ATTACHMENT D

BROWN

4 Burbank Place, Baulkham Hills

Traffic and Parking Assessment Report

Prepared for Capital Corporation

7 April 2014

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Roads and Traffic Division

CAPITAL CORPORATION

Smart Consulting

COMMERCIAL IN CONFIDENCE

Brown Consulting (NSW) Pty Ltd
Level 2 Burbank Place, Baulkham Hills Place, Norwest Business Park
PO Box 8300
Baulkham Hills NSW 2153

Ph: (02) 8808 5000

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4 Burbank Place Traffic and Parking Assessment Report

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Draft	07/04/2014	Traffic and Parking Assessment Report	JA	FR	JA
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1. Introduction

1.1 Project Summary

Brown Consulting have been engaged by Capital Corporation to prepare an assessment of the traffic and parking related considerations associated with the proposed additions and alterations to 4 Burbank Place, Baulkham Hills. The site location is illustrated in Figure 1.

Figure-1: Site Location (source Google Maps)

1.2 Purpose of this Report

This report presents a Traffic and Parking Assessment of the proposed development. The scope of the assessment includes:

- A description of the proposal
- A description of the road network serving the development property
- Determination of the traffic activity associated with the proposal and any associated impacts upon the surrounding road network
- Assessment of the proposed parking provision, according to Council's planning control requirements; and
- Compliance review of proposed car parking areas

The Report is set out as follows:

- Chapter 2 provides a summary of the proposed development
- Chapter 3 describes existing conditions
- Chapter 4 provides a summary of the findings of the data assessment
- Chapter 5 presents a summary and report recommendations

2. Development Proposal

2.1 Norwest Business Park

The proposed site is located at 4 Burbank Place in Norwest Business Park, Baulkham Hills, within The Hills Shire LGA. The Norwest business park website, (http://www.norwestbusinesspark.com.au/), provide the following information:

> *'Norwest Business Park is a thriving business community strategically located with direct access to Sydney's orbital motorway system providing easy access to the CBD, airport and Sydney's manufacturing and distribution heartland.*
>
> *The Business Park has grown to accommodate over 20,000 employees with expansion expected to increase capacity to over 35,000 employees.*
>
> *This growth needed more infrastructure to accommodate the increase in people and there are 3 infrastructure projects currently underway to help service the area. These include the North-West Rail line (with two stations in Norwest - one at Norwest Boulevard/ Brookhollow Avenue, the other at Old Windsor Road/Celebration Drive), the upgrade of the Windsor Road entry to Norwest and the M2 upgrade.*
>
> *The Business Park has a wide range of space available accommodating companies such as Woolworths, Resmed, Braun, Inchcape (Subaru) and Capital Finance and also a plethora of small and medium businesses. It is also home to the new Hills Private Hospital. The Hills Shire has the highest proportion of businesses between 3-4 people and this is reflected by the amount of quality office space available between 50–150m^2.'*

The park is located between Windsor Road to the east and Old Windsor Road to the west, while Norwest Boulevard serves as its main vehicular access.

2.2 Existing Development Site and DA 1107/ 2013

The site is located on the northern side of Burbank Place and is comprised of four levels, with a total floor area of 3,720m^2. This area is comprised mainly of offices, as well as a café on the ground floor. The car parks are shared between the building and 2 Burbank Place, with a total of 558 spaces and operate at ground level and two basement levels.

At present, the two buildings have a total of 13,890 m^2. The approved DA 1107/ 2013 provides a total of 16,183 m^2 and 650 parking spaces. Sub-section 2.3 provides more detail about the development proposal.

The ground level car parking area is accessed by two driveways at its frontage on Burbank Place. The basement car parks are accessed through a controlled driveway located at the cul-de-sac located on the western side of Burbank Place. A visitor parking is located on the ground level and supplies 49 spaces. Figure 2 illustrates in more detail the location of the site and its associated accesses.

Figure-2: 4 Burbank Place, Baulkham Hills

(Source Google Maps)

2.3 Development Proposal

The total area of existing building is 3,720m^2
Following the proposed additions of 1,237m^2, the site would comprise of 4,957m^2 GFA.

The car park has been redesigned to provide an additional 12 parking spaces (for in each car park level) to cater for the proposed additions. No changes are proposed to the operation of access to the car parks, both in terms of geometry or operation. Table 1 and 2 provide the detailed GFA and parking spaces for existing situation, DA 1107/ 2013 and the proposal.

Table-1: Area & Parking Schedule

Land Use	Currently Constructed Area (m^2)	Currently Constructed Cars (number)	Approved DA 1107/2013 Area (m^2)	Approved DA 1107/2013 Cars (number)	4 Burbank Extensions Area (m^2)	4 Burbank Extensions Cars (number)
Commercial Building A	2739	110	2739	110	2739	110
Building A Level 1 Mezzanine	810	33	810	33	810	33
Commercial Building B (including Existing Level 7 Commercial Area)	9232	370	9232	370	9232	370
Building B Level 1 Mezzanine	938	38	938	38	938	38
Level 1 Exansion - Burbank	-	-	532	21	532	21
Level 7 Exansion - Burbank	-	-	1761	70	1761	70
4 Burbank expansion	-	-	-	-	1237	49
Café	171	7	171	7	171	7
Total	**13890**	**558**	**16183**	**649**	**17420**	**698**
FSR	1:1		1.166:1		1.254:1	
Total Spaces currently provided						687
Additional spaces required						12

Table-2: Schedule of Expansion

4 Burbank Expansion Schedule	Area (m^2)
Level 1	235
Level 2	334
Level 3	334
Level 4	334
Total Expansion	**1237**

Details of the proposed changes prepared by Tim Farrell Architects are provided in Appendix A.

3. Existing Traffic and Transport Conditions

3.1 Road Network

3.1.1 Classification Criteria

It is usual to classify roads according to a road hierarchy in order to determine their functional role within the road network. Changes to traffic flows on the roads can then be assessed within the context of the road hierarchy. Roads are classified according to the role they fulfil and the volume of traffic they should appropriately carry. The RTA has set down the following guidelines for the functional classification of roads.

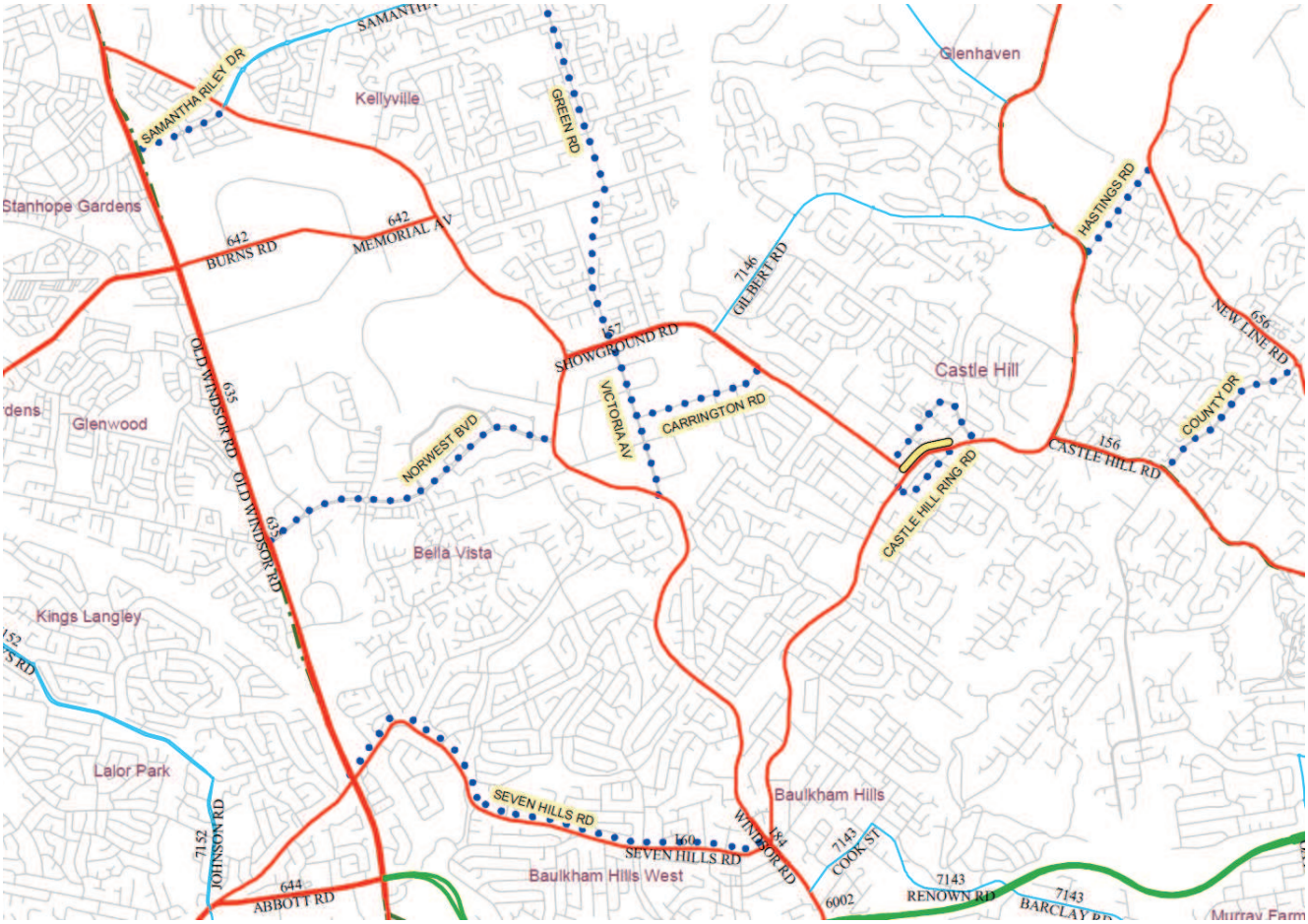
- Arterial Road – typically a main road carrying over 15,000 vehicles per day and fulfilling a role as a major inter-regional link (over 1,500 vehicles per hour)
- Sub-arterial Road – defined as secondary inter-regional links, typically carrying volumes between 5,000 and 20,000 vehicles per day (500 to 2,000 vehicles per hour)
- Collector Road – provides a link between local roads and regional roads, typically carrying between 2,000 and 10,000 vehicles per day (250 to 1,000 vehicles per hour). At volumes greater than 5,000 vehicles per day, residential amenity begins to decline noticeably
- Local Road – provides access to individual allotments, carrying low volumes, typically less than 2,000 vehicles per day (250 vehicles per hour)

3.1.2 Existing Road Network

The existing road network in the vicinity of the proposed development is described as follows and is illustrated in Figure 3:

- Windsor Road: is a north-south aligned four-lane mostly non-divided State Road, connecting Parramatta and Beaumont Hills. It feeds Norwest Boulevard from east. It has a posted speed of 60-70 km/h
- Old Windsor Road: is a north-south aligned four-lane, divided State Road, connecting Constitution Hill and Windsor Road. It represents one of the mains feeders into Norwest Boulevard, from west, after its intersection with M7 motorway. It has a posted speed of 80 km/h
- Norwest Boulevard: is an east-west aligned four-lane, divided sub-arterial road, connecting Windsor Road and Old Windsor Road. It has a posted speed of 70 km/h. Along its length between Old Windsor Road and Windsor Road, all intersections are controlled by roundabouts
- Solent Circuit: is a divided two-lane collector road and represent the only access to the site. Parking is not restricted on its both sides along the kerbs
- Burbank Place: it consists of a two-lane non-divided local cul-de-sac road. Access to the site is made at the end of the cul-de-sac. Parking is unrestricted on its both sides

Figure-3: Existing Road Network



(Source: RMS Road Hierarchy Review)

3.2 Existing Traffic Conditions

The existing road network was designed to cater for the future growth associated with the Norwest Business Park. As described in Subsection 2.1, the Business Park is expected to accommodate over 35 thousand employees. The proposal is within the proposed development of the business park. The road network operates within its projected capacity.

3.3 Existing Parking Conditions

2 and 4 Burbank Place share the car parks, which operate at ground level and two basement levels, with a total of 558 spaces to satisfy the existing development, while DA 1107/ 2013 requires 649 spaces to satisfy the number of spaces under this consent. The ground level car parking area is accessed by two driveways at its frontage on Burbank Place. The basement car parks are accessed through a controlled driveway located at the cul-de-sac located on the western side of Burbank Place. A visitor parking is located on the ground level and supplies 49 spaces.

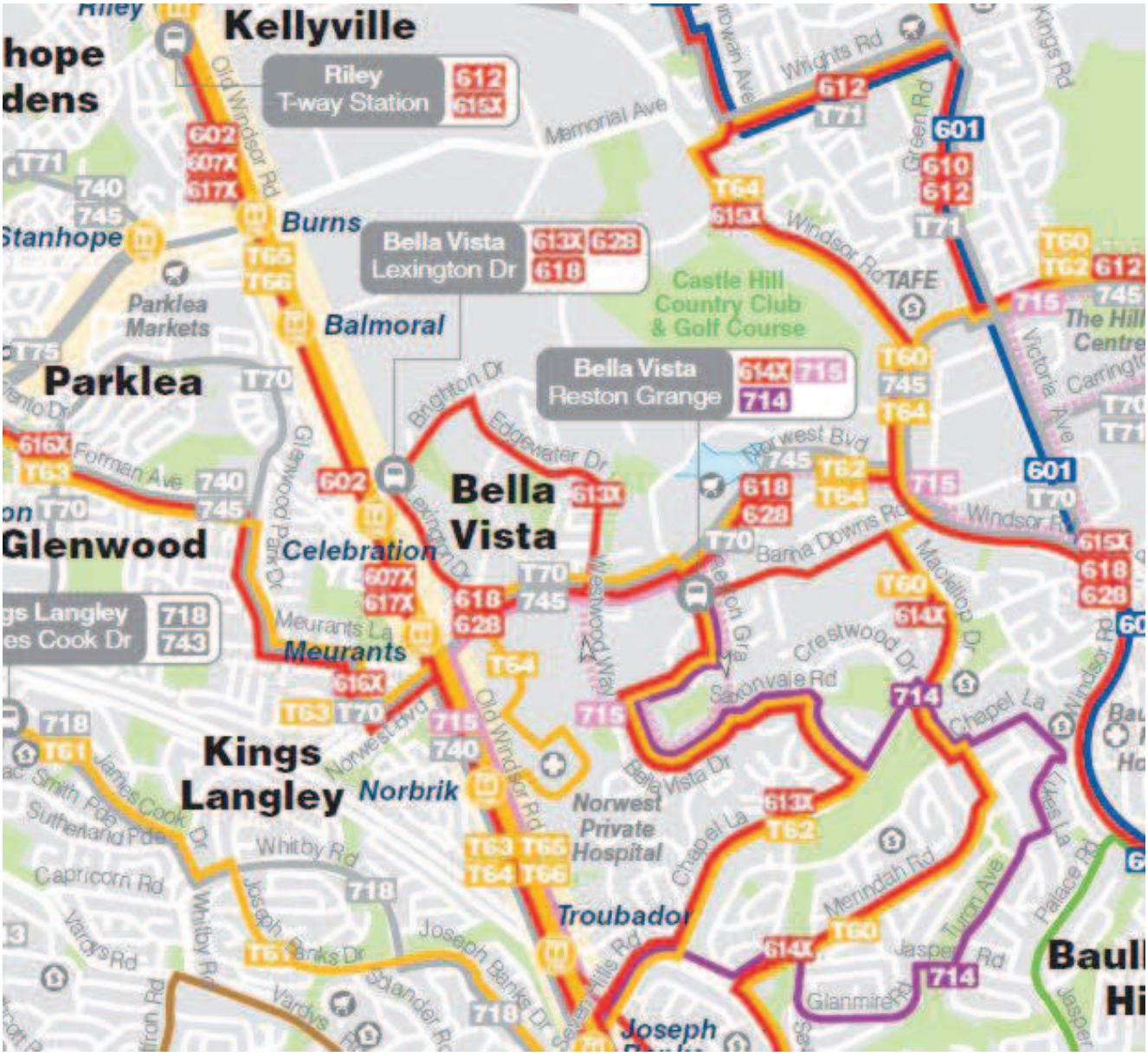
3.4 Public Transport

Bus services are available in the area, serviced by Hillsbus. The supply of buses is provided in the following subsection.

3.4.1 Buses

The supply of buses by Hillsbus is illustrated in Figure 4. Bus stops are provided along Norwest Boulevard and operate satisfactorily.

Figure-4: Bus Route Map



(Source: Hillsbus website)

The following bus routes service the business park and stop along Norwest Boulevard:

- 618 – services between Sydney CBD and Norwest Business Park
- 628 – services between Macquarie Park and Norwest Business Park, via Windsor Road, Baulkham Hills and M2
- 715 – services between Castle Hill and Seven Hill, via Norwest Business Park and Old Windsor Road
- 745 – services between Castle Hill and St Marys, via Norwest Business Park and Stanhope Gardens
- T62 – services between Castle Hill and Parramatta, via Norwest Business Park, Bella Vista, Tuckwell Road and North-West T-way
- T64 – services between Rouse Hill and Parramatta, via Norwest Business Park
- 613X – services between Bella Vista and City, via Norwest Boulevard and M2
- T70 - services between Blacktown and Glenwood, via Norwest Boulevard, Bella Vista and Castle Hill

3.4.2 Norwest Train Station

Construction of the North-West Rail Link has begun. Two stations will directly service Norwest Business Park, namely:

Norwest Station, located at the corner of Norwest Boulevard and Brookhollow Avenue.

According to the North-West Rail Link's website (http://nwrail.transport.nsw.gov.au/The-Project/Stations/Norwest):

> *'… the station will be located in the heart of the Norwest Business Park, serving one of Sydney's biggest employment precincts. It will also serve a large area of recent residential development to the south of the station. The business park has seen strong growth and has significant opportunity for further employment and residential expansion in the future.'*

Bella Vista Station, located on the western edge of the Norwest Business Park, off-Celebration Drive and east of Old Windsor Road, serving the business park as well as well as local residential areas of Bella Vista.

The future supply of public transportation will certainly reduce the use of private cars within the surrounding area. Both stations are slated to open close to 2020. The locations of the two stations are provided in Figure 5.

Figure-5: North-West Link Rail Overview

(Source North-West Rail Link website)

4. Development Traffic and Parking Assessment

4.1 Traffic Generation

The RMS Guide to Traffic Generating Developments is in the process of being further revised. Over the past few years a number of surveys has been undertaken to update trip generation and parking information as part of the Guide. The traffic generation of the proposed development has been established with reference to the current Guide and to these updated surveys, May 2013.

4.2 Land Uses

The development comprises of a four-level building, with a proposed total addition of 1,237m^2 and a final GFA of 4,957m^2.

The updated surveys undertaken by RMS (page 2 of the TDT 2013/ 04a RMS Guide to Traffic Generating Developments – updated traffic surveys, August 2013 - "Business parks and industrial estates") indicate the following rates:

Table-3: Applicable Trip Generation Rates

	Sydney		Regional	
Weekday Rates	Average	Range	Average	Range
AM peak (1 hour) vehicle trips/ 100m2 of GFA	0.52	0.15-1.31	0.70	0.32-1.20
PM peak (1 hour) vehicle trips/ 100m2 of GFA	0.56	0.16-1.50	0.78	0.39-1.30
Daily total vehicle trips	4.60	1.89-10.47	7.83	3.78-11.99

The upper limit of the trip generation Sydney range has been adopted. It is also assumed that the in/ out split during the morning and evening peak periods is 80% in/ 20% out and 20% in/ 80% out respectively.
Adopting these rates and in/ out splits will equate the following trip generation estimate:

Table-4: Projected Additional Peak Hour Trip Generation (vph)

Peak Period	GFA m2	Trips /100m2 GFA	Total Trips	Trips In	Trips Out
AM Peak	1,237	1.31	16.21	13	3
PM Peak		1.50	18.56	4	15

Table 5 shows that the anticipated trip generation during peak hours is minimal and can be easily accommodated into the road network. As such, the proposed development is not anticipated to have any significant adverse traffic impact on the surrounding road network.

4.3 Car Parking Requirements

The minimum on-site parking supply requirements as stipulated in The Hills Shire's DCP 2012 Part C Section 1 Table 1 include:

- Commercial premises (including business premises, office premises): 1 space/ 25 m^2 GFA.

The proposed additional GFA of 1,237 m^2 will therefore require an additional 50 spaces.

The site currently accommodates a parking provision of 687 car parking spaces including visitor parking. The approved DA 1107/ 2013 GFA of both buildings (2 and 4 Burbank Place) is 16,183m^2, with a requirement of 649 car spaces. As such, the site currently consists of an excess parking supply of 38 spaces.

The parking supply and requirement can be identified as follows:

- Required parking to satisfy existing development pre DA 1107/ 2013: 558 spaces
- Required parking to satisfy approved DA 1107/ 2013 supply: 649 spaces
- Total number of existing spaces: 687 spaces
- Required supply (post-development): 699 (649 + 50) spaces
- Proposed supply (post-development): 699 (687 + 12) spaces

The proposed parking supply is sufficient to meet the minimum requirement as stipulated in Council's DCP.

4.4 Parking Access and Car Park Design

No changes are proposed to access to the car parks, as discussed in previous sections. The only proposed change is the addition of 12 car spaces. Appendix B provide the plan where additional spaces are supplied in the Basement.

Servicing will continue to be conducted as at present. The existing Parking Management Plan will continue to guide to manage the available parking spaces in the site, including the general visitor spaces located on the ground floor.

5. Findings and Recommendations

The likely traffic and parking impacts of the proposed additions to 4 Burbank Place, Baulkham Hills has been assessed.

- Additional traffic volumes to and from the site will be minimal and will be easily accommodated onto the road network
- No work will be required to mitigate against any adverse traffic impacts
- No changes are proposed to access to the site
- The proposed parking supply of 699 spaces at site is adequate to meet the minimum requirement stipulated in The Hills Shire' DCP (2012)

It is therefore recommended that the proposed additions to the building at 4 Burbank Place, Baulkham Hills supported in terms of traffic impact and parking supply.

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Appendices

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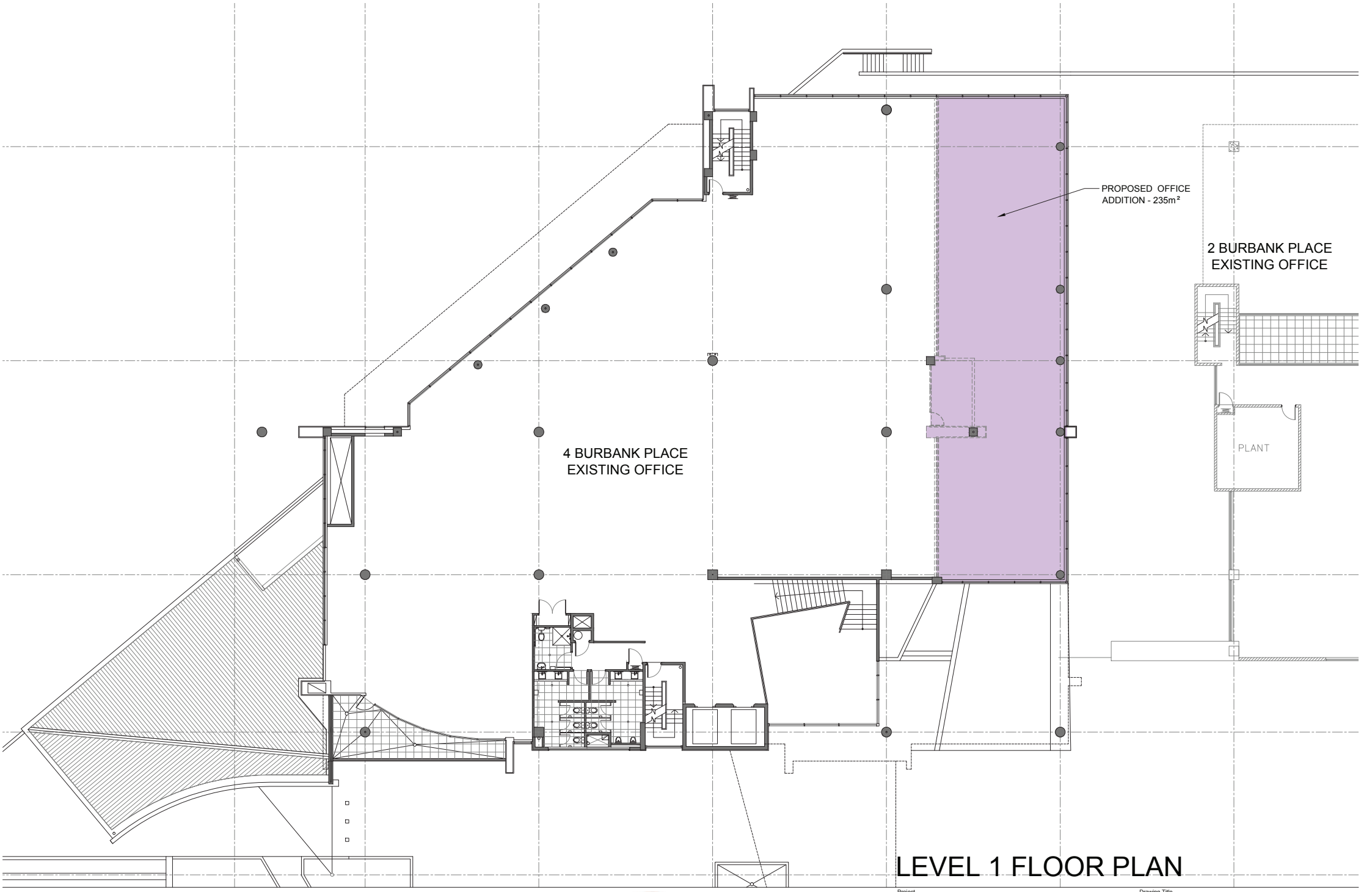
Appendix A Architectural Plans



LEVEL 1 FLOOR PLAN

TIM FARRELL
ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

CAPITALCORPORATION

Project
ADDITIONS TO EXISTING OFFICE

Location
4 BURBANK PLACE, NORWEST

Project Number
1513

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Drawing Title
LEVEL 1 FLOOR PLAN

Date
10 APRIL 2014

Drawing Number
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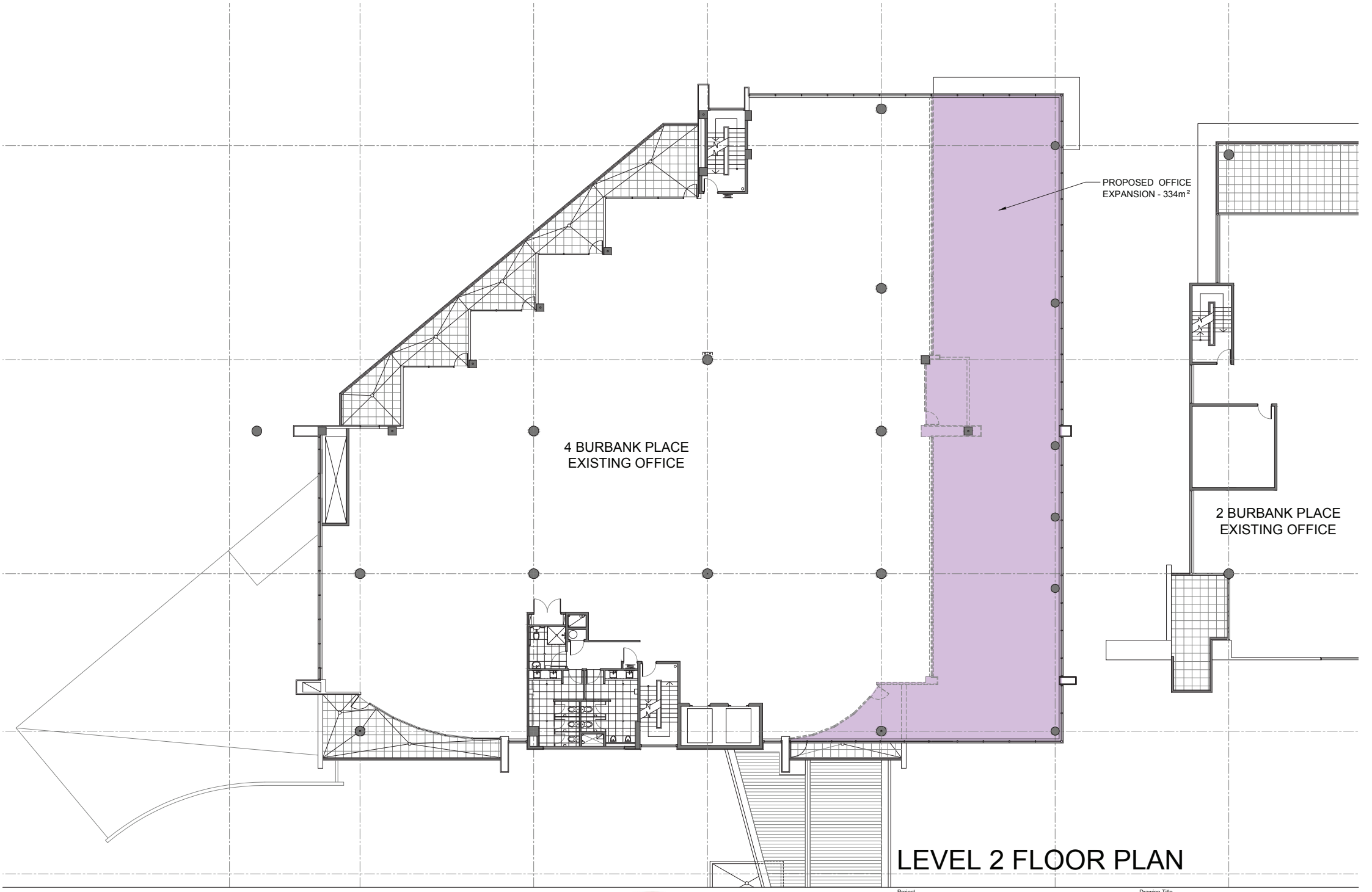

LEVEL 2 FLOOR PLAN

TIM FARRELL
ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

CAPITALCORPORATION

Project
ADDITIONS TO EXISTING OFFICE

Location
4 BURBANK PLACE, NORWEST

Project Number
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Drawing Title
LEVEL 2 FLOOR PLAN

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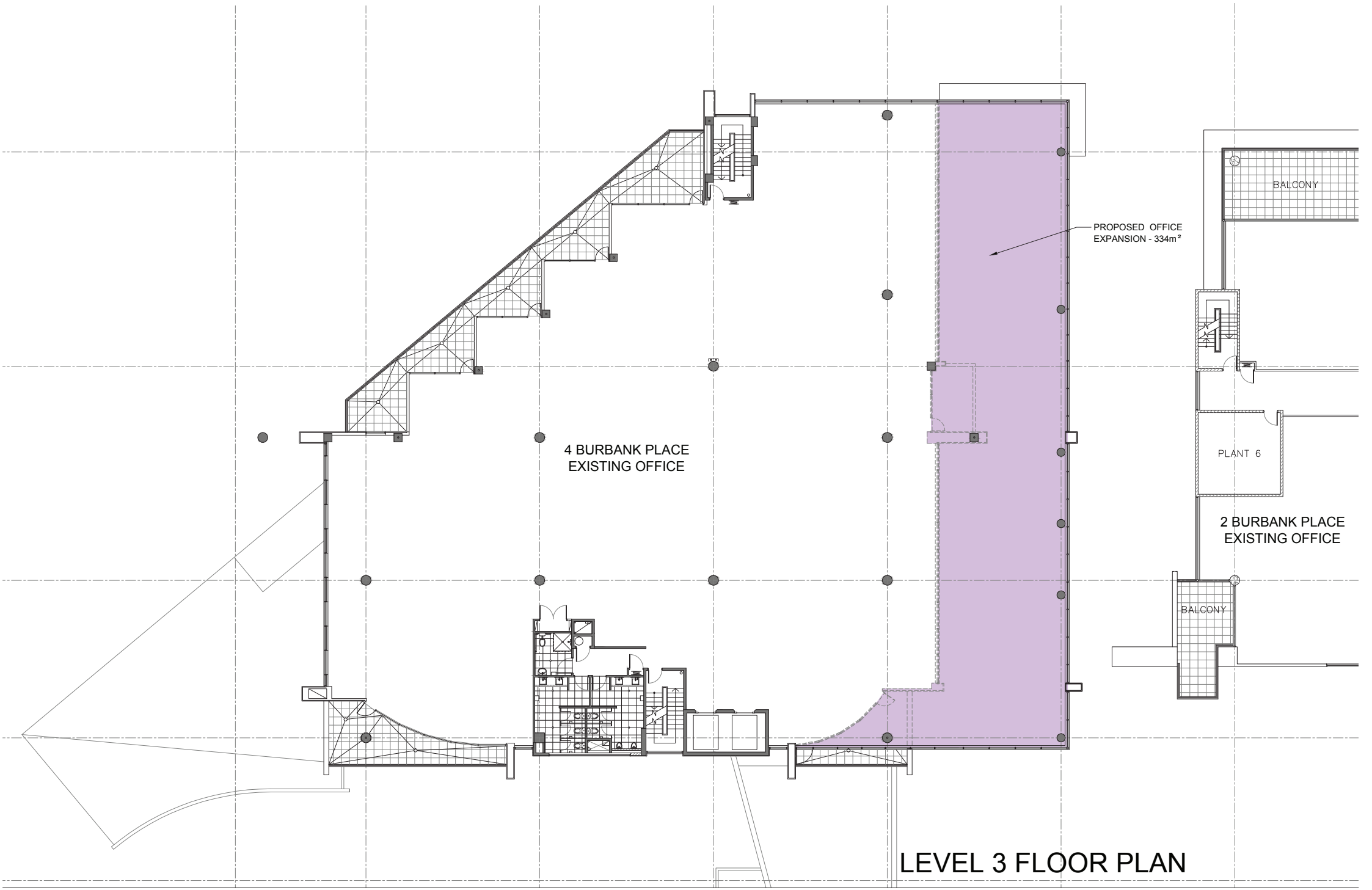

LEVEL 3 FLOOR PLAN

TIM FARRELL
ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

CAPITALCORPORATION

Project
ADDITIONS TO EXISTING OFFICE

Location
4 BURBANK PLACE, NORWEST

Project Number
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Drawing Title
LEVEL 3 FLOOR PLAN

Date
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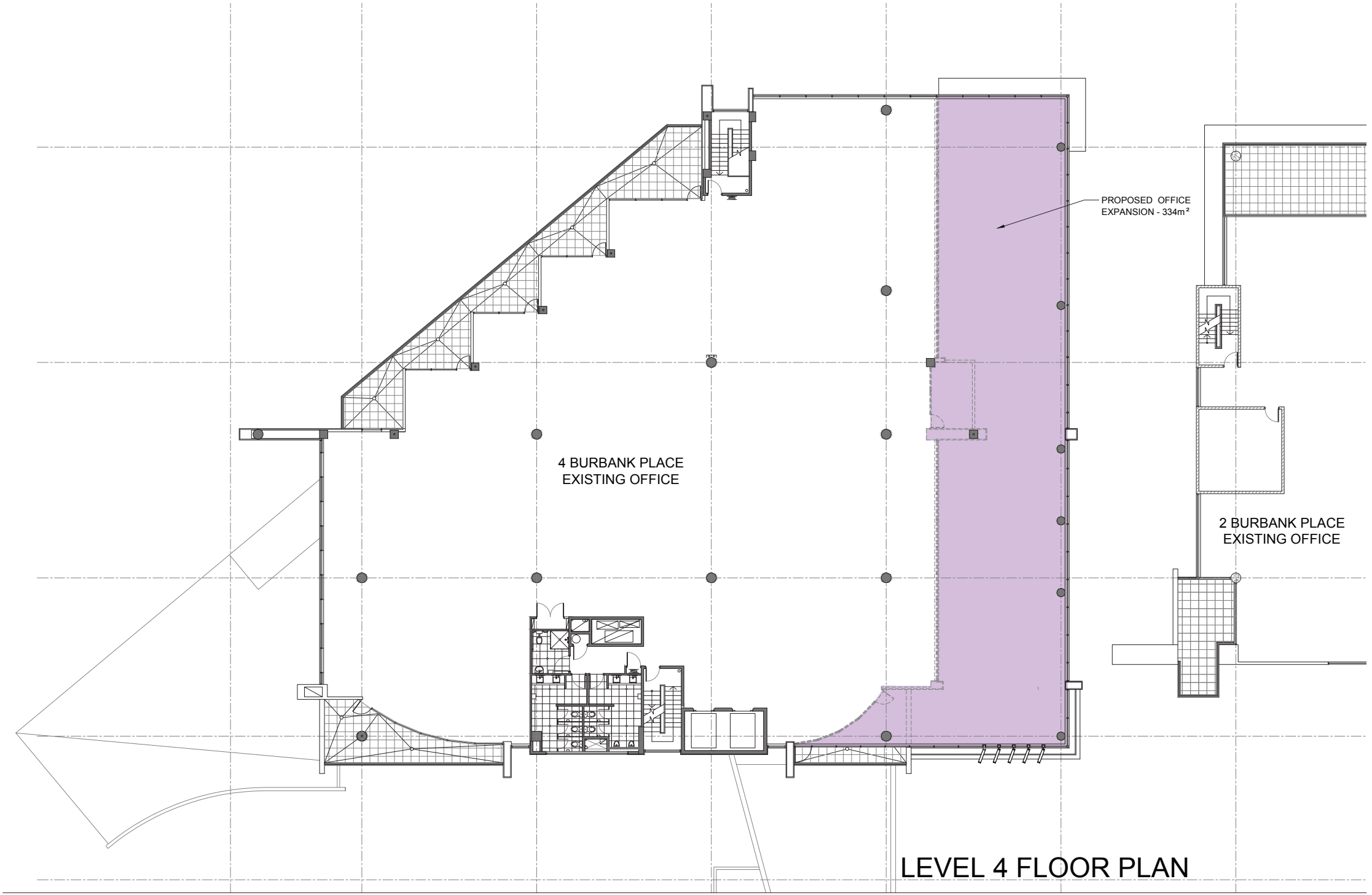

LEVEL 4 FLOOR PLAN

TIM FARRELL
ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

CAPITALCORPORATION

Project
ADDITIONS TO EXISTING OFFICE

Location
4 BURBANK PLACE, NORWEST

Project Number
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Drawing Title
LEVEL 4 FLOOR PLAN

Date
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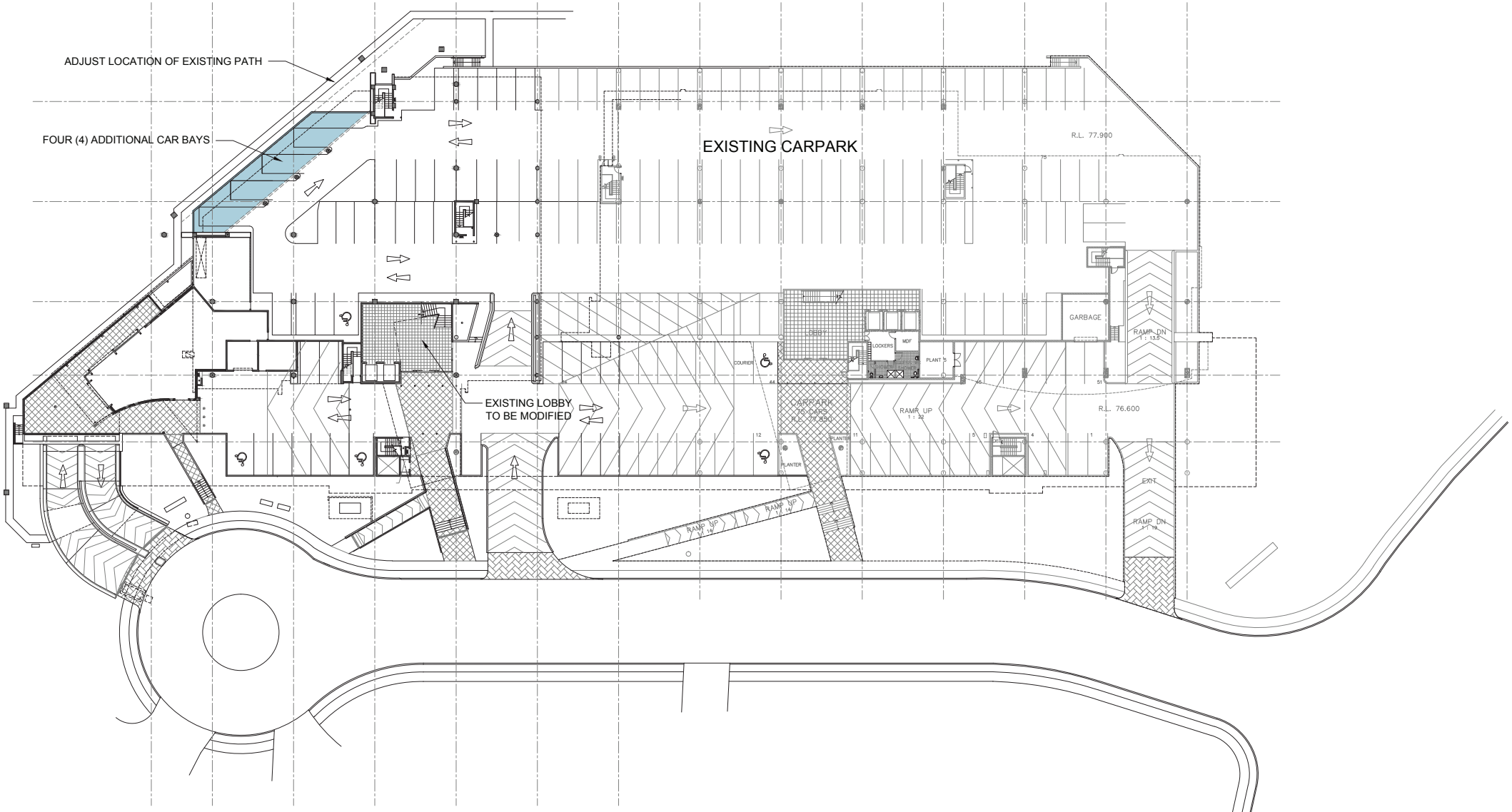
Appendix B: Proposed additional car spaces



GROUND FLOOR PLAN

TIM FARRELL ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

CAPITALCORPORATION

Project
ADDITIONS TO EXISTING OFFICE

Location
4 BURBANK PLACE, NORWEST

Project Number
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Drawing Title
GROUND FLOOR PLAN

Date
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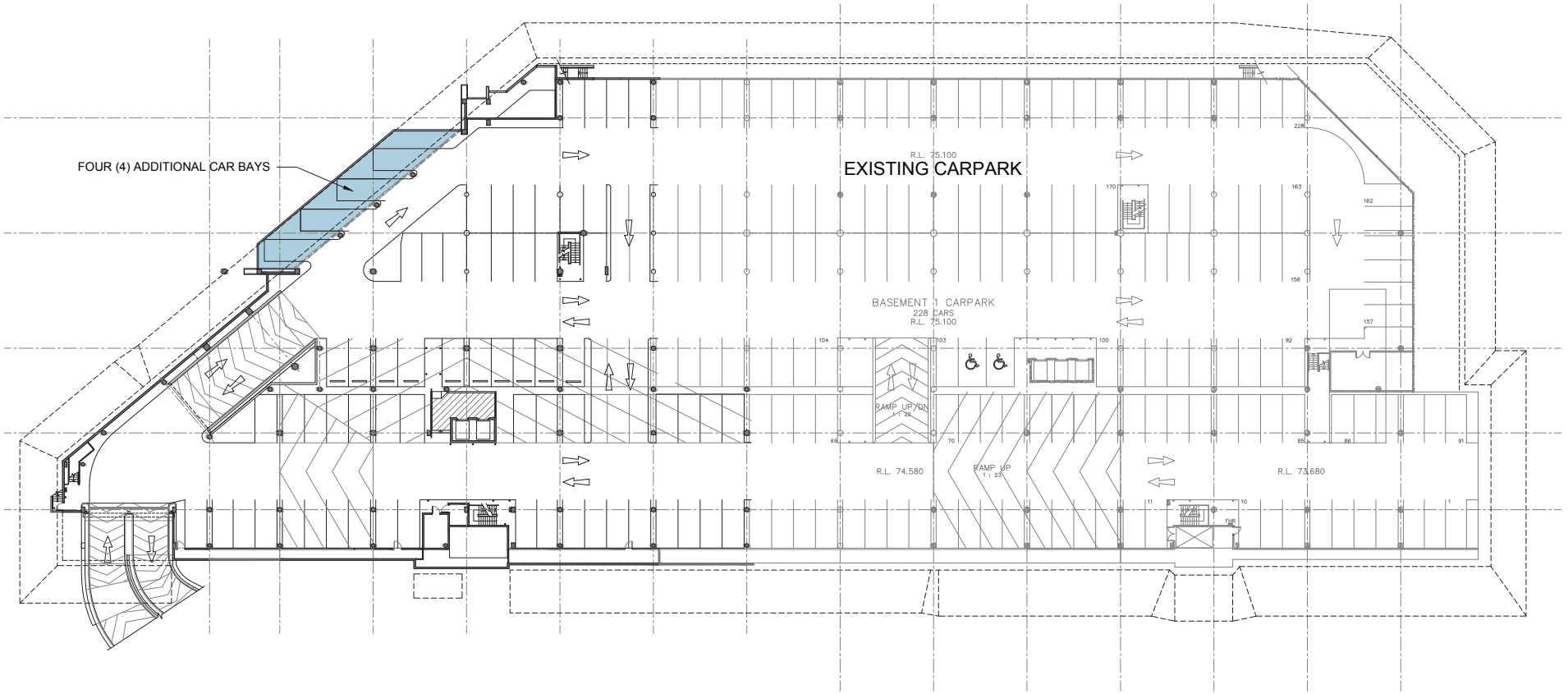

BASEMENT 1 FLOOR PLAN

TIM FARRELL ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

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Location
4 BURBANK PLACE, NORWEST

Project Number
1513

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Drawing Title
BASEMENT 1 FLOOR PLAN

Date
10 APRIL 2014

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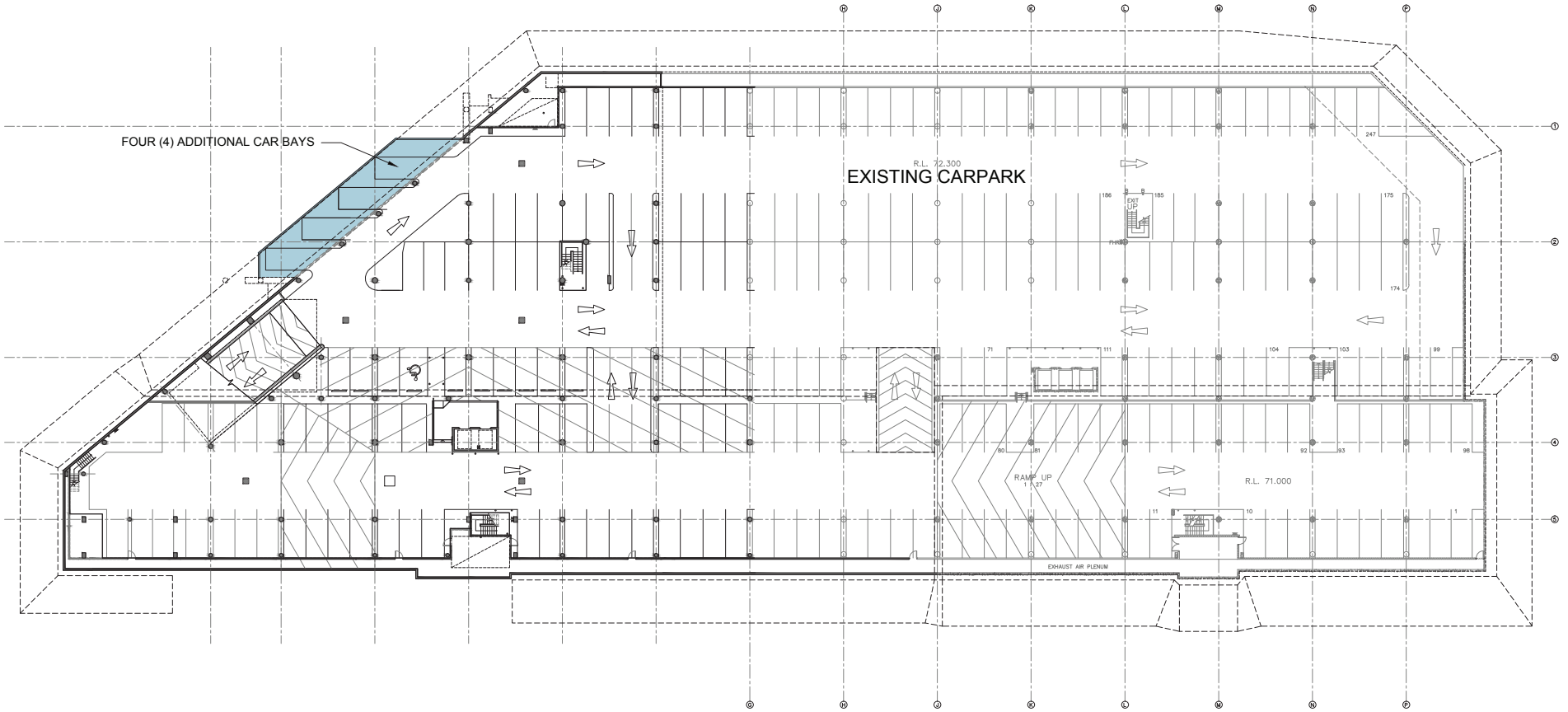

BASEMENT 2 FLOOR PLAN

TIM FARRELL ARCHITECTS

Tim Farrell Pty Ltd Architects ABN 92 138 300 740
54 Woodhill Street Castle Hill NSW 2154
T: +61 2 9614 4500 tf@tfa.co www.tfa.co
Nominated Architect Tim Farrell No.6257

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Project Number
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Scale
1:500 @ A3

Drawing Title
BASEMENT 2 FLOOR PLAN

Date
10 APRIL 2014

Drawing Number
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