proportion of Aboriginal and Torres Strait Islander students in the top two NAPLAN bands for reading and numeracy by 30 per cent;
 - 70 per cent of government transactions to be conducted via digital channels by 2019;
 - increase on-time admissions for planned surgery, in accordance with medical advice;
 - increase attendance at cultural venues and events in NSW by 15 per cent by 2019;
 - maintain or improve reliability of public transport services over the next four years;
 - o Safer communities
 - LGAs to have stable or falling reported violent crime rates by 2019;
 - reduce adult reoffending by five per cent by 2019;
 - reduce road fatalities by at least 30 per cent from 2011 levels by 2021;
 - o 12 premier's priorities
 - creating jobs;
-

- building infrastructure;
- reducing domestic violence;
- improving service levels in hospitals;
- tackling childhood obesity;
- improving education results;
- protecting our kids;
- reducing youth homelessness;
- driving public sector diversity;
- keeping our environment clean;
- faster housing approvals;
- improving government services.

□ A Plan for Growing Sydney

2.18 A Plan for Growing Sydney provides a strategic plan to accommodate an additional 1.6 million people, 664,000 houses and 689,000 jobs.

2.19 The plan includes the following goals and actions to achieve them:

o Goal 1: a competitive economy with world class services and transport

Actions:

- grow a more internationally competitive Sydney CBD;
 - grow Greater Parramatta – Sydney’s second CBD;
 - establish a new priority growth area – Greater Parramatta to the Olympic Peninsula;
 - transform the productivity of western Sydney through growth and investment;
 - enhance capacity at Sydney’s gateways and freight networks;
 - expand the Global Economic Corridor;
 - grow strategic centres – providing more jobs closer to home;
-

- enhance linkages to regional NSW;
 - support priority economic sectors;
 - plan for education and health services to meet Sydney's growing needs; and
 - deliver infrastructure.
- o Goal 2: a city of housing choice, with homes that meet our needs and lifestyles
- Actions:
- accelerate housing supply across Sydney;
 - accelerate urban renewal across Sydney – providing homes closer to jobs;
 - improve housing choice to suit different needs and lifestyles; and
 - deliver timely and well planned greenfield precincts and housing.
- o Goal 3: a great place to live with communities that are strong, healthy and well balanced
- Actions:
- revitalize existing suburbs;
 - create a network of interlinked, multipurpose open and green spaces across Sydney;
 - create built environments; and
 - promote Sydney's heritage, arts and culture.
- o Goal 4: a sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources
- Actions:
- protect our natural environment and biodiversity;
 - build Sydney's resilience to natural hazards; and
 - manage the impacts of development on the environment.
-

- NSW Long Term Transport Master Plan

2.20 The NSW Long Term Transport Master Plan has been developed, in association with A Plan for Growing Sydney and State Infrastructure Strategy, to support NSW 2021. The key measures identified are as follows:

- providing a fully integrated transport system;
- providing a modern railway system and increase capacity by 60 per cent;
- providing a modern light rail system in the CBD;
- providing a modern bus system to complement the rail networks;
- connect the motorway network, including WestConnex, F3/M2 link and F6;
- reduce congestion in the CBD, including removing the monorail, increasing light rail, improving pedestrian links, increasing ferry use, providing increased capacity on the rail system and improved walking and cycling infrastructure;
- support the growth of new economic centres including the north west and south west rail links, new roads in growth areas and new bus infrastructure;
- connect regional communities through major highway upgrades, and improved rail, bus and air services;
- improve freight efficiency and productivity;
- improve access to Sydney Airport and Port Botany;
- boost walking, cycling and its integration with public transport; and
- preserve future transport corridors.

2.21 The Plan for Growing Sydney defines Burwood as a 'Strategic Centre', in the 'central subregion', highlighting its importance in the metropolitan area in terms of employment and future development.

2.22 The plan provides a number of priorities specifically relating to Burwood as follows:

-
-
- o work with council to provide capacity for additional mixed use development including offices, retail, services and housing; and
 - o investigate a potential light rail corridor from Parramatta to Strathfield/Burwood via Sydney Olympic Park.

Public Transport, Walking and Cycling

- 2.23 The site is across the road from Burwood railway station. Burwood is on the North Shore (Berowra – Parramatta via the City), Northern (Hornsby and Epping to City via Strathfield), Western (Emu Plains/Richmond to City) and Inner West and South (Campbelltown to City via Granville) Lines.
- 2.24 Numerous services are provided on these lines through Burwood, connecting it with surrounding areas and the greater metropolitan area.
- 2.25 Local bus services are provided by Sydney Buses. These services link Burwood with surrounding areas. There are major bus stops on Railway Parade adjacent to the site, at Burwood station, as well as other stops on Burwood Road. Bus services provide links to surrounding areas and include:
- o route 407: Burwood – Strathfield;
 - o route 408: Burwood – Rookwood Cemetery;
 - o route 415: Campsie, Strathfield, Burwood, Chiswick;
 - o route 458: Burwood, Strathfield, Rhodes, Ryde;
 - o route 461: Burwood, Parramatta Road, city, Domain;
 - o route 463: Burwood, Bayview Park;
 - o route 466: Cabarita, Burwood, Strathfield, Ashfield;
 - o route 490: Drummoyne, Burwood, Kingsgrove, Hurstville;
 - o route 492: Drummoyne, Burwood, Kingsgrove, Rockdale;
-
-

- o route 525: Parramatta, Newington, Burwood; and
- o route 526: Sydney Olympic Park Wharf, Newington, Strathfield.

- 2.26 There are good pedestrian links between the site and surrounding areas, including Burwood railway station, bus stops on Railway Parade and Burwood Road and other commercial and retail development in Burwood. Signalised intersections close to the site include signalised pedestrian crossings. There are a number of pedestrian crossings on streets adjacent to the site.
- 2.27 The site therefore has excellent access to public transport services. The proposed development will therefore be readily accessible by public transport, walking and cycling.
- 2.28 The proposed development would increase employment, retail and residential densities close to existing public transport services.
- 2.29 To support accessibility by bicycles, appropriate bicycle parking, in accordance with appropriate controls, should be provided.
- 2.30 The proposed development will therefore satisfy the objectives of NSW: Making It Happen, A Plan for Growing Sydney and the NSW Long Term Transport Master Plan policy package as follows:
- enabling commuters and residents to readily access trains and buses close to the site;
 - providing pedestrian connections to and through the site, to improve accessibility for users and the general public;

- ❑ providing an appropriate level of on-site parking, with reference to appropriate council and RMS requirements, to encourage greater public transport use and increase the proportion of trips by public transport;
- ❑ providing a mixed use development, including commercial, residential and retail uses within the town centre, close to other commercial and retail facilities to reduce the need for external travel;
- ❑ being located within a major employment and retail centre, as well as being readily connected to surrounding areas and the Sydney CBD; and
- ❑ providing for an increase in population living within 30 minutes by public transport of a city or major centre in the metropolitan area.

Travel Access Guide

- 2.31 To encourage travel modes other than private vehicle, a travel demand management approach should be adopted, through a travel access guide to meet the specific needs of the site, future employees, residents and visitors. The specific requirements and needs of the future employees and residents and visitors, should be incorporated in the travel access guide to support the objectives of encouraging the use of public transport.
- 2.32 The principles of the travel access guide, to be developed by the applicant in consultation with the building owner, council, RMS, Sydney Buses and other stakeholders, should include the following:
- ❑ encourage the use of public transport, including rail and bus services through Burwood;
-

- ❑ work with public transport providers to improve services;
- ❑ encourage employees to car pool where possible;
- ❑ encourage public transport by employees through the provision of information, maps and timetables;
- ❑ raise awareness of health benefits of walking (including maps showing walking routes);
- ❑ encourage cycling by providing safe and secure bicycle parking, including the provision of lockers and change facilities;
- ❑ provide appropriate on-site parking provision, consistent with the objective of reducing traffic generation.

2.33 The travel access guide may take a variety of forms including a green transport plan or work place travel plan. The travel access guide will assist in delivering sustainable transport objectives by considering the means available for reducing dependence solely on cars for travel purposes, encouraging the use of public transport and supporting the efficient and viable operation of public transport services. It should be prepared prior to occupation of the building.

Parking Provision

- 2.34 The Burwood Development Control Plan includes the following parking requirements for development in centres:
- o 0.5 spaces per studio/bed sitter;
-

-
-
- o one space per one/two bedroom apartment;
 - o 1.5 spaces per three bedroom apartment; and
 - o one space per five dwellings for visitors.
 - o offices: one parking space per 400m² (for the first 400m² plus one space per 120m² thereafter; and
 - o retail: one space per 400m² (for the first 400m² GFA plus one space per 40m² thereafter).

2.35 By comparison, the RMS “Guide to Traffic Generating Developments” suggests the following parking requirements for high density residential in sub-regional centres and CBDs:

Sub-regional centres:

- o 0.6 spaces per one bedroom apartment;
- o 0.9 spaces per two bedroom apartment;
- o 1.4 spaces per three bedroom apartment; and
- o one space per five apartments for visitors.

CBDs:

- o 0.4 spaces per one bedroom apartment;
- o 0.7 spaces per two bedroom apartment;
- o 1.2 spaces per three bedroom apartment; and
- o one space per seven apartments for visitors.

2.36 The DCP does not include a specific parking requirement for cinemas. At peak retail times, cinemas generate a parking demand of one space per 25 seats.

2.37 The development will provide a mix of uses which will have overlapping parking demands. For example, retail parking spaces will be busier during the day and cinema/residential visitor parking demands will be higher at night. There is therefore the opportunity to share parking between the various uses.

2.38 As previously noted, a potential scale of development includes the following:

- o retail: 26,817m²;
- o cinemas: 1,683m² (assumed to provide some 500 seats);
- o commercial: 20,000m² GFA (including 100 room hotel);
- o residential: 1,044 apartments (assumed to comprise 10 per cent studio, 45 per cent one bedroom, 40 per cent two bedroom and five per cent three bedroom apartments).

2.39 Table 2.1 sets out parking requirements based on DCP and RMS residential parking rates.

Table 2.1: Parking requirements					
Component	Size	Rate		Requirement	
		DCP	RMS	DCP	RMS
Residential					
Studio	104	0.5	0.4	52	42
1 bed	418	0.5	0.4	209	167
2 bed	470	1	0.7	470	329
3 bed	52	1.5	1.2	78	62
Visitor		0.2	1/7	209	149
Retail	26,817m ²	1/40m ²		661	
Commercial	20,000m ²	1/120m ²		164	
Cinema	500 seats	1/25 seats		20	
Total				1,863	1,594

2.40 Table 1 indicates a provision of some 1,600 to 1,850 parking spaces would be appropriate. As previously noted, there is potential to share residential visitor, commercial and retail/cinema parking. Parking within this range is consistent with

planning controls for Burwood Town Centre and would therefore have been anticipated in the BTCLEP and S94A plan.

- 2.41 Appropriate parking should be provided at the development application stage, based on the above rates. Appropriate disabled and motor cycle parking should be included in the development.

Access, Servicing and Internal Layout

- 2.42 Vehicular access to the site would be appropriately provided from Railway Parade and Wynne Avenue. Access for resident/tenant parking and the publicly accessible spaces would be separated within the development. Internal ramps would connect the parking levels.
- 2.43 The access points to the car park and loading docks should be provided in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 2: Off-street commercial vehicle facilities), AS 2890.1:2004 and AS 2890.2 – 2002.
- 2.44 Within parking areas, parking space dimensions, aisle widths, ramp grades, transitions, column locations and height clearances would be provided in accordance with AS 2890.1:2004 and AS 2890.2 – 2002.
- 2.45 Loading docks should provide for deliveries to the retail and commercial components, as well as garbage collection. Docks should provide for 12.5 metre rigid trucks and 19 metre semi-trailers. The design should include provision for service vehicles to enter and exit the site in a forward direction.
-

Traffic Generation

- 2.46 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with other traffic on the surrounding road network.
- 2.47 The Section 94 plan include the following works in the town centre:
- o upgrade to the signalised intersection at Burwood Road/Belmore Street (2015-2018);
 - o upgrade to the signalised intersection at Burwood Road/Railway Parade (2015-2018);
 - o new traffic signals at the intersection of Railway Parade/Conder Street (2015-2018);
 - o widening of Railway Parade east of Burwood Road (2024-2027);
 - o new mid-block traffic signals in Wynne Avenue (2012-2015);
 - o new traffic signals at Belmore Street/Wynne Avenue (2012-2015);
 - o new traffic signals at Belmore Street/Conder Street (2012-2015);
 - o widening of Railway Parade adjacent to Burwood Plaza (after 2035);
 - o streetscape upgrades in Belmore Street, Conder Street, Wynne Avenue (2012 - after 2020); and
 - o shared zones in Conder Street and Clarendon Place (2015-2018).
-

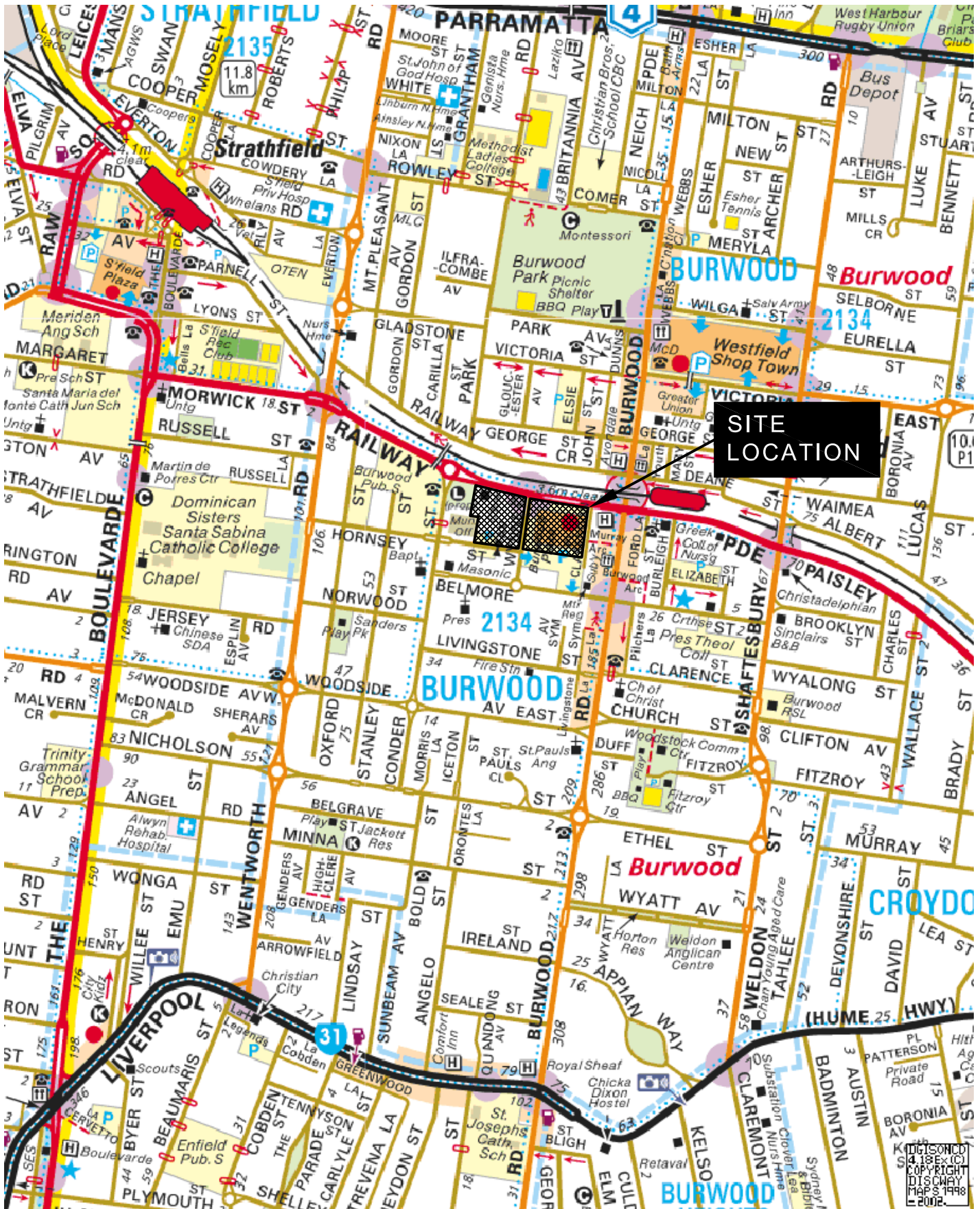
- 2.48 These works have been identified to cater for development under the existing planning controls. They would therefore be appropriate to cater for traffic generated by a development scheme with some 48,500m² of retail/commercial space and 300 residential apartments.
- 2.49 Surveys undertaken by RMS include the following traffic generation rates for residential apartments:
- o 0.19 and 0.15 vehicles per hour per apartment for high density residential apartments close to public transport.
- 2.50 On this basis, the additional 740 residential apartments in the proposed development would have a traffic generation of some 140 and 110 vehicles per hour two-way during weekday morning and afternoon peak hours respectively.
- 2.51 These are modest traffic generations. Traffic increases on Wynne Avenue, Belmore Street, Railway Parade and Burwood Road would be some 25 to 80 vehicles per hour two-way at peak times.
- 2.52 With the implementation of the road works identified in the Section 94 plan, the small increases in traffic flows would have minor effects on the operation of the surrounding road network.
- 2.53 If other sites in the town centre have increased FSR, Architectus has estimated that there would be a further some 4,200 additional residential apartments compared to the permissible FSR. These additional apartments would generate a further 800 and 630 vehicles per hour two-way at peak times.
-

-
-
- 2.54 Bearing in mind that the traffic generation would be spread across a range of sites and spread across the town centre road network, increases on particular streets are likely to be some 50 to 100 vehicles per way, two-way, during peak times.
- 2.55 It should also be noted that residential traffic would mainly be leaving the town centre in the morning and entering the town centre in the afternoon. This should lessen traffic effects as commuter traffic would be travelling in the opposite direction during peak periods.
- 2.56 In association with the planning proposal, a traffic modelling study is being undertaken by Road Delay Solutions Pty Ltd. This study will examine the area-wide traffic implications of the planning proposal in the context of future development in the Burwood town centre and the works identified in council's section 94 plan.

Summary

- 2.57 In summary, the main points relating to the transport aspects of the planning proposal are as follows:
- i) the planning proposal would provide for a mixed use development including some 28,500m² retail (including a cinema complex), 20,000m² commercial (including a 100 room hotel) and 1,044 residential units;
 - ii) the proposed increase in FSR is equivalent to some 740 additional residential apartments, compared to the current FSR;
 - iii) the planning proposal is consistent with the planning for Burwood as a strategic centre;
-
-

- iv) a series of road and transport works has been identified to accommodate future development in Burwood, including the subject site;
 - v) the development would increase employment, retail and residential densities close to existing public transport services and is consistent with government objectives to reduce private car travel and encourage public transport use;
 - vi) appropriate on-site parking for cars and bicycles should be provided, consistent with the site's good public transport access;
 - vii) access, internal circulation and layout should be provided in accordance with Australian Standards;
 - viii) the traffic generation of the proposed additional 740 apartments would be modest, at some 110 to 140 vehicles per hour two-way at peak times, compared to development under the current controls;
 - ix) with the implementation of the road works identified in the Section 94 plan, the small increases in traffic flows would have minor effects on the operation of the surrounding road network; and
 - x) a traffic modelling study is being undertaken to examine the area-wide traffic implications of the planning proposal in the context of future development in the Burwood town centre and the works identified in council's section 94 plan.
-



Location Plan