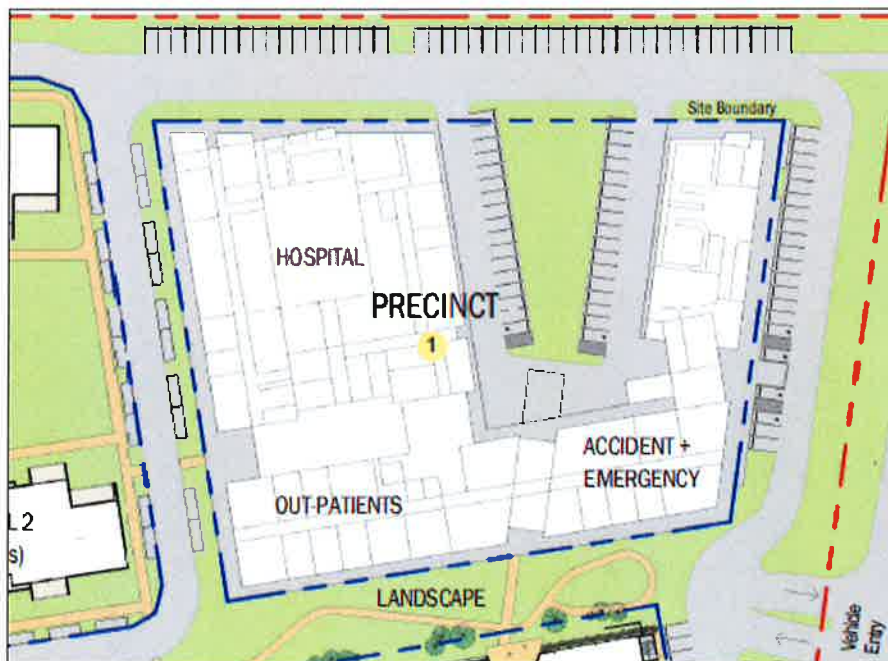


MODIFICATION APPLICATION

Section 75W Modification
Major Project MP 08_0232 Private Hospital
(Precinct 1 – Orange Private Hospital Campus)
Lot 1 DP 549856, Forest Road, Orange



Prepared for
James Richmark Pty Ltd
June 2014

Ref: MA1PJB13033

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INTRODUCTION

1.1 OVERVIEW

This Section 75W application seeks to modify Major Project MP 08_0232, which grants approval for a Private Hospital in Precinct 1 of the Orange Private Hospital Campus.

This application is lodged concurrently with separate applications to amend the Approved Concept for Orange Private Hospital Campus (MP07_0072); and the Approved Project for Precinct 2 – Medi Motel & Ancillary Services (MP 08_0233).

The current Project Approval under MP 08_0232 provides for a part 2 and 3 level building with a GFA of 10,350m². The building comprises a 52 bed private hospital complex including in-patient, operating, pathology, cancer care and pharmacy facilities, and medical consultation suites.

The proposed modification of the Project Approval seeks to increase the building height from a part 2 and 3 storey building to a part 3 and 4 storey building (plus lift overruns and plant). The intention is to increase floor area essentially over the original building footprint so that a larger number of private hospital beds and additional medical facilities can be provided. In this regard:

- GFA would increase to 12,620m².
- Private hospital beds would increase to 104.
- Space would be provided for in-patient, operating, pathology, cancer care, accident/emergency facilities, and medical consultation suites.

The key issues that require further consideration as a result of the proposed modification of MP 08_0232 include:

- Comparison to Approved Project
- Environmental planning instruments
- Other planning provisions
- Traffic and parking
- Urban design
- Heritage
- Flora and fauna
- Social impact

1.2 APPLICANT

James Richmark Pty Ltd
PO Box 7765
Gold Coast Mail Centre QLD 9726

Correspondence to be forwarded to the applicant's consultant:

Peter Basha Planning & Development
PO Box 1827
Orange NSW 2800

1.1 PROJECT TEAM

The project team engaged for this modification application comprises the following:

Site Owner:	James Richmark Pty Ltd
Project Architect:	TVS Architects
Landscape Architect:	McGregor Coxall
Town Planner:	Peter Basha Planning & Development
Traffic Engineer:	Terraffic Pty Ltd

1.2 DOCUMENTATION

This report is accompanied by the following documentation.

Annexure A

Architectural Drawings by TVS Architects

Annexure B

Traffic and Parking Assessment by Terraffic Pty Ltd

Annexure C

Landscaping Plans by McGregor Coxall

Annexure D

Confirmation of physical commencement

THE PROPOSED MODIFICATION

2.1 CURRENT PROJECT APPROVAL

With reference to the Table in Schedule 3, Part 1 of MP 08_0232, the current approval is for the construction of a private hospital (Precinct 1) including the following elements:

- A three level building comprising new private hospital complex comprising 10,350m² of in-patient, operating, pathology, cancer care and pharmacy facilities, medical consultation suites and 149 at-grade car parking spaces.
- Road improvements including the construction of a four way signalised intersection on Forest Road.
- Landscaping.
- Stormwater and infrastructure works.

It should be noted that the approval was due to lapse on 23 November 2013. However physical works in respect of MP 08_0233; MP 08_0232; and MP 07_0072 were physically commenced within the meaning of Section 95 of the EPA Act before the lapsing date (as confirmed in letter from Orange City Council - refer Annexure D).

2.2 PROPOSED MODIFICATION OF THE PROJECT

Pursuant to Section 75W of the EPA Act, and with reference to the architectural drawings provided in Annexure A, it is proposed to modify MP 08_0232 (Precinct 1) as follows:

- Increase the number of beds from 52 to 104 by adding another level to the western wing of the hospital, thus converting this section of the building from 3 storeys to 4 storeys.
- Relocate the pharmacy and some of the medical suites from the south eastern corner of the hospital ground floor and in their place introduce an accident and emergency facility. The pharmacy and medical suites would be transferred to the proposed health services building in Precinct 2.
- Decrease the number of parking spaces from 149 to 101 based on the parking assessment provided by traffic and parking consultants, Terraffic Pty Ltd.
- Delete the proposed internal bus zones.

The following Table provides a snapshot comparison between the Approved Project and the proposed modification.

Precinct 1 (MP 08_0232) Private Hospital	Approved Development	Proposed Development
Description	Part 2 and 3 level building comprising new private hospital complex comprising 10,350m ² of in-patient, operating, pathology, cancer care and pharmacy facilities, medical consultation suites and 149 at grade car parking spaces	Part 3 and 4 level building comprising new private hospital complex comprising 12,620m ² of in-patient, operating, pathology, cancer care and accident and emergency facilities, medical consultation suites and 101 at grade car parking spaces
In-patient unit	2,230m ² (60 beds)	4,400m ² (104 beds)
Administration	325m ²	325m ²
General Support	680m ²	680m ²
Operating Unit	1,715m ² (4 theatres)	1,715m ² (4 theatres)
Accident/Emergency	n/a	2,000m ²
Cancer Care Facility	1,400m ²	1,400m ²
Imaging, Pathology	2,000m ²	2,000m ²
Medical Suites	1,750m ²	n/a
Pharmacy	250m ²	n/a

The rationale for the proposed modification is summarised as follows:

- The Orange Private Hospital Campus has recently passed into new ownership. The new owners seek to modify the approved concept and projects to better respond to the emerging character and function of the surrounding health services precinct, which now comprises the Orange Health Service (public hospital) to the east of the subject land and an aged

care and retirement facility (under construction) to the south of the subject land.

- The emerging health precinct would benefit by providing additional health services. The rationale for this particular modification relates primarily to the obvious benefits generated by the provision of additional hospital beds and facilities at the private hospital.
- The reduction in parking spaces is based on the parking assessment by Terraffic Pty Ltd. However, some of the spaces to be removed would be along the Forest Road frontage of the site. The loss of spaces in this area increases the opportunity for landscaping and improved visual amenity.
- The provision of internal bus zones is unwarranted. The development site is already served by Route 537 whereby buses currently operate on a daily basis between Orange City Centre and the main entrance to the Orange Health Service (public hospital). The development site is within easy walking distance of that bus stop and pedestrian access will be facilitated by the safe crossings provided in the proposed four-way signalised intersection.

2.1 AMENDMENTS TO APPROVAL NOTICE AND CONDITIONS

Should the proposed modification be approved, the approval notice and conditions will require amendments as indicated below (additions are shown in red and deletions are struck through)

Amend the Table in Schedule 2, Part 1 to read as follows:

Application made by:	Forest Road Syndicate Pty Ltd James Richmark Pty Ltd
Application made to:	Minister for Planning
Major Project Number:	MP 08/0232
On land comprising:	Lot 1 DP 549856
Local Government Area:	Orange City Council
For the carrying out of:	Construction of a private hospital (Precinct 1) including the following elements: • A three and four level building comprising new hospital complex comprising 12,620m² of in-patient, operating, pathology, cancer care and pharmacy accident and emergency facilities, medical consultation suites and 149 101 at grade car parking spaces • Road improvements including the construction of a four way signalised intersection on Forest Road • Landscaping • Stormwater and infrastructure works

Capital Investment Value:	\$25 million
Type of Development:	Project approval under Part 3A of the EP&A Act
Determination made on:	
Determination:	Modification of Project approval for private hospital is granted subject to conditions set out in Parts D, E, F, G, H and I of Schedule 2
Date of commencement of approval:	This approval commences on the date of the Minister's approval
Date approval is liable to lapse:	5 years from the date of determination unless specified action has been taken in accordance with Section 75Y of the EP&A Act

Amend Condition D1 Development Description to read to the following effect:

Project approval is granted only to the carrying out of the following:

- Construction of a new part ~~two~~ **three**/part ~~three~~ **four**-level building comprising ~~10,350m²~~ **12,620m²** of in-patient, operating, pathology, cancer-care and ~~pharmacy~~ **accident and emergency** facilities, medical consultation suites.
- Construction of ~~149~~ **101** at grade car-parking spaces
- Stormwater and infrastructure works
- Road improvements
- Landscaping
- Construction of a four way signalised intersection on Forest Road

Amend Condition D2 Development in Accordance with Plans and Documentation to read to the following effect:

The development shall be in accordance with the following plans and documentation:

EA, Concept Plan EA and PPR as modified by documentation provided in support of proposed Modification 1 of MP 08_0232
Project Application – Orange Private Hospital as modified by documentation provided in support of proposed Modification 1 of MP 08_0232
Architectural (or Design) Drawings prepared by Cox Richardson TVS Architects

Drawing Number	Name of Plan	Revision	Date
DA-01	Site Analysis and Local Context Plan		03/12/2007
DA-02	Site Concept Plan		30/06/2008
DA-03	Private Hospital/Site Plan		30/06/2008
DA-04	Private Hospital Precinct – Level 1 Plan		30/06/2008
DA-05	Private Hospital Precinct – Level 2 Plan		30/06/2008
DA-06	Private Hospital Precinct – Level 3 Plan		30/06/2008
DA-07	Private Hospital Precinct – Northern and Eastern Elevations		23/11/2007
DA-08	Private Hospital Precinct – Southern and Western Elevations		23/11/2007
DA-09	Private Hospital Precinct Section AA and BB		23/11/2007
DA-10	Private Hospital Precinct Section CC and DD		23/11/2007
DA-11	Shadow diagrams (20 March)		23/11/2007
DA-12	Shadow diagrams (21 June)		23/11/2007
DA-13	Shadow diagrams (22 December)		23/11/2007
	Landscape Plan Hospital Precinct 01	Revision F	June 2008
	Section/Elevation Images 02 – Hospital Precinct	Revision E	June 2008
5420.3S.01.101	Site Master Concept Plan	13	16.04.14
5420.3S.01.104	Private Hospital Precinct – Site Plan	2	16.04.14
5420.3S.02.401	Private Hospital Precinct – Level 1	1	18.03.14
5420.3S.02.402	Private Hospital Precinct – Level 2	1	18.03.14
5420.3S.02.403	Private Hospital Precinct – Level 3	1	18.03.14
5420.3S.02.404	Private Hospital Precinct – Roof Plan	1	18.03.14
5420.02.405	Private Hospital Precinct – Elevations	1	18.03.14
5420.02.406	Private Hospital Precinct – Elevations	1	18.03.14
5420.02.407	Private Hospital Precinct – Sections	1	18.03.14
5420.02.408	Private Hospital Precinct – Sections	1	18.03.14
	Landscape General Concept Plan 00	C	

Amend Condition E7.1 Traffic and Access to read to the following effect:

Engineering plans showing details of the proposed road works, intersection works, bus bays, loading bays, street lighting, car parking areas and signage must be submitted to, and approved by Orange City Council, and the RTA for works on Forest Road, prior to the issuing a Construction Certificate.

All civil design and construction works are to be in accordance with the Orange City Council Development and Subdivision Code and RTA requirements. The Engineering plans shall incorporate:

- A four-way signalised intersection in Forest Road to serve the development. Street lighting is to be provided at the proposed four-way signalised intersection in accordance with RTA and Country Energy requirements.

- ~~• A bus zone and loading bay on the eastern side of the Central Road Reserve between the Private Hospital Precinct and the Medi-Motel Precinct. All bus movements within the development are to be in an anti-clockwise direction and appropriate signage is to be installed in accordance with the Australian Standard.~~

Amend Condition E10 Water and Sewer Augmentation Charges to read to the following effect:

A Certificate of Compliance, from Orange City Council in accordance with the *Water Management Act 2000*, is to be submitted to the Principal Certifying Authority prior to the issuing of a Construction Certificate. The Certificate of Compliance will be issued subject to the payment of contributions for water, sewer and drainage works – at the level of contribution applicable at that time. The contributions are based on ~~60~~ (number to be advised by Orange City Council) ETs for water supply headworks and ~~60~~ (number to be advised by Orange City Council) ETs for sewerage headworks.

ASSESSMENT OF THE PROPOSED MODIFICATION

This section provides an assessment of the proposed modifications against the relevant environmental planning instruments and policies and the likely environmental impacts.

3.1 SECTION 75W MODIFICATIONS

Section 75W of the Environmental Planning & Assessment Act (the Act) provides as follows:

75W Modification of Minister's approval

1) *In this section:*

"Minister's approval" means an approval to carry out a project under this Part, and includes an approval of a concept plan.

"modification of approval" means changing the terms of a Minister's approval including:

- a) revoking or varying a condition of the approval or imposing an additional condition of the approval, and*
- b) changing the terms of any determination made by the Minister under Division 3 in connection with the approval.*

2) *The proponent may request the Minister to modify the Minister's approval for a project. The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.*

3) *The request for the Minister's approval is to be lodged with the Director-General. The Director-General may notify the proponent of environmental assessment requirements with respect to the proposed modifications that the proponent must comply with before the matter will be considered by the Minister.*

4) *The Minister may modify the approval (with or without conditions) or disapprove of the modification.*

5) *The proponent of a project to which section 75K applies who is dissatisfied with the determination of a request under this section with respect to the project (or with the failure of the Minister to determine the request within 40 days after it is made) may, within the time prescribed by the regulations, appeal to the Court. The Court may determine any such appeal".*

The proponent requests that the Minister for Planning and Infrastructure, as the consent authority, approve the proposed modifications to the Project Application and Conditions of Consent under Section 75W of the Act.

There appear to be no provisions of Section 75W that prohibit or limit the proposed modifications.

3.2 ENVIRONMENTAL PLANNING INSTRUMENTS

3.2.1 State Environmental Planning Policy (Major Development) 2005

Major Project MP08_0232 was approved under Part 3A of the Act. Part 3A of the Act was repealed on 1 October 2011 and Schedule 6A of the Act sets out the transitional arrangements applying to projects approved under Part 3A.

Clause 2(5) of Schedule 6A of the Act states that:

A transitional Part 3A project extends to the project as varied by changes to the Part 3A project or concept plan application, to the concept plan approval or to the project approval, whether made before or after the repeal of Part 3A.

Accordingly, any modifications to the approved project will continue to be dealt with under Part 3A as Section 75W modifications.

The Minister for Planning and Infrastructure will continue to determine applications made by State agencies and public proponents, with less significant or non-controversial applications being determined by senior officers of the Department under delegation (refer Department of Planning and Infrastructure Fact Sheet, May 2011).

3.2.2 State Environmental Planning Policy Infrastructure 2007

The project (as modified) represents traffic generating development pursuant to Section 104 and Schedule 3 of *State Environmental Planning Policy Infrastructure 2007*. As such the consent authority is required to consult with NSW Roads and Maritime Services.

Traffic matters are addressed in *Section 3.4.1* of this report.

3.2.3 State Environmental Planning Policy No. 55 Remediation of Land

The provisions of SEPP 55 were addressed in the original environmental assessment for the project.

A Stage 1 site assessment was undertaken by Environmental Investigation Services and concluded that the subject land did not indicate any obvious on site activity that could be expected to generate significant soil contamination.

Further, the results of laboratory testing on selected soil samples indicated levels below the adopted health-based assessment criteria.

3.2.4 Orange Local Environmental Plan 2011

The relevant provisions of Orange Local Environmental Plan 2011 (the LEP) are considered below.

Zoning

The subject land is zoned R1 General Residential. The objectives of the R1 Zone are:

- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To ensure development is ordered in such a way as to maximise public transport patronage and encourage walking and cycling in close proximity to settlement.
- To ensure that development along the Southern Link Road has an alternative access.

There are no aspects of the proposed modification that are adverse to the zone objectives. In particular:

- The first stated objective is not relevant to the proposed modification.
- The second stated objective is not relevant to the proposed modification.
- The proposed modification is not adverse to the third stated objective.
- In response to the fourth stated objective, the project (as modified) forms part of an evolving medical/hospital precinct and would thus benefit by the various transport modes that service the area.
- The fifth stated objective is not relevant to the proposed modification.

Permissibility

The project within Precinct 1 represents development for the purposes of a *health services facility* and is permissible in the R1 Zone with recourse to *State Environmental Planning Policy (Infrastructure) 2007*.

Clause 57(1) of the SEPP states that development for the purpose of *health services facilities* may be carried out by any person with consent on land in a prescribed zone. The R1 General Residential Zone is a *prescribed zone*.

Clause 1.2 Aims of Plan

The particular aims of the LEP are as follows:

- a) to encourage development that complements and enhances the unique character of Orange as a major regional centre boasting a diverse economy and offering an attractive regional lifestyle,
- b) to provide for a range of development opportunities that contribute to the social, economic and environmental resources of Orange in a way that allows the needs of present and future generations to be met by implementing the principles of ecologically sustainable development,
- c) to conserve and enhance the water resources on which Orange depends, particularly water supply catchments,
- d) to manage rural land as an environmental resource that provides economic and social benefits for Orange,
- e) to provide a range of housing choices in planned urban and rural locations to meet population growth,
- f) to recognise and manage valued environmental heritage, landscape and scenic features of Orange.

In consideration of the general aims of LEP 2011, the following comments are provided in support of the proposed modification:

- There are no aspects of the proposed modification that would detract from the character of Orange as a major regional centre [*General Aim (a)*].
- The project as modified maintains the potential to have a positive effect in terms of the social, economic and environmental resources of the City. There are no aspects of the proposed modification that would compromise the principles of ecologically sustainable development [*General Aim (b)*].
- There are no aspects of the proposed modification that would represent a direct threat to the City's water resources [*General Aim (c)*].
- The management of rural land as an environmental resource is not relevant to this proposal [*General Aim (d)*].
- The impact on the City's range and supply of housing choices is not relevant to this proposal [*General Aim (e)*].
- Based on the information provided in this report, the proposed modification will not adversely affect the value of heritage, landscape and scenic features of the City [*General Aim (f)*].

Clause 5.10 Heritage Conservation

The subject land is not within a Heritage Conservation Area. However, it is in the vicinity of "Bloomfield Hospital" which is identified in the LEP as a heritage item of State significance.

Clause 5.10 of the LEP applies. The objectives of this clause are as follows:

- a) to conserve the environmental heritage of Orange,
- b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- c) to conserve archaeological sites,
- d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Pursuant to Clause 5.10(4), it is necessary to consider the potential impact that the proposed modification may have on any heritage item within the vicinity of the subject land.

Heritage matters are addressed at *Section 3.4.3* of this report.

Clause 7.3 Stormwater management

Clause 7.3 of the LEP applies. The objective of this clause is to minimise the impacts of urban stormwater on the land to which the development applies, and on adjoining downstream properties, native bushland and receiving waters.

The proposed modification does not involve any alteration to the approved stormwater drainage arrangements that will serve the approved project.

Clause 7.6 Groundwater vulnerability

The subject land is defined on the Orange Local Environmental Plan 2011 – Water Map as having groundwater vulnerability. Clause 7.6 of the LEP applies.

The objectives of this clause are to maintain the hydrological functions of key groundwater systems and to protect vulnerable groundwater resources from depletion and contamination as a result of inappropriate development.

There are no aspects of the proposed modification that would cause adverse impact on groundwater resources.

3.3 DEVELOPMENT CONTROL PLANS

3.3.1 Orange Development Control Plan 2004 – 07 Development in Residential Areas

Orange Development Control Plan 2004 – 7 Development in Residential Areas is applicable only due to the land being zoned R1 General Residential. The DCP however does not set specific Planning Outcomes for the type of development described in this project approval.

3.3.2 Orange Development Control Plan 2004 – 13 Heritage

Orange DCP 2004 – 13 Heritage applies to the extent that the subject land is in the vicinity of an identified heritage item. The DCP sets certain Planning Outcomes pertaining to heritage and conservation.

The proposed modification is not adverse to these Planning Outcomes. The heritage impacts of the proposed modification are considered later in this report at *Section 3.4.3*.

3.3.1 Orange Development Control Plan 2004 – 15 Car Parking

The parking requirements of DCP 2004-15 are considered below in *Section 3.4.1*.

3.4 POTENTIAL IMPACTS

3.4.1 Traffic and Parking

Consultants Terraffic Pty Ltd have undertaken a traffic and parking assessment which is included as Annexure B to this report. Terraffic assess the traffic and parking impacts for the entire project as modified. The findings and conclusions of the Terraffic report are summarised below.

Parking Assessment

The proposed development will be served by a total of 617 off-street car parking spaces as follows:

- Precinct 1
 - 101 spaces (including 6 disabled spaces) serving the hospital
- Precinct 2
 - 116 spaces (including 7 disabled spaces) serving the health facilities and retail shops
 - 72 spaces serving the motel comprising 70 guest and 2 staff parking spaces. This parking provision includes 5 disabled guest spaces

- Precinct 3
 - 83 spaces serving the 59 residential units
 - 25 spaces serving the 100 place Child Care Centre
- Precinct 4
 - 220 spaces serving the 157 residential units

In addition to these spaces, there are 41 parallel parking spaces on the internal road network serving the site. Once these roads are constructed to provide access to Precincts 3 and 4, these on-street parking spaces will be available as surplus parking for the overall development (thus the total parking provision will be 658 spaces).

According to DCP 2004–15, the proposed development would generate a parking requirement of 749 spaces as calculated in the following table.

Proposed Use	DCP requirement	Calculation Unit	Spaces Required
Hospital	1 space for every 3 beds plus 1 space each resident doctor plus 1 space for every 2 visiting doctor plus 1 space for every 2 employees.	104 beds = 35 spaces Allow 130 staff including doctors = 65 spaces	100
Health Consulting Rooms	2 spaces for every 1 practitioner with spaces being available for customer and staff use.	Allow 24 practitioners = 48 spaces	48
Motel	1 space per unit plus 1 space for manager plus 1 space for every 2 employees plus 1 space per 3 seats in restaurant plus 1 space per 10m ² of entertainment or function room areas	82 units = 82 spaces 1 manager = 1 space Say 12 staff = 6 spaces 90 seat restaurant=30 spaces 140m ² function= 14 spaces	133
Restaurants	1 space per 10m ² GFA or 1 space for every 3 seats, whichever is greater	150 seats = 50 spaces	50
Childcare Centre	1 space for every 4 children in attendance	100 places = 25 spaces	25
Residential Units	1.2 spaces per 2 bedroom unit 0.2 visitors spaces per unit	216 x 2 bed units=259 spaces 216 x 0.2 = 43 visitor spaces	302
Shops	6.1 spaces per 100m2 GLFA	GLFA 1,498m ² = 91 spaces	91
TOTAL PARKING REQUIREMENT FOR PROPOSED DEVELOPMENT			749

Based on the proposed parking provision and the DCP requirements, the development would generate a parking shortfall of 91 spaces.

However, Terraflow seeks to modify the DCP requirements based on the following arguments pertaining to dual and complimentary uses (refer extract below):

Dual and Complimentary Use of Parking

The Council's parking requirements do not consider the Dual and Complementary use of parking that will occur on the site.

Dual use of parking spaces occurs when patrons of one component of a development also patronise another. For example, a proportion of staff and visitors to the proposed hospital and medical facility can also be expected to patronise the retail shops in Precinct 2. Not only will this reduce the parking requirements for the proposed medical facility, it also has the potential to reduce the traffic generating potential of visitors to the site.

In addition, another form of Dual use parking is that a proportion of residents in the Precinct 3 and 4 residential flat buildings will be employees of the commercial uses on the site and the Orange Base Hospital. These residents will be allocated an on-site parking space within the residential precinct and will ultimately reduce the overall parking demand and traffic generation of the proposed development site.

Complementary use of parking spaces occurs when the peak parking demand of one component of a development does not coincide with the peak parking demand of another. In this case, the peak parking demand of the restaurant or the function centre in the motel is at night after 6pm, whereas the peak parking demand of the retail shops and health facilities in Precinct 2 is throughout the day.

Modifications to DCP Parking Requirements

When taking into account the dual and complimentary use of car parking, this assessment has slightly modified the following DCP parking requirements:

- 1. The parking requirement for the retail floorspace (6.1 spaces per 100m²) is excessive because it is unlikely that the general public will travel to the site to visit the café/flower/gift/newsagent stores. Furthermore, a high percentage of shoppers will already be on the site or will be generated by the Base Hospital on the eastern side of Forest Road (dual use). In these circumstances, the parking requirement for that retail floorspace will adopt the Council DCP rate of 4.1 spaces per 100m² which applies to shops in the CBD.*
- 2. The parking requirement specified for the motel rooms (1 space per room) is excessive because 12 of the rooms will be medical suites occupied by persons who are bedridden. Accordingly, the requirement of 1 space per room has been applied to 70 standard rooms.*
- 3. The parking requirement for the restaurant incorporated in Precinct 2 will only apply during the night when the restaurant will be operational. As noted in the foregoing, this approach is applying the principle of complementary use of parking on the site. In addition, it is likely that*

some restaurant patrons will be staff/visitors to the hospital or guests of the motel who are already in the area. This includes staff and visitors to the Base Hospital on the eastern side of Forest Road. To that end, the restaurant will also be adopting the dual use principle.

4. *The parking requirement for the restaurant incorporated in the motel is excessive because a substantial proportion of restaurant patronage, if not all of it, will be drawn from motel guests and patients. In addition there will be a proportion of staff and visitors of the proposed hospital in Precinct 1 and the existing Base Hospital opposite the site. In these circumstances, the parking requirement for the motel restaurant (1 space per 3 seats) has been reduced to 20% of the requirement and will apply during the night only. These additional restaurant patrons who are not already in the area will utilise the remaining Precinct 2 parking spaces allocated to the health facility and retail shops that will be closed at that time (complementary use)*
5. *As per the restaurants on the site, the motel function room is expected to only operate at nights when the health facilities and retail shops are closed on Precinct 2. To that end, the parking requirement of 1 space per 10m² for the motel function room will apply at night time only. Furthermore, it is expected that some of the function guests will also be motel guests who have already parked on the site (dual use).*
6. *As the hospital in Precinct 1 will be operational 24 hours a day, this assessment has assumed that the night time workforce parking demand will be 20% of the daytime peak. As the visitor peak is typically at nights, the parking demand for the visitor component of the parking requirement will apply during the evening (i.e. 35 spaces).*

In addition, this assessment has assumed that the proposed health facilities in Precinct 2 will have a total of 24 practitioners on-site at any given time. As can be appreciated, this is a conservative approach as specialists (such as surgeons and physiotherapists) tend to operate between hospitals and their office and may only be on-site on a given day.

On the basis of the above, Terraform assesses the parking requirements as:

DAYTIME PARKING REQUIREMENT	
Precinct 1	Hospital 100 spaces
Precinct 2	Health Facility 55 spaces Retail Shops 61 spaces Motel 72 spaces (Precinct 2 Sub-total 188 spaces)
Precinct 3	Residential 83 spaces Child Care Centre 25 spaces (Sub-total 108 spaces)
Precinct 4	Residential 220 spaces
Total requirement	616 spaces

NIGHT TIME PARKING REQUIREMENT	
Precinct 1	Hospital 48 spaces
Precinct 2	Restaurant 50 spaces Motel 72 spaces Motel restaurant 8 spaces Motel function room 14 spaces (Precinct 2 Sub-total 144 spaces)
Precinct 3	Residential 83 spaces
Precinct 4	Residential 220 spaces
Total requirement	495 spaces

Based on the above information, the Terrafic report concludes that the parking provision incorporated in the development proposal is adequate and that the proposed development has no unacceptable parking implications.

Servicing Assessment

The Terrafic report concludes that the project will be satisfactory in terms of servicing as summarised below:

- Precinct 1: Private Hospital Deliveries:
 - The proposed development will retain the 2 loading docks that were approved to serve the hospital development. The loading docks are required to accommodate the commercial vehicles transporting food, linen, medical supplies, office equipment and provisions to the hospital, and transporting waste from the hospital.
 - The vehicles used in those activities are expected to comprise predominantly vans and the SRV, with some deliveries via the MRV and the HRV. Articulated vehicles (AV) are not expected to be involved in deliveries to/from the site.
 - While the number of commercial vehicle trips generated by the Private Hospital will be variable, it is expected that the maximum daily commercial vehicle generation will be in the order of 20 vehicles per day (40 vehicle trips per day).
 - All delivery vehicles accessing the hospital precinct and loading docks will enter via the Forest Road traffic signals. The ability of the heavy rigid vehicle to access the site and manoeuvre to/from the loading dock has been tested using the AutoTrack computer simulation software. This test found that the HRV can comfortably access the site and the loading docks incorporated in the proposed Private Hospital.

- Precinct 2: Health Facilities, Neighbourhood Shops and Motel Deliveries:
 - The proposed health facility is not served by a dedicated loading dock like the hospital in Precinct 1. Couriers making deliveries to this facility in vans will utilise the off-street parking area serving this component of the Precinct 2 development. Deliveries by larger commercial vehicles are not expected to occur for the health facility.
 - The neighbourhood shopping area contains 2 separate loading areas capable of accommodating Medium Rigid Vehicles. The loading docks are located at the eastern and western ends of the development and will provide convenient access to each shop.
 - The motel will also be served by a loading area capable of accommodating the Medium Rigid Vehicle. The motel is expected to generate commercial vehicles transporting predominantly food, liquor, linen and other provisions to the motel, and transporting waste from the motel.
 - The vehicles used in those activities are expected to comprise predominantly vans, with some deliveries using the SRV and the MRV.
 - While the number of commercial vehicle trips generated by the uses in Precinct 2 will be variable, it is expected that the maximum daily commercial vehicle generation will be in the order of 30 vehicles per day (60 vehicle trips per day).
 - The ability of medium rigid vehicles to access the site and manoeuvre to/from the loading areas serving each use in Precinct 2 has also been tested using the AutoTrack computer simulation software. This test found that the MRV can comfortably access the site and the loading areas.
- Precinct 3: Child Care Centre and Residential Unit Deliveries:
 - Deliveries to the childcare centre are expected to be only minor, comprising 3 to 4 vehicle trips per day in vans or SRV's.
 - Childcare centres typically avoid deliveries during peak child set-down/pick-up periods and utilise the empty car park outside of the am and pm peak periods.
- Precinct 3 and 4: Residential Unit Deliveries:
 - While the residential component of the proposed development will generate commercial vehicle activity associated with residents moving into and out of the precinct, and some service vehicle activity for residents living there, this commercial vehicle activity will not be frequent nor regular, or of a level that is likely to have any significant traffic implications.

- Based on these assumptions, the overall development will generate in the order of 45 to 50 deliveries per day ranging from courier vans to Heavy Rigid Vehicles. This level of activity equates to no more than 10 deliveries to the site during the morning and evening peak periods. This commercial vehicle activity will not be of a level that is likely to have any significant traffic implications.

Traffic Assessment

The currently approved access arrangements that serve the site off Forest Road will be retained and comprise the following:

- A new 4-way signalised intersection on Forest Road that will connect the site to the main access driveway serving the Orange Base Hospital which is located on the eastern side of Forest Road. The new signals will include pedestrian crossings on each leg of the intersection to enhance pedestrian safety.
- Left turn exit only movements from a northern access driveway

To assess the adequacy of the approved access arrangements in the context of the proposed modification, the traffic assessment involved:

- Prediction of traffic generation by the development;
- Allowance for traffic growth along Forest Road;
- Modelling of each access point under projected future demand.

Terraffix concludes that the project will not generate unacceptable traffic impacts as summarised below:

- The main traffic implications of the proposed development concern the ability of traffic that it generates to access the site via the two access points off Forest Rd (i.e. the new traffic signals serving the site and the Base Hospital and the northern left out only access driveway).
- The ability for these intersections to accommodate the projected post-development traffic demand can be assessed using the SIDRA traffic model.
- The access points off Forest Rd were modelled under projected future (2024) traffic demand and include the current traffic generation characteristics of the Base Hospital on the eastern side of Forest Road.
- The results of that SIDRA analysis reveal that both intersections will operate satisfactorily under projected traffic demand in 2024.

3.4.2 Visual Amenity

It is submitted that the proposed modification will not generate adverse visual impacts due to the following:

- The building footprint and siting remains unchanged.
- At the Forest Road frontage, the building height and design remains as approved.
- The increase in building height (due to the addition of more beds) occurs only on the western wing of the hospital, towards the rear of Precinct 1. This design approach is considered satisfactory in terms of visual impact. The taller element is recessed from the street frontage and site boundaries and should therefore assist to render the development less prominent when viewed from adjoining property and the road network.
- The proposed modification removes the expansive car park that dominates the frontage of the hospital under the current approval and thus increases the opportunity for landscaping in this area.
- The proposed modification maintains a high level of landscaping.

3.4.3 European Heritage

Schedule 5 of Orange LEP 2011 identifies the Bloomfield Hospital campus (to the east of the subject land on the opposite side of Forest Road) as a heritage item of State significance. More specifically, the listing refers to *Bloomfield Hospital "Nymagee Lodge" (including landscape features, entry gateway, Elm avenue and grounds)*.

A review of the Bloomfield Hospital Conservation Management Plan (CMP) indicates that this project is located well beyond the primary heritage curtilage and thus presents even less of a potential impact upon the heritage values of the place.

In any event and consistent with the currently approved project, the proposed modification respects the heritage item. In this regard the building height as approved does not alter along the Forest Road boundary of the project site. Further, the visual relationship between the heritage item and the proposed taller section of the hospital is diluted due to the physical separation that exists between them.

It should also be noted that the new public hospital which has been constructed in the Bloomfield Hospital campus is a modern and bulky building that now characterises the precinct. This building and its external support areas diminish the visual relationship between the heritage item and the subject land.

3.4.4 Aboriginal Heritage

The potential impacts on Aboriginal heritage were considered in the environmental assessment for the currently approved project.

There are no aspects of the proposed modification that would generate additional impacts in this regard.

3.4.5 Flora and Fauna

The potential impacts on native flora and fauna were considered in the environmental assessment for the currently approved project.

There are no aspects of the proposed modification that would generate additional impacts in this regard.

3.4.6 Social and Economic Impacts

The social and economic impacts of the project were considered as positive in the environmental assessment for the Approved Concept, particularly as the co-location of the private hospital campus with the existing public hospital campus would present numerous benefits for patients, staff, administrators and carers to utilise the complementary medical, social and ancillary services of the two facilities.

The proposed modification to the Approved Project in Precinct 1 is expected to broaden the social and economic benefits due to the following:

- The increased floor area in the private hospital is expected to generate the following benefits:
 - It increases the number of private hospital beds plus offers additional space for other hospital services and facilities including an accident and emergency department.
 - Improved hospital offerings contribute to the notion of a “centre of excellence” as various medical treatment facilities and technologies accumulate in both the private and public sectors of the broader medical precinct.
- The increase in floor area for health services will encourage a broader range of medical and allied health professionals to locate at the site in close proximity to public and private hospitals. The benefits include:
 - Greater convenience and less discomfort for patients in being able to obtain treatment in a relatively contained medical precinct.

- Greater convenience for health professionals to consult in their rooms and also undertake their hospital-based work.
- Improves the current situation where there are limited sites and available land for private health consulting rooms and medical facilities to become established in close proximity to the existing public and proposed private hospitals.
- A broader range of health services facilities and consulting rooms contributes to the notion of a “centre of excellence” as various medical treatment facilities and technologies accumulate in both the private and public sectors of the broader medical precinct.

There appear to be no negative social or economic effects generated by the proposed modification. An increase in the offering of health care services could only be considered beneficial for the community.

CONCLUSION

The proposed modification of MP 08_0232 (Precinct 1) seeks to:

- Increase the number of beds from 52 to 104 by adding another level to the western wing of the hospital, thus converting this section of the building from 3 storeys to 4 storeys.
- Relocate the pharmacy and some of the medical suites from the south eastern corner of the hospital ground floor and in their place introduce an accident and emergency facility. The pharmacy and medical suites would be transferred to the proposed health services building in Precinct 2.
- Decrease the number of parking spaces from 149 to 101 based on the parking assessment provided by traffic and parking consultants, Terraffic Pty Ltd.
- Delete the proposed internal bus zone due to the availability of a bus service at the nearby public hospital.

The proposed modification remains consistent with the intent of the original approval which sought to form a cohesive, harmonious and interrelated whole about a nucleus of health services. This fundamental intent has not been altered. Rather, the emerging health precinct would benefit by the provision of additional hospital beds and facilities at the private hospital.

This environmental assessment demonstrates that the project as modified will not result in any significant adverse impacts on the surrounding environment. In particular:

- The visual impacts are considered satisfactory.
- The reduction in parking spaces is based on the parking assessment by Terraffic Pty Ltd. Some of the spaces to be removed would be along the Forest Road frontage of the site. The loss of spaces in this area increases the opportunity for landscaping and improved visual amenity.
- The proposed parking resources and potential traffic impacts are considered to be satisfactory based on the assessment undertaken by Terraffic Pty Ltd.
- It has the potential to generate positive social and economic benefits.

It is recommended that this Section 75W application be approved

Yours faithfully

Peter Basha Planning & Development



Per:

PETER BASHA

Annexure A

Architectural Drawings by TVS Architects



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1	DA Issue	18.03.14	DH
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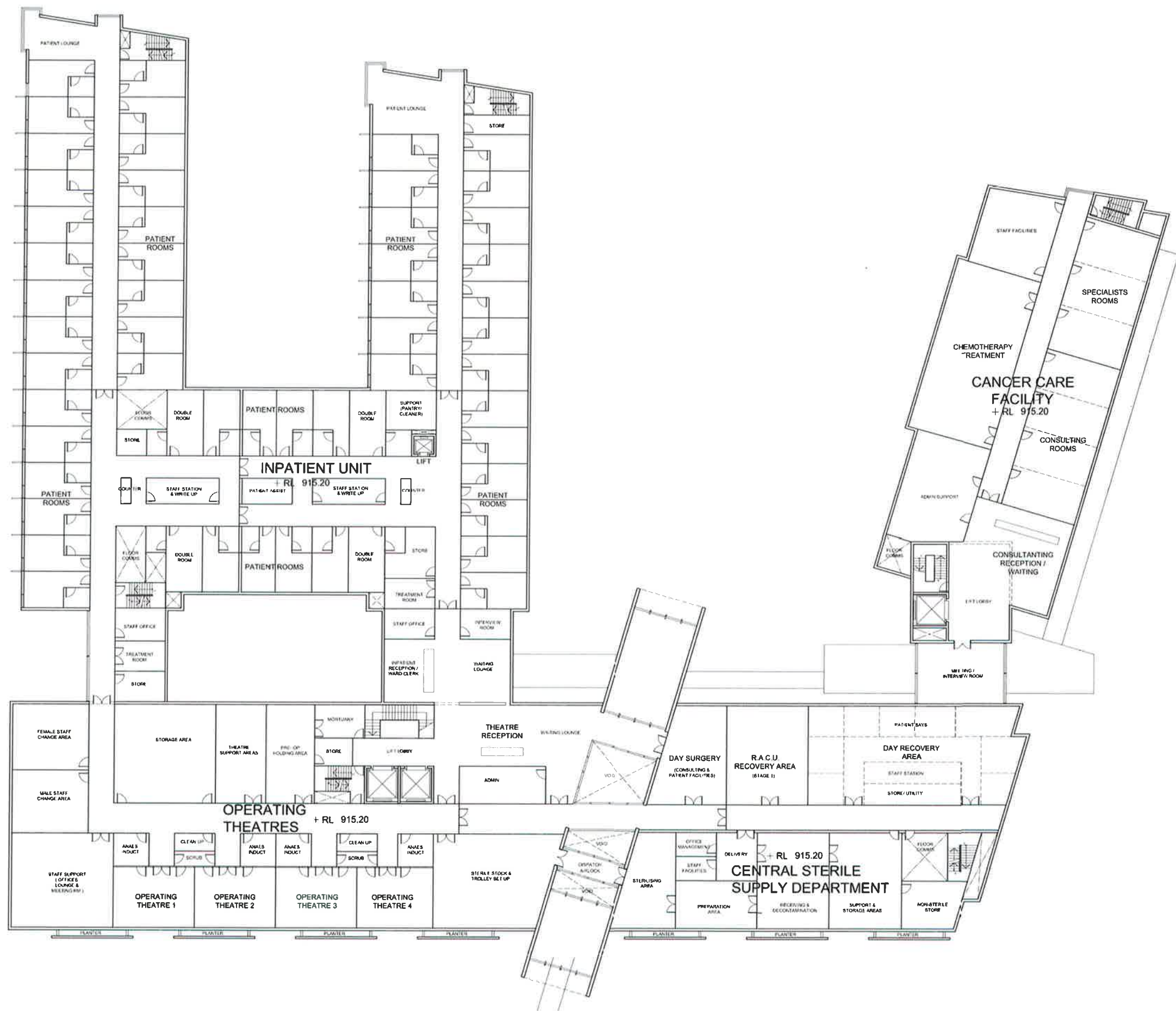
Project
Orange Private Hospital Site

Client
James Richmark Pty Ltd

Drawing Title
Private Hospital Precinct -
Site Plan

Project Architect/Designer M Urquhart
Scale @ A3 1 : 500
Checked
Drawing No. 5420.3S.01.104

Drawn By BH
Date Drawn Mar 2014
Date Checked
Revision 2



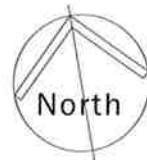
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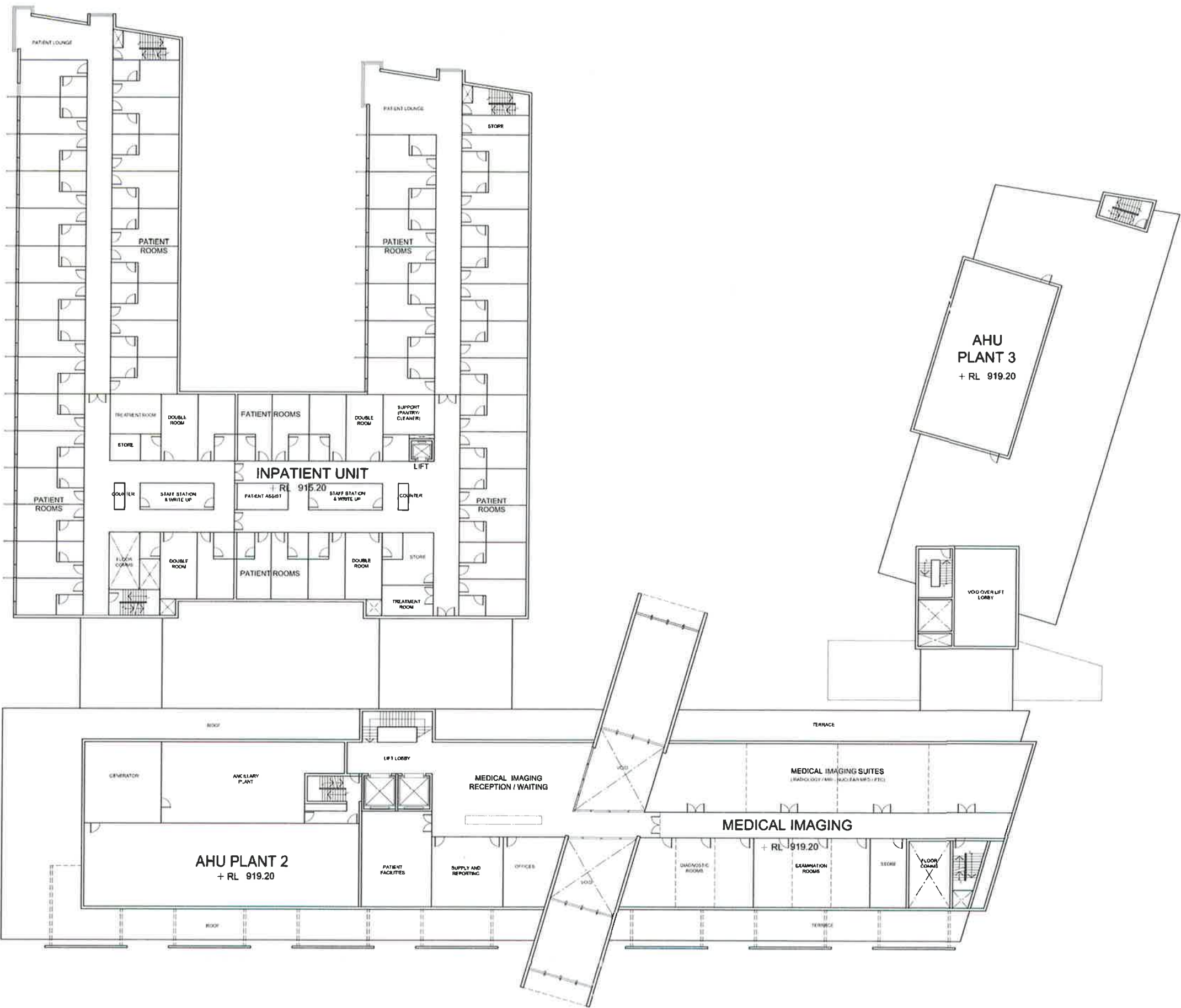
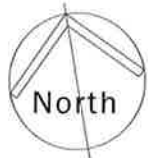
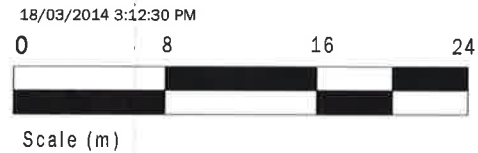
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Project
 Orange Private Hospital Site

Client
 James Richmark Pty Ltd

Drawing Title
 Private Hospital Precinct -
 Level 2

Project Architect/Designer M Urquhart
 Drawn By BH
 Date Drawn Mar 2014
 Scale @ A3 Checked
 Date Checked
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 Drawing No. 5420.3S.02.402
 Revision 1



Revision	Description	Date	Initials
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Private Hospital Precinct -
Level 3

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Drawing No. 5420.3S.02.403

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Project
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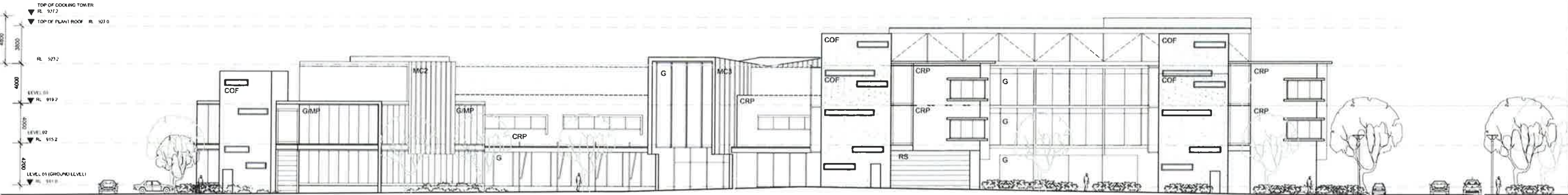
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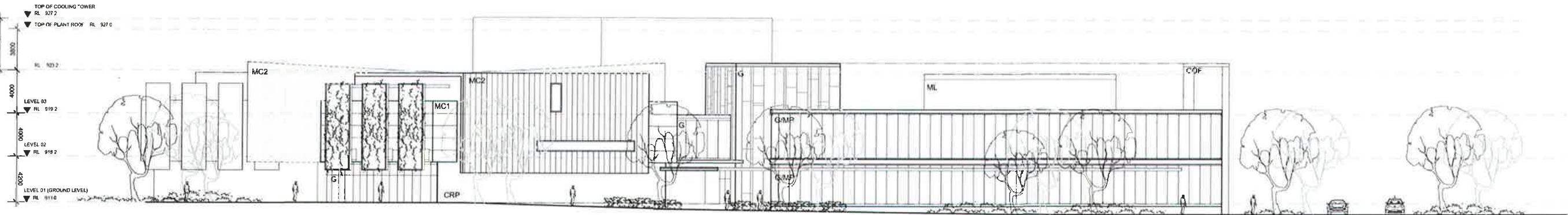
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Date Checked

Revision

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NORTHERN ELEVATION



EASTERN ELEVATION

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- GMP - COLOURED GLAZING AND COLOURED METAL PANELS
- TP - TIMBER PLY PANELS
- CT - CERAMIC TILE
- COF - CONCRETE OFF-FORM
- CSS - CONCRETE BLADE SUN SHADE
- RS - ROLLER SHUTTER
- TIM - TIMBER BATTENS SCREEN
- MC1 - PRE-FINISHED METAL CLADDING (HORIZONTAL)
- MC2 - PRE-FINISHED METAL CLADDING (VERTICAL)
- MC3 - PRE-FINISHED METAL CLADDING (PANELS)
- MM - PRE-FINISHED METAL MESH
- MSS - PRE-FINISHED METAL SUN SHADE (HORIZONTAL)
- ML - METAL LOUVRES (HORIZONTAL)
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- PB - STEEL FRAMED PLANTER BOX (HIDDEN) AND CLIMBING PLANTS

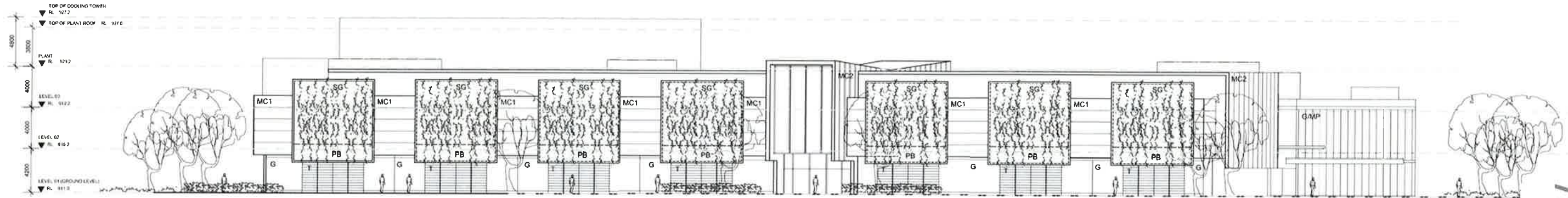
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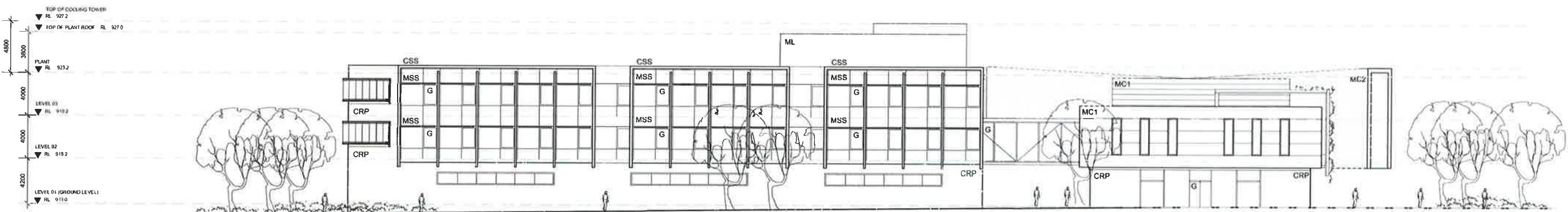
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Project Architect/Designer
M Urquhart
Scale @ A3
1:400
Drawing No.
5420.02.405
Drawn By
BH
Checked for Construction
Date Drawn
Mar 2014
Date Checked
Revision
1



SOUTHERN ELEVATION



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CT - CERAMIC TILE
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CSS - CONCRETE BLADE SUN SHADE
RS - ROLLER SHUTTER
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SG - STEEL FRAMED GRILL PANEL
PB - STEEL FRAMED PLANTER BOX (HIDDEN) AND CLIMBING PLANTS

WESTERN ELEVATION

Project

Orange Private Hospital Site
Forest Road, Orange

Drawing Title

Private Hospital Precinct - Elevations

Revision	Description	Date	Initials
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Project Architect/Designer

M Urquhart

Drawn By

BH

Date Drawn

Mar 2014

Scale @ A3

Checked for Construction Date Checked

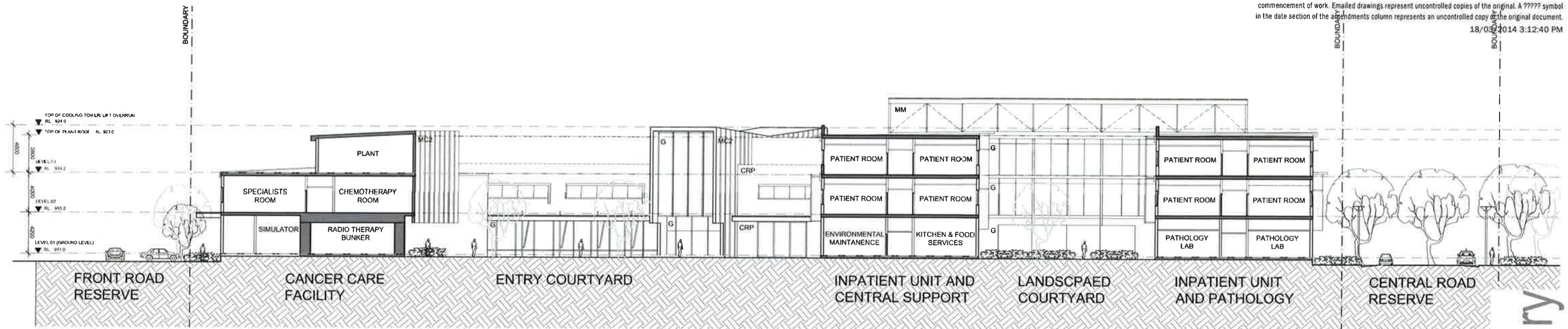
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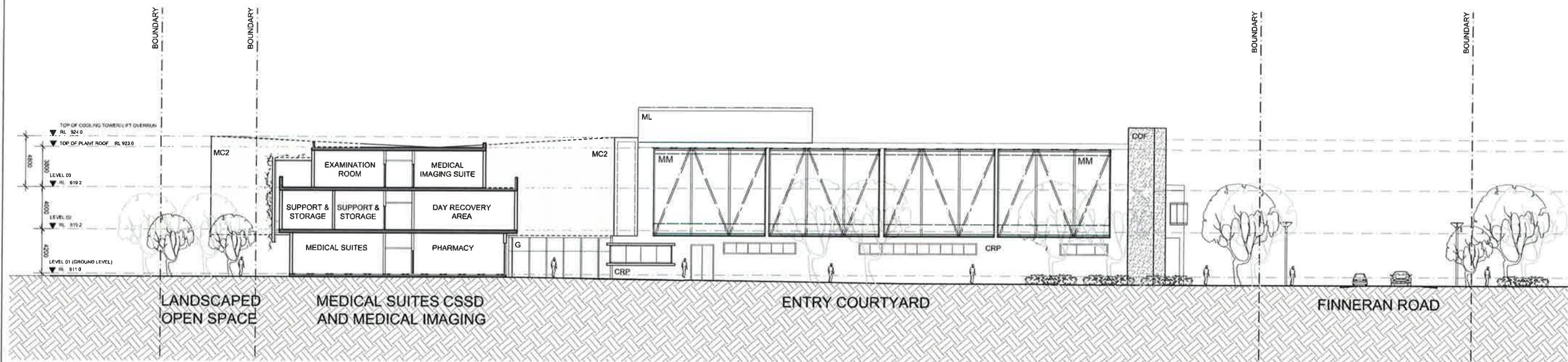
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SECTION A-A



SECTION B-B

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Forest Road, Orange

Drawing Title

Private Hospital Precinct - Sections

Revision	Description	Date	Initials
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Project Architect/Designer

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Mar 2014

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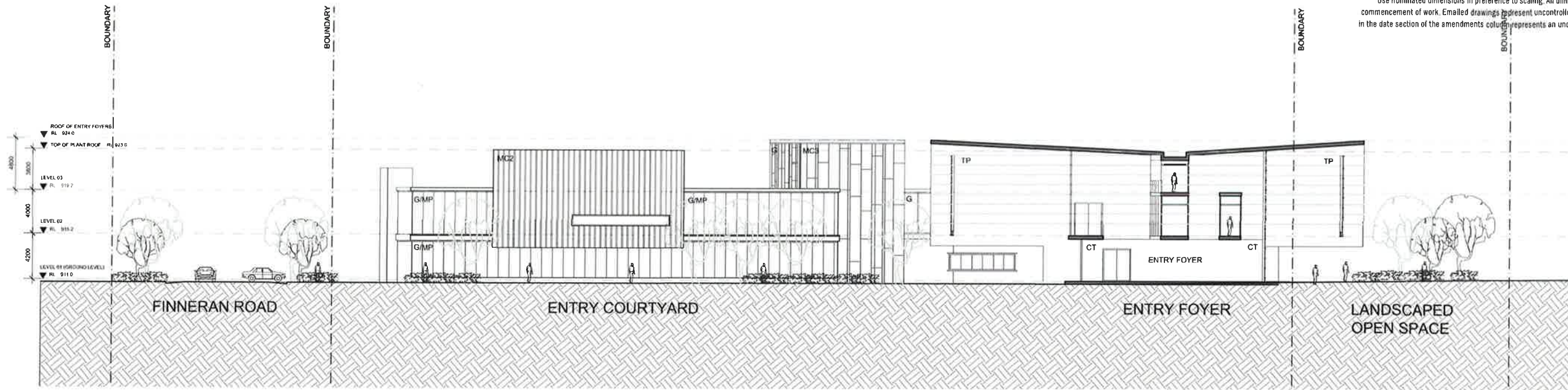
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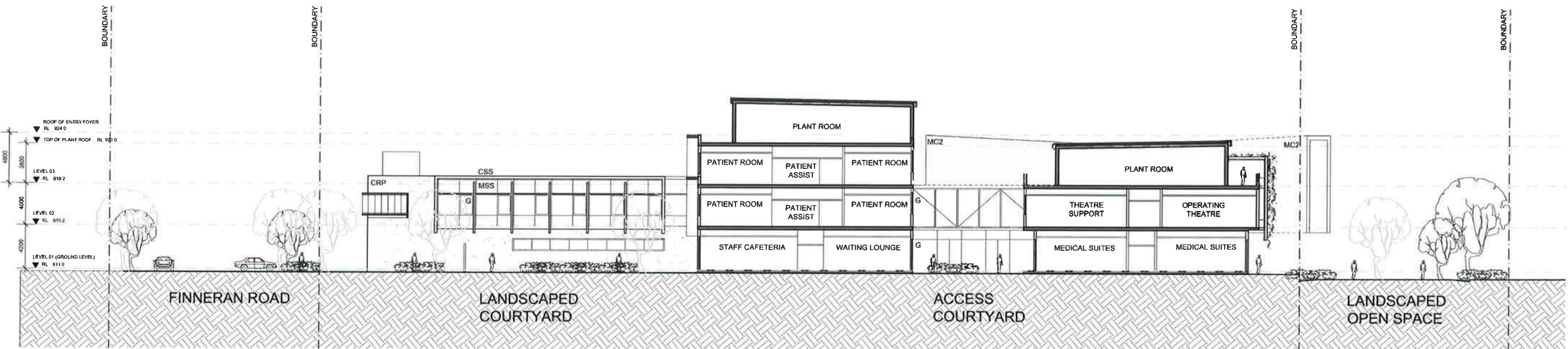
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Preliminary



SECTION C-C



SECTION D-D

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Project

Orange Private Hospital Site
Forest Road, Orange

Drawing Title

Private Hospital Precinct - Sections

Revision	Description	Date	Initials
1	DA Issue	18.03.14	DH

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M Urquhart

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BH

Date Drawn
Mar 2014

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Date Checked

Drawing No.

5420.02.408

Revision

1

Preliminary

Annexure B

Traffic and Parking Assessment by Terraffic Pty Ltd



**ORANGE PRIVATE HOSPITAL DEVELOPMENT
FOREST ROAD, ORANGE**

Traffic and Parking Assessment Report

22 April 2014

Ref: 14016

Prepared by

Terraflow Pty Ltd
Traffic and Parking Consultants

TABLE OF CONTENTS

1. INTRODUCTION	1
2. PROPOSED DEVELOPMENT	8
3. PARKING ASSESSMENT	11
4. SERVICING ASSESSMENT	17
5. TRAFFIC ASSESSMENT	21

APPENDICES

APPENDIX A	PLANS OF PROPOSED DEVELOPMENT PREPARED BY TVS ARCHITECTS
APPENDIX B	TRAFFIC COUNT DATA
APPENDIX C	SIDRA MOVEMENT SUMMARY SHEETS FOR THE FOREST ROAD/BASE HOSPITAL/SUBJECT SITE ACCESS DRIVEWAY
APPENDIX D	SIDRA MOVEMENT SUMMARY SHEETS FOR THE FOREST ROAD NORTHERN SITE EXIT DRIVEWAY

LIST OF ILLUSTRATIONS

FIGURE 1	LOCATION
FIGURE 2	SITE
FIGURE 3	FUTURE TRAFFIC SIGNAL CONTROL



1. INTRODUCTION

This report has been prepared to accompany a Section 75W Application to modify MP08_0232; MP08_0233; and MP07_0072 for the Orange Private Hospital development on the site known as No.3403, Lot 1, DP549856, Forest Road, Orange (Figures 1 and 2).

The site is located on the western side of Forest Road opposite the Orange Base Hospital. It has a frontage of approximately 260m to Forest Road and has an area of approximately 6 hectares. The site was formerly used as an outdoor drive-in cinema, but has been unused for approximately 11 years.

On the 23rd November 2008, the Minister for Planning approved Major Project No.07_0072 on the development site as follows:

Concept approval is granted only to carrying out the development solely within the concept plan area as described in the Environmental Assessment Report titled "Orange Private Hospital" prepared by JBA Urban Planning Consultants and dated February 2008 and the Preferred Project Report prepared by JBA Planning Consultants dated August 2008 (as amended). The concept plan includes 4 separate precincts:

- (1) Private hospital precinct*
- (2) Medi -Motel precinct*
- (3) Residential precinct*
- (4) Hostel precinct*

The development includes:

- a part two / part three-storey private hospital*
- an 80-room Medi-Motel and 9 consultation suites*
- short and medium-term accommodation for hospital staff and students*
- a future precinct for residential dwellings and or apartments*
- a future precinct for a lodge / hostel for patients and families of patients*
- future child-care facilities and cancer care facilities*
- a gymnasium*
- ancillary retail activities (florist, newsagent and cafe/restaurant)*



- internal roads and car parking, and
- landscaping
- a four way signalised intersection on Forest Road.

The “Site Master Concept Plan” prepared by TVS Architects for the proposed development is reproduced in the following pages. Table 1.1 shows a comparison between the approved and proposed developments. As can be seen, the development will retain the 4 precincts as per the approval and will comprise:

Precinct 1 – Hospital site

Precinct 2 – Neighbourhood shops, health facility and motel

Precinct 3 – 3 x residential flat buildings and a 100 space child care centre

Precinct 4 – 4 x residential flat buildings

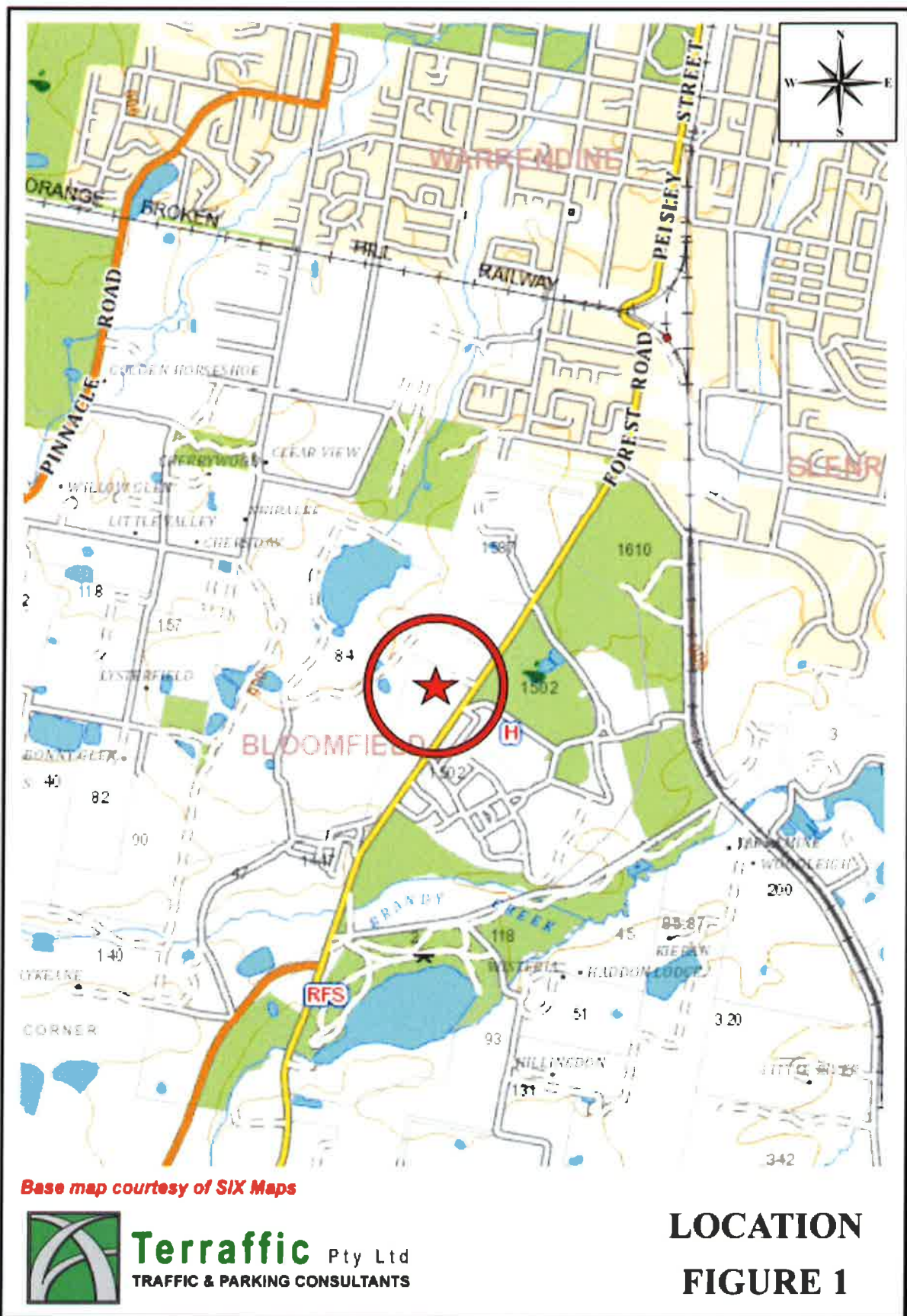
Plans of Precinct 1 and 2 are reproduced in Appendix A. Detailed plans of Precincts 3 and 4 have not been prepared for the DA Submission and are in concept only.

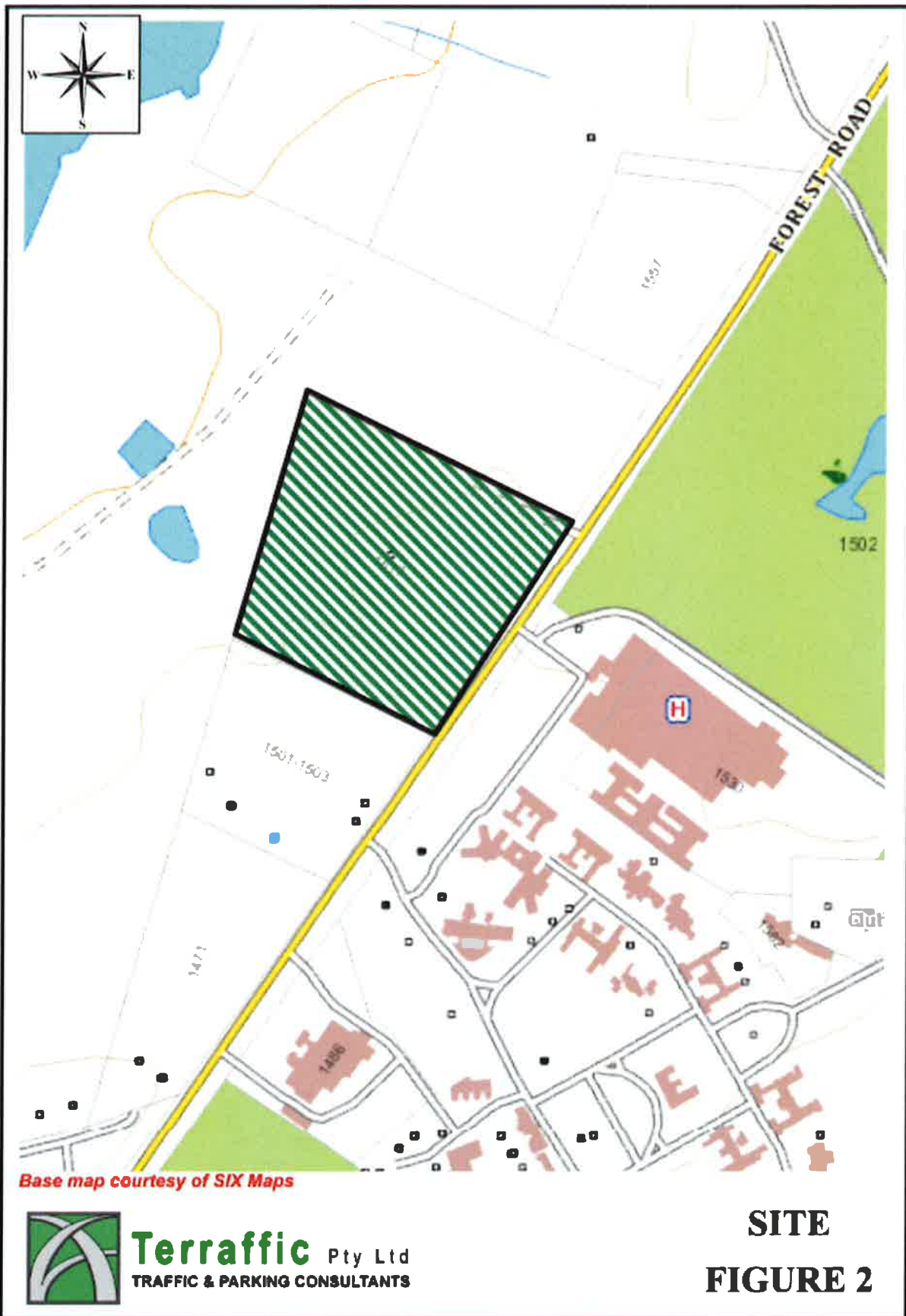
The development site is served by Route 537 which is operated by Orange Buslines. A copy of the Route 537 timetable is reproduced below. As can be seen, the buses currently operate on a daily basis between Orange City Centre and the main entrance to the Orange Hospital.

ROUTE 537		ORANGE HOSPITAL (to HOSPITAL)															
		Monday - Friday												Saturday			
Route		537 am	537 am	537 am	537 am	537 am	537 am	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	534* am	537 am
1 Orange Central/City Centre		6.40	8.00	8.45	9.40+	10.10	11.20	12.25	1.05	1.40+	2.10	2.40	3.10	4.55	5.15	9.00	11.00
5 Orange Railway Station		6.42	8.02	8.47	9.42	10.12	11.22	12.27	1.07	1.42	2.12	2.42	-	4.57	5.17	-	11.02
42 Forest Rd/Tynan St		6.45	8.05	8.50	9.45	10.15	11.25	12.30	1.10	1.45	2.15	2.45	-	5.00	5.20	9.08	11.05
71 Jack Brabham Park - Forest Road		6.46	8.06	8.51	9.46	10.16	11.26	12.31	1.11	1.46	2.16	2.46	3.35	5.01	5.21	9.09	11.06
70 Orange Hospital - Main Entrance		6.48	8.08	8.53	9.48	10.18	11.28	12.33	1.13	1.48	2.18	2.48	3.40	5.03	5.23	9.10	11.08

ROUTE 537		ORANGE HOSPITAL (from HOSPITAL)															
		Monday - Friday												Saturday			
Route		537 am	537 am	537 am	534 am	537 am	537 am	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	537 pm	534 am
70 Orange Hospital - Main Entrance		7.03	7.35	8.08	8.53	9.48	10.20	11.30	12.35	1.15	1.50	2.20	2.50	3.40	5.07	5.25	9.10
71 Forest Rd/Sharp Rd		7.05	7.36	8.10	8.55	9.50	10.22	11.32	12.37	1.17	1.52	2.22	2.52	3.41	5.09	5.27	9.11
42 Forest Rd/Tynan St		7.06	7.37	-	8.56	9.51	10.23	11.33	12.38	1.18	1.53	2.23	2.53	3.42	5.10	5.28	9.12
5 Railway Station - opp Peisley St		7.09	7.40	-	-	9.54	10.26	11.36	12.41	1.21	1.56	2.26	2.56	3.44	5.13	5.31	-
2 Canobolas Hotel - Summer St		7.11	7.42	8.16	9.08	9.56	10.28	11.38	12.43	1.23^	1.58	2.28	2.58	3.45	5.15	5.33	9.26

Orange Buslines timetable effective from 4th July 2013







TVS architects
100/102 IMPERIAL COURT, WARRIMOO NSW 2570
25 JUL 2014 2:00 PM
Scale 1:1000
North



Note: This sheet has been prepared from
5470.35.01.101

13	DA Name	10.04.14	DA
12	Construction Stage	11.04.14	DA
11	Construction Stage	12.04.14	DA

TVS
architects
100/102 IMPERIAL COURT, WARRIMOO NSW 2570
02 4022 2116
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Project:
Orange Private Hospital Site

Client:
James Richmark Pty Ltd

Drawing title:
Site Master Concept Plan

Project Section Designer: Drawn By: Date Drawn:
M. Unwin: Aug 13
Scale: A3: Checked: Date Checked:
1:1000: PJ: 13
Drawing No.: 5470.35.01.101



Site Plan
1:1000
02.10.13



Precinct 1	APPROVED DEVELOPMENT	PROPOSED DEVELOPMENT
Inpatient Unit	2,230m ² (60 beds)	4,500m ² (104 beds)
Administration Unit	325m ²	325m ²
General Support	680m ²	680m ²
Operating Unit (4 theatres)	1,715m ²	1,715m ²
Accident and Emergency	n/a	2,000m ²
Cancer Care Facility	1,400m ²	1,400m ²
Medical Imaging, pathology	2,000m ²	2,000m ²
Health Consulting Rooms	1,750m ²	n/a
Pharmacy	250m ²	n/a

Precinct 2	APPROVED DEVELOPMENT	PROPOSED DEVELOPMENT
Health Consulting Rooms	750m ²	1,311m ²
Rehabilitation Centre (Physio/chiro)	750m ²	700m ²
Medical Imaging, pathology	n/a	1,050m ²
Gym/Health and Fitness	800m ²	n/a
Retail shops	500m ² (4 shops)	1,498m ² (11 shops)
Restaurant	n/a	293m ² (150 seats)
Motel (Public Rooms)	60 rooms	70 rooms
Motel (Patient Suites)	20 rooms	12 rooms
Motel Restaurant	150m ² (100 seats)	130m ² (90 seats)
Motel Function Room	n/a	140m ²

Precinct 3	APPROVED DEVELOPMENT	PROPOSED DEVELOPMENT
Residential Flat Buildings	n/a	59 x 2 bedroom units
Child Care Centre	20 children	100 children
Hostel	100 x 1 bedroom units	n/a

Precinct 4	APPROVED DEVELOPMENT	PROPOSED DEVELOPMENT
Residential Flat Buildings	114 x 2 bedroom units	157 x 2 bedroom units

Table 1.1 – Comparison between approved and proposed developments



The purpose of this report is to assess the traffic and parking implications of the development proposal. To that end, this report:

- describes the site and provides details of the development proposal
- assesses the adequacy and suitability of the quantum of off-street carparking provided on the site
- assesses the adequacy and suitability of the loading facilities provided on the site
- reviews the geometric design features of the proposed carparking facilities for compliance with the relevant codes and standards
- reviews the road network in the vicinity of the site, and the traffic conditions on that road network
- estimates the traffic generation potential of the existing approved and proposed developments and assigns the additional traffic generation to the road network serving the site
- assesses the traffic implications of the development proposal in terms of road network capacity



2. PROPOSED DEVELOPMENT

As noted in the foregoing, the proposed development will retain the four approved precincts on the site and will comprise the following:

Precinct 1 (Hospital Site)	GFA(m²)	Staffing Levels	Hours operation
Inpatient Unit (104 rooms)	4500	30	24 hours
Administration Unit	325	10	7am-6pm
General Support	680	20	8am-6pm
Operating Unit (4 theatres)	1715	20	7am-6pm
Accident and Emergency	2000	10	8am-6pm
Cancer Care Facility	1400	20	8am-6pm
Medical Imaging, Pathology	2000	20	8am-6pm
Total Precinct 1 Hospital	12620	130	
Precinct 2 (Health Facilities, Neighbourhood Shops and Motel)			
<u>Health Facilities</u>	GFA(m²)	Staffing Levels	Hours operation
Health Consulting Rooms (8 Practitioners + 2 staff)	1311	10	8am-6pm
Rehabilitation Centre (8 Practitioners + 2 staff)	700	10	8am-6pm
Imaging and pathology (8 Practitioners + 10 staff)	1050	18	8am-6pm
Total Precinct 2 Health Facility	3061	38	
<u>Shopping Centre</u>	GFA(m²)	Staffing Levels	Hours operation
11 Retail Shops	1498	20	8am-5pm
<u>Restaurant</u>	GFA(m²)	Staffing Levels	Hours operation
Restaurant (150 seats - dinner only)	293	8	6pm - 11pm
<u>Motel</u>	GFA(m²)	Staffing Levels	Hours operation
70 Motel Rooms for Public (1 resident manager and 2 staff)	n/a	3	24 hours
12 Motel Rooms for Patients	n/a	n/a	24 hours
Motel Restaurant (90 seats generally guests only)	130	4	6am-10am, 6pm-11pm
Function Room (night time use only)	140	5	6pm - 11pm
Total Precinct 2 Motel	270	12	
Precinct 3 (Residential and Child Care Centre Site)	GFA(m²)	Staffing Levels	Hours operation
Approximately 59 x 2 bedroom apartments	n/a	n/a	n/a
100 space Child Care Centre	n/a	12	7am - 6pm
Total Precinct 3		12	
Precinct 4 (Residential Apartments)	GFA(m²)	Staffing Levels	Hours operation
Approximately 157 x 2 bedroom apartments	n/a	n/a	n/a
Total Precinct 4			

Table 2.1 – The Development Proposal



The proposed development will be served by a total of 617 off-street car parking spaces as follows:

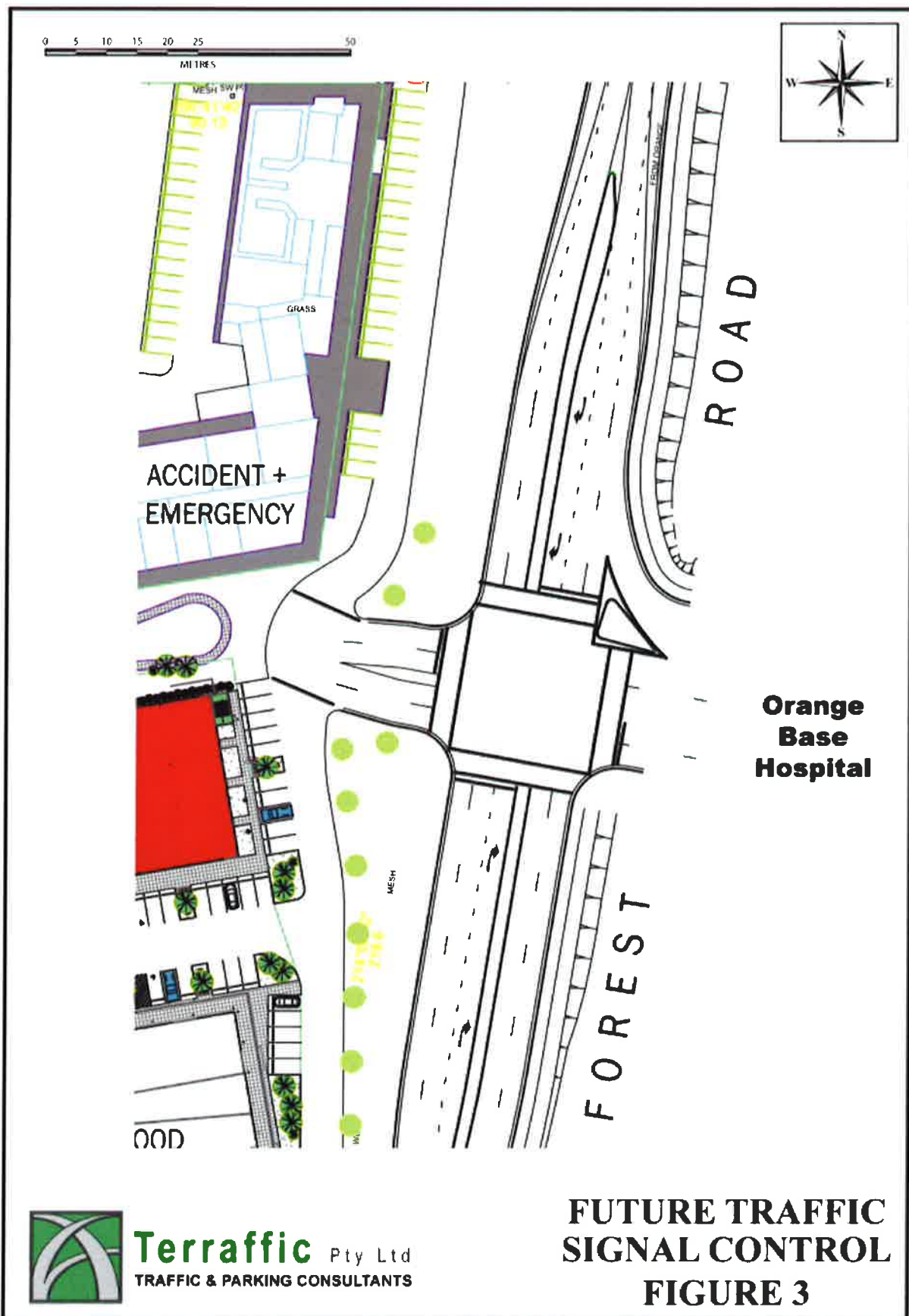
Precinct 1	101 spaces (including 6 disabled spaces) serving the hospital
Precinct 2	116 spaces (including 7 disabled spaces) serving the health facilities and retail shops 72 spaces serving the motel comprising 70 guest and 2 staff parking spaces. This parking provision includes 5 disabled guest spaces
Precinct 3	83 spaces serving the 59 residential units 25 spaces serving the 100 place Child Care Centre
Precinct 4	220 spaces serving the 157 residential units
Total	617 spaces

In addition to these spaces, there are 41 parallel parking spaces on the internal road network serving the site. Once these roads are constructed to provide access to Precincts 3 and 4, these on-street parking spaces will be available as surplus parking for the overall development.

The approved access arrangements serving the site off Forest Road will be retained and comprise the following:

- A new 4-way signalised intersection that will connect the site to the main access driveway serving the Orange Base Hospital which is located on the eastern side of Forest Road. The new signals will include pedestrian crossings on each leg of the intersection to enhance pedestrian safety.
- Left turn **exit only** movements from a northern access driveway

A plan of the main site access and future traffic signal controls is reproduced on Figure 3.



Terraflow Pty Ltd
TRAFFIC & PARKING CONSULTANTS



3. PARKING ASSESSMENT

Car Parking Requirements

Orange Development Control Plan 2004 (30 June 2007) specifies the following parking requirements which are relevant to the proposed development:

Hospital	1 space for every 3 beds + 1 space each resident doctor and 1 space for every 2 visiting doctor + 1 space for every 2 employees.
Health Consulting Rooms	2 spaces for every 1 practitioner with spaces being available for customer and staff use.
Motel	1 space per unit + 1 space for each resident manager + 1 space for every 2 employees + 1 space for every 3 seats in a restaurant + 1 space per 10m ² of entertainment or function room areas
Restaurants	1 space per 10m ² GFA or 1 space for every 3 seats, whichever is greater
Childcare Centre	1 space for every 4 children in attendance
Residential Units	1-bedroom unit - 1.0 space per unit 2-bedroom unit - 1.2 spaces per unit 3 (or more) bedroom unit - 1.5 spaces per unit Visitors - 0.2 spaces per unit
Shops and Shopping Centres	6.1 spaces per 100m ² GLFA

Dual and Complimentary Use of Parking

The Council's parking requirements do not consider the *Dual and Complimentary* use of parking that will occur on the site.

Dual use of parking spaces occurs when patrons of one component of a development also patronise another. For example, a proportion of staff and visitors to the proposed hospital and medical facility can also be expected to patronise the retail shops in Precinct 2. Not only will this reduce the parking requirements for the proposed medical facility, it also has the potential to reduce the traffic generating potential of visitors to the site.



In addition, another form of *Dual use* parking is that a proportion of residents in the Precinct 3 and 4 residential flat buildings will be employees of the health facilities and retail shops on the site and possibly the Orange Base Hospital. These residents will be allocated an on-site parking space within the residential precinct and will not require an additional car space in either Precinct 1 or 2. These residents will ultimately reduce the overall parking demand and traffic generation of the proposed development site.

Complementary use of parking spaces occurs when the peak parking demand of one component of a development does not coincide with the peak parking demand of another. In this case, the peak parking demand of the restaurant or the function centre in the motel is at night after 6pm, whereas the peak parking demand of the retail shops and health facilities in Precinct 2 is throughout the day.

Modifications to DCP Parking Requirements

When taking into account the dual and complimentary use of carparking, this assessment has slightly modified the following DCP parking requirements:

1. The parking requirement for the retail floorspace (6.1 spaces per 100m²) is excessive because it is unlikely that the general public will travel to the site to visit the café/florist/gift/newsagent stores. Furthermore, a high percentage of shoppers will already be on the site or will be generated by the Base Hospital on the eastern side of Forest Road (*dual use*). In these circumstances, the parking requirement for that retail floorspace will adopt the Council DCP rate of 4.1 spaces per 100m² which applies to shops in the CBD.
2. The parking requirement specified for the motel rooms (1 space per room) is excessive because 12 of the rooms will be medical suites occupied by persons who are bedridden. Accordingly, the requirement of 1 space per room has been applied to 70 standard rooms.
3. The parking requirement for the restaurant incorporated in Precinct 2 will only apply during the night when the restaurant will be operational. As noted in the foregoing,



this approach is applying the principle of *complementary use* of parking on the site. In addition, it is likely that some restaurant patrons will be staff/visitors to the hospital or guests of the motel who are already in the area. This includes staff and visitors to the Base Hospital on the eastern side of Forest Road. To that end, the restaurant will also be also adopting the *dual use* principle.

4. The parking requirement for the restaurant incorporated in the motel is excessive because a substantial proportion of restaurant patronage, if not all of it, will be drawn from motel guests and patients. In addition there will be a proportion of staff and visitors of the proposed hospital in Precinct 1 and the existing Base Hospital opposite the site. In these circumstances, the parking requirement for the motel restaurant (1 space per 3 seats) has been reduced to 20% of the requirement and will apply during the night only. These additional restaurant patrons who are not already in the area will utilise the remaining Precinct 2 parking spaces allocated to the health facility and retail shops that will be closed at that time (*complementary use*)
5. As per the restaurants on the site, the motel function room is expected to only operate at nights when the health facilities and retail shops are closed on Precinct 2. To that end, the parking requirement of 1 space per 10m² for the motel function room will apply at night time only. Furthermore, it is expected that some of the function guests will also be motel guests who have already parked on the site (*dual use*).
6. As the hospital in Precinct 1 will be operational 24 hours a day, this assessment has assumed that the nighttime workforce parking demand will be 20% of the daytime peak. As the visitor peak is typically at nights, the parking demand for the visitor component of the parking requirement will apply during the evening (ie 35 spaces).

In addition, this assessment has assumed that the proposed health facilities in Precinct 2 will have a total of 24 practitioners on-site at any given time. As can be appreciated, this is a conservative approach as specialists (such as surgeons and physiotherapists) tend to operate between hospitals and their office and may only be on-site on a given day.



Parking Calculations

Those parking requirements, with appropriate modifications, are applied to each component of the proposed development in Table 3.1 indicating a total parking requirement of up to 616 spaces during the daytime comprising:

DAYTIME PARKING REQUIREMENT

Precinct 1	Hospital	100 spaces
Precinct 2	Health Facility	55 spaces
	Retail Shops	61 spaces
	Motel	72 spaces
	<i>(Precinct 2 Sub-total</i>	<i>188 spaces)</i>
Precinct 3	Residential	83 spaces
	Child Care Centre	25 spaces
	<i>(Sub-total</i>	<i>108 spaces)</i>
Precinct 4	Residential	220 spaces
Total Requirement		616 spaces

Application of the modified parking requirements to take into account *dual and complementary use* of parking indicates a total parking requirement in Table 3.2 of up to 495 spaces during the nighttime comprising:

NIGHTTIME PARKING REQUIREMENT

Precinct 1	Hospital	48 spaces
Precinct 2	Restaurant	50 spaces
	Motel	72 spaces
	Motel restaurant	8 spaces
	Motel function room	14 spaces
	<i>(Precinct 2 Sub-total</i>	<i>144 spaces)</i>
Precinct 3	Residential	83 spaces
Precinct 4	Residential	220 spaces
Total Requirement		495 spaces

As noted in the foregoing, the proposed development makes provision for a total of 617 parking spaces, satisfying the likely daytime and nighttime demand of the proposed uses.



In addition, the development contains 41 parallel parking spaces on the internal road network serving Precincts 3 and 4. Once these precincts have been developed, these 41 spaces will be available as surplus parking for the overall development.

In the circumstances, it can be concluded that the parking provision incorporated in the development proposal is adequate such that the proposed development has no unacceptable parking implications.



Development Site Daytime Parking Requirements

Precinct 1 (Hospital Site)	GFA(m ²)	Staffing Levels	Parking Requirement	Req'd spaces	Staff parking	Visitor parking
Inpatient Unit (104 rooms)	4500	30	1 space per 3 beds + 1 space per 2 employees and visiting doctors	50	0 15	35 0
Administration Unit	325	10	1 space per 2 employees	5	5	0
General Support	680	20	1 space per 2 employees	10	10	0
Operating Unit (4 theatres)	1715	20	1 space per 2 employees and visiting doctors	10	10	0
Accident and Emergency	2000	10	1 space per 2 employees and visiting doctors	5	5	0
Cancer Care Facility	1400	20	1 space per 2 employees and visiting doctors	10	10	0
Medical Imaging, Pathology	2000	20	1 space per 2 employees and visiting doctors	10	10	0
Total Precinct 1	12620	130		100	65	35
Precinct 2 (Health Facilities, Neighbourhood Shops and Motel)	GFA(m ²)	Staffing Levels	Parking Requirement	Req'd spaces	Staff parking	Visitor parking
Health Facilities						
Health Consulting Rooms (8 Practitioners)	1311	8	2 spaces per 1 practitioner with space for customers	16	8	8
Consulting Room support staff		2	1 space per 2 employees	1	1	0
Rehabilitation Centre (8 practitioners)	700	8	2 spaces per 1 practitioner with space for customers	16	8	8
Rehabilitation Centre support staff		2	1 space per 2 employees	1	1	0
Imaging and pathology (8 Practitioners)	1050	8	2 spaces per 1 practitioner with space for customers	16	8	8
Imaging and pathology support staff		10	1 space per 2 employees	5	5	0
Total Precinct 2 Health Facility	3061	38		55	31	24
Shopping Centre						
11 Retail Shops	1498	20	4.1 spaces per 100m ²	61	10	51
Restaurant						
Restaurant (150 seats - dinner only)	293	8	not applicable	0	0	0
Motel						
70 Motel Rooms for Public			1 space per unit	70	0	70
12 Motel Rooms for Patients			not applicable	0	0	0
Motel staff (1 resident manager and 2 staff)		3	1 space per resident manager + 1 space per 2 employees	2	2	0
Motel Restaurant Patrons (90 seats)	130		not applicable	0	0	0
Motel Restaurant Staff		4	not applicable	0	0	0
Function Room	140	5	not applicable	0	0	0
Total Precinct 2 Motel	270	12		72	2	70
Total Precinct 2				188	43	145
Precinct 3 (Residential and Child Care Centre Site)	GFA(m ²)	Staffing Levels	Parking Requirement	Req'd spaces	Resident /Staff parking	Visitor parking
Approximately 59 x 2 bedroom apartments			1.2 spaces per dwelling + 1 space per 5 for visitors	83	71	12
100 space Child Care Centre		12	1 space per 4 children (includes staff parking)	25	6	19
Total Precinct 3		12		108	77	31
Precinct 4 (Residential Apartments)	GFA(m ²)	Staffing Levels	Parking Requirement	Req'd spaces	Resident parking	Visitor parking
Approximately 157 x 2 bedroom apartments			1.2 spaces per dwelling + 1 space per 5 for visitors	220	189	31
Total Precinct 4				220	189	31
TOTAL DEVELOPMENT DAYTIME ONLY				616	374	242

Table 3.1 – Daytime Parking Requirements



Development Site Nighttime Parking Requirements

Precinct 1 (Hospital Site)	GFA(m²)	Staffing Levels	Parking Requirement	Req'd spaces	Staff parking	Visitor parking
Inpatient Unit (104 rooms)	4500	30	1 space per 3 beds	38	0	35
			1 space per 2 employees and visiting doctors x 20%		3	0
Administration Unit	325	10	1 space per 2 employees x 20%	1	1	0
General Support	680	20	1 space per 2 employees x 20%	2	2	0
Operating Unit (4 theatres)	1715	20	1 space per 2 employees and visiting doctors x 20%	2	2	0
Accident and Emergency	2000	10	1 space per 2 employees and visiting doctors x 20%	1	1	0
Cancer Care Facility	1400	20	1 space per 2 employees and visiting doctors x 20%	2	2	0
Medical Imaging, Pathology	2000	20	1 space per 2 employees and visiting doctors x 20%	2	2	0
Total Precinct 1	12620	130		48	13	35
Precinct 2 (Health Facilities, Neighbourhood Shops and Motel)	GFA(m²)	Staffing Levels	Parking Requirement	Req'd spaces	Staff parking	Visitor parking
Health Facilities						
Health Consulting Rooms (5 Practitioners)	1311	0	not applicable	0	0	0
Consulting Room support staff		0	not applicable	0	0	0
Rehabilitation Centre (8 practitioners)	700	0	not applicable	0	0	0
Rehabilitation Centre support staff		0	not applicable	0	0	0
Imaging and pathology (8 Practitioners)	1050	0	not applicable	0	0	0
Imaging and pathology support staff		0	not applicable	0	0	0
Total Precinct 2 Health Facility	3061	0		0	0	0
Shopping Centre						
11 Retail Shops	1498	0	not applicable	0	0	0
Restaurant						
Restaurant (150 seats - dinner only)	293	8	1 space per 10m ² or 1 space per 3 seats	50	4	46
Motel						
70 Motel Rooms for Public			1 space per unit	70	0	70
12 Motel Rooms for Patients			not applicable	0	0	0
Motel staff (1 resident manager and 2 staff)		3	1 space per resident manager + 1 space per 2 employees	2	2	0
Motel Restaurant Patrons (90 seats)	130		1 space per 3 seats x 20%	6	0	6
Motel Restaurant Staff		4	1 space per 2 employees	2	2	0
Function Room	140	5	1 space per 10m ²	14	2	12
Total Precinct 2 Motel	270	12		94	6	88
Total Precinct 2				144	10	134
Precinct 3 (Residential and Child Care Centre Site)	GFA(m²)	Staffing Levels	Parking Requirement	Req'd spaces	Resident /Staff parking	Visitor parking
Approximately 59 x 2 bedroom apartments			1,2 spaces per dwelling + 1 space per 5 for visitors	83	71	12
100 space Child Care Centre		0	not applicable	0	0	0
Total Precinct 3		12		83	71	12
Precinct 4 (Residential Apartments)	GFA(m²)	Staffing Levels	Parking Requirement	Req'd spaces	Resident parking	Visitor parking
Approximately 157 x 2 bedroom apartments			1,2 spaces per dwelling + 1 space per 5 for visitors	220	189	31
Total Precinct 4				220	189	31
TOTAL DEVELOPMENT DAYTIME ONLY				495	279	166

Table 3.2 – Nighttime Parking Requirements



4. SERVICING ASSESSMENT

The Australian Standards AS/NZS2890.1:2004 - "*Off-street car parking facilities*" and AS2890.2:2002 - "*Off-street commercial vehicle facilities*" identify the following categories of trucks and delivery vehicles:

Standard	Vehicle class	Length	Width	Clearance height	Design turning radius
AS2890.1	B99 courier van	5.2m	1.94m	2.2m	6.3m
AS2890.2	Small Rigid Vehicle (SRV)	6.4m	2.3m	3.5m	7.1m
AS2890.2	Medium Rigid Vehicle (MRV)	8.8m	2.5m	4.5m	10.0m
AS2890.2	Heavy Rigid Vehicle (HRV)	12.5m	2.5m	4.5m	12.5m
AS2890.2	Articulated Vehicle (AV)	19.0m	2.5m	4.5m	12.5m

Precinct 1: Private Hospital Deliveries

The proposed development will retain the 2 loading docks that were approved to serve the hospital development. The loading docks are required to accommodate the commercial vehicles transporting food, linen, medical supplies, office equipment and provisions to the hospital, and transporting waste from the hospital.

The vehicles used in those activities are expected to comprise predominantly vans and the SRV, with some deliveries via the MRV and the HRV. Articulated vehicles (AV) are not expected to be involved in deliveries to/from the site.

While the number of commercial vehicle trips generated by the Private Hospital will be variable, it is expected that the maximum daily commercial vehicle generation will be in the order of 20 vehicles per day (40 vehicle trips per day) as follows:



Precinct 1 (Hospital Site)	GFA(m²)	Hours operation	Deliveries per day	Deliveries per week
Inpatient Unit (104 rooms)	4500	24 hours	4 x vans/SRVs + 4 MRV/HRV's	28 x vans/SRVs + 28 MRV/HRV's
Administration Unit	325	7am-6pm	1 courier van	5 courier vans
Operating Unit (4 theatres)	1715	7am-6pm	4 courier vans	28 courier vans
Accident and Emergency	2000	8am-6pm	4 courier vans/SRV's	28 courier vans
Cancer Care Facility	1400	8am-6pm	1 courier van	5 courier vans
Medical Imaging, Pathology	2000	8am-6pm	2 courier van	10 courier vans
Total Precinct 1 Hospital	11940		20 deliveries	132 deliveries

All delivery vehicles accessing the hospital precinct and loading docks will enter via the Forest Road traffic signals. The ability of the heavy rigid vehicle to access the site and manoeuvre to/from the loading dock has been tested using the AutoTrack computer simulation software. This test found that the HRV can comfortably access the site and the loading docks incorporated in the proposed Private Hospital.

Precinct 2: Health Facilities, Neighbourhood Shops and Motel Deliveries

The proposed health facility is not served by a dedicated loading dock like the hospital in Precinct 1. Couriers making deliveries to this facility in vans will utilise the off-street parking area serving this component of the Precinct 2 development. Deliveries by larger commercial vehicles are not expected to occur for the health facility.

The neighbourhood shopping area contains 2 separate loading areas capable of accommodating Medium Rigid Vehicles. The loading docks are located at the eastern and western ends of the development and will provide convenient access to each shop.

The motel will also be served by a loading area capable of accommodating the Medium Rigid Vehicle. The motel is expected to generate commercial vehicles transporting predominantly food, liquor, linen and other provisions to the motel, and transporting waste from the motel. The vehicles used in those activities are expected to comprise predominantly vans, with some deliveries using the SRV and the MRV.



While the number of commercial vehicle trips generated by the uses in Precinct 2 will be variable, it is expected that the maximum daily commercial vehicle generation will be in the order of 30 vehicles per day (60 vehicle trips per day) as follows:

Precinct 2 (Health Facilities, Neighbourhood Shops and Motel)	GFA(m²)	Hours operation	Deliveries per day	Deliveries per week
<u>Health Facilities</u>				
Health Consulting Rooms	1311	8am-6pm	1 courier van	5 courier vans
Rehabilitation Centre	700	8am-6pm	1 courier van	5 courier vans
Imaging and pathology	1050	8am-6pm	1 courier van	5 courier vans
Total Precinct 2 Health Facility	3061		3 deliveries	15 deliveries
<u>Shopping Centre</u>				
11 Retail Shops	1498	8am-5pm	20 x courier vans/SRV's	100 x courier vans/SRV's
<u>Restaurant</u>				
Restaurant	293	6pm - 11pm	2 courier vans/SRV's	10 courier vans/SRV's
<u>Motel</u>				
Motel Rooms	na	24 hours	1 courier van/SRV	5 courier vans/SRV's
Motel Restaurant	100	6am-10am, 6pm-11pm	2 courier van/SRV's	10 courier vans/SRV's
Function Room	140	6pm - 11pm	1 courier van	5 courier vans
Total Precinct 2 Motel	240		4 deliveries	20 deliveries

The ability of medium rigid vehicles to access the site and manoeuvre to/from the loading areas serving each use in Precinct 2 has also been tested using the AutoTrack computer simulation software. This test found that the MRV can comfortably access the site and the loading areas.

Precinct 3: Child Care Centre and Residential Unit Deliveries

Deliveries to the childcare centre are expected to be only minor, comprising 3 to 4 vehicle trips per day in vans or SRV's. Childcare centres typically avoid deliveries during peak child set-down/pick-up periods and utilise the empty carpark outside of the AM and PM peak periods.



Precinct 3 and 4: Residential Unit Deliveries

While the residential component of the proposed development will generate commercial vehicle activity associated with residents moving into and out of the precinct, and some service vehicle activity for residents living there, this commercial vehicle activity will not be frequent nor regular, or of a level that is likely to have any significant traffic implications.

Based on these assumptions, the overall development will generate in the order of 45 to 50 deliveries per day ranging from courier vans to Heavy Rigid Vehicles. This level of activity equates to no more than 10 deliveries to the site during the morning and evening peak periods. This commercial vehicle activity will not be of a level that is likely to have any significant traffic implications.

In the circumstances, the proposed medical facility will have no unacceptable servicing implications.



5. TRAFFIC ASSESSMENT

Existing Road Network

Forest Rd is classified by the RMS as a Regional Road performing a sub-arterial road function. The section of Forest Rd in the vicinity of the site is constructed to a two-lane rural road standard with a sealed carriageway approximately 6.5m wide between edge lines with a 500mm bitumen shoulder on each side.

As can be seen in the aerial photograph below, the main access driveway serving the Orange Base Hospital opposite the subject site is controlled by a sea-gull treatment. Traffic making a right turn into the site are within a protected lane and do not obstruct northbound traffic. Vehicles making a right turn from the Hospital turn into a protected merge lane.



Aerial photograph of existing Base Hospital access arrangements

Orange City Council has engaged GHD to prepare roadwork plans for the upgrade of Forest Road and in particular the provision of traffic signals at the intersection of Forest Road, the Base Hospital and the subject site. The plan of these proposed access arrangements was reproduced earlier in this report on Figure 3.



Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken at the intersection of Forest Road and Base Hospital main access driveway between 7.00-9.00am and 4.00-6.00pm on Friday 7th march 2014. The results of the traffic surveys are reproduced in full in Appendix B and reveal that:

- the morning peak period occurs between 7.45-8.45am. At that time, the traffic flow on Forest Road to the north of the access driveway was 792 vehicles per hour (vph), while to the south of the driveway there were only 474vph
- during the morning peak, the Base Hospital generates in the order of 352vph with 95% of that traffic approaching from the north and departing to the north
- the evening peak period occurs between 4.15-5.15pm. At that time, the traffic flow on Forest Road to the north of the access driveway was 845vph, while to the south of the driveway there were 542vph
- during the evening peak period, the Base Hospital generates in the order of 317vph with 95% of that traffic approaching from the north and 99% departing to the north

Traffic Generating Potential of Proposed Medical Facility

Section 3.11 of the RMS publication "*Guide to Traffic Generating Developments*" (October 2002) specifies the following traffic generating rates that can apply to the proposed development:

Private Hospitals

AM Peak Period = $-10.21 + 0.47 B + 0.06 \text{ ASDS}$

PM Peak Period = $-2.84 + 0.25 B + 0.40 \text{ ASDS}$

Where:



B - No of beds

ASDS - Average number of staff per weekday shift.

Specialty Shops

Evening Peak Periods 4.6vtph per 100m²

Restaurant

Evening peak hour vehicle trips 5vtph per 100m²

Motel

Evening peak hour vehicle trips 0.4 per unit

Child Care Centre

AM peak period 0.8 vtph per child

PM peak period 0.7 vtph per child

Residential Flat Buildings (up to 2 bedroom units)

Peak periods 0.4-0.5vtph per unit

As the Guidelines do not provide a traffic generation rate for the professional consulting rooms, the rehabilitation centre and the imaging and pathology services, this assessment will adopt a “*first principles*” approach to determine an appropriate traffic generation for these components of the Precinct 2 “Health Facilities”.

The “*first principles*” approach will be based on the following:

1. The number of spaces allocated to long-term (staff) parking
2. The number of spaces allocated to short-term (patient/visitor) parking
3. The number of consulting rooms or doctors/professionals
4. An appropriate patient turnover for each doctor/professional per hour
5. An appropriate car driver rate for visitors/patients

Traffic Generation of Precinct 2 Health Facilities

The parking requirements for the Precinct 2 Health Facilities calculated in Chapter 3 of this report comprise the following:



Consulting Rooms (8 practitioners and 2 staff)	9 staff spaces plus 8 visitor spaces
Rehabilitation Centre (8 practitioners and 2 staff)	9 staff spaces plus 8 visitor spaces
Imaging/Pathology (8 practitioners and 10 staff)	13 staff spaces plus 8 visitor spaces
Total Requirement (21 practitioners and 14 staff)	31 staff spaces plus 24 visitor spaces

While the centre is open between 8.00am and 6.00pm, it is unlikely that all practitioners will start at 8.00am and finish at 6.00pm. Furthermore, it is unlikely that all 24 specialists (such as surgeons and physiotherapists) will be on-site at any given time as they tend to operate between hospitals and their office. However, in order to prepare a robust assessment, it has been assumed that all practitioners and staff will arrive during the morning peak and depart during the evening peak. To that end, there will be 31 staff vehicles entering the site in the morning peak and 31 staff vehicles departing during the evening peak.

As can be appreciated, patients visiting a specialist are required to make an appointment which evenly distributes their traffic and parking generation throughout the day. In addition, a proportion of these visitors will utilise the local bus service that services the site. Notwithstanding this assessment will assume that:

- each practitioner will have a continual patient turnover of 1 visitor every 30 minutes, i.e. 2 patients per hour
- each visitor will drive to the site

As there are 24 practitioners, the visitor traffic generation will be as follows:

AM Peak	48 inbound vehicle trips + 24 outbound vehicle trips
PM Peak	24 inbound vehicle trips + 48 outbound vehicle trips

To that end, the proposed health facilities will have the following peak period traffic generating characteristics:

AM Peak	72 inbound + 24 outbound = 96 vehicle trips
PM Peak	24 inbound + 72 outbound = 96 vehicle trips



Traffic Generation of Remaining Components

Application of the abovementioned RMS traffic generating rates to the remaining components of the proposed development yields the following:

Precinct 1:

Private Hospital (with 104 beds and 130 staff per weekday shift)

AM Peak Period = $-10.21 + (0.47 \times 104 \text{ beds}) + (0.06 \times 130 \text{ staff}) = 46\text{vtph}$

PM Peak Period = $-2.84 + (0.25 \times 104 \text{ beds}) + (0.40 \times 130 \text{ staff}) = 75\text{vtph}$

Precinct 2:

Specialty Shops

AM Peak Period 1,498m² @ 4.6vtph per 100m² = 69vtph

PM Peak Period 1,498m² @ 4.6vtph per 100m² = 69vtph

Restaurant

AM Peak Period closed

PM Peak Period 293m² @ 5vtph per 100m² = 15vtph

Motel (does not include patient rooms)

AM Peak Period = 70 motel rooms @ 0.4vtph per room = 28vtph

PM Peak Period = 70 motel rooms @ 0.4vtph per room = 28vtph

Motel Restaurant

AM Peak Period closed

PM Peak Period 130m² @ 5vtph per 100m² = 7vtph

Precinct 3:

Child Care Centre

AM Peak Period 100 children @ 0.8vtph per child = 80vtph

PM Peak Period 100 children @ 0.7vtph per child = 70vtph

Residential

AM Peak Period 59 units @ 0.4vtph per unit = 24vtph

PM Peak Period 59 units @ 0.4vtph per unit = 24vtph

**Precinct 4:****Residential**

AM Peak Period 157 units @ 0.4vtph per unit = 63vtph

PM Peak Period 157 units @ 0.4vtph per unit = 63vtph

Based on the RMS generic traffic generation rates and first principle assumptions, the proposed development will generate in the order of 406vtph during the morning peak and 457vtph during the evening peak as follows:

AM PEAK PERIOD TRAFFIC GENERATION			
Use	Inbound	Outbound	Total
Precinct 1 Hospital	36	10	46
Precinct 2 Health Facility	72	24	96
Precinct 2 Specialty Shops	49	20	69
Precinct 2 Restaurant	0	0	0
Precinct 2 Motel	8	20	28
Precinct 2 Motel Restaurant	0	0	0
Precinct 3 Child Care Centre	45	35	80
Precinct 3 Residential	6	18	24
Precinct 4 Residential	13	50	63
Total Development	229	177	406



PM PEAK PERIOD TRAFFIC GENERATION			
Use	Inbound	Outbound	Total
Precinct 1 Hospital	15	60	75
Precinct 2 Health Facility	24	72	96
Precinct 2 Specialty Shops	20	49	69
Precinct 2 Restaurant	12	3	15
Precinct 2 Motel	20	8	28
Precinct 2 Motel Restaurant	5	2	7
Precinct 3 Child Care Centre	35	45	80
Precinct 3 Residential	18	6	24
Precinct 4 Residential	50	13	63
Total Development	199	258	457

That traffic projected traffic generation potential has been assigned to the road network serving the site generally reflecting the origin/destination characteristics of the surveyed traffic generation of the existing Base Hospital as follows:

To/from North 95%

To/from South 5%



Traffic Growth of Forest Road

The Traffic and Parking Assessment Report prepared for the approved development by John Coady Consulting Pty Ltd (dated 1 July 2008) received the following information from Orange City Council with regard to traffic growth along Forest Road:

- The average daily traffic flows on Forest Rd in the vicinity of the proposed development site are in the order of 6,500 vehicle trips per day, and grew at an average annual rate of 3.9% in the period 1998 to 2005.
- The AM peak hour traffic flows are in the order of 520 vtp/h and grew at an annual rate of 3.0% per annum between 1998 and 2005, while the PM peak traffic flows are in the order of 600 vtp/h and grew at an annual rate of 3.7% between 1998 and 2007.

This report will continue to assume a 4% annual increase in traffic flow over next 10 years. The current traffic flows accessing the Orange Base Hospital will not be increased. To that end, the 2024 base flows on Forest Road travelling past the site will be as follows:

Direction	2014 Traffic Flow	2024 Traffic Flow
AM Northbound	236	349
AM Southbound	238	352
PM Northbound	337	499
PM Southbound	205	303

Traffic Implications of Proposed Development

The main traffic implications of the proposed development concern the ability of traffic that it generates to access the site via the two access points off Forest Rd (ie the new traffic signals serving the site and the Base Hospital and the northern left out only access driveway).



The ability of these intersections to accommodate the projected post-development traffic demand can be assessed using the SIDRA traffic model, and criteria for interpreting the results of SIDRA analysis are set out on the schedule reproduced in the following pages.

The access points off Forest Rd were modelled under projected future (2024) traffic demand and include the current traffic generation characteristics of the Base Hospital on the eastern side of Forest Road.

The results of that SIDRA analysis are set out in Table 5.1 (Traffic Signals) and Table 5.2 (northern access driveway) revealing that both intersections operate satisfactorily under projected traffic demand in 2024.

The Sidra Movement Summary Sheets for the Forest Road/Base Hospital/Subject Site Main Access are reproduced in Appendix C, while the Movement Summary Sheets for the Forest Road Northern Exit Driveway are reproduced in Appendix D.

**TABLE 5.1 – RESULTS OF SIDRA ANALYSIS OF FOREST ROAD AND
BASE HOSPITAL / MAIN SITE ACCESS INTERSECTION**

<u>2024 Conditions</u>	Level of Service	Degree of Saturation	Total Average Vehicle Delay (sec)
AM Peak	B	0.631	15.5
PM Peak	B	0.701	15.3

**TABLE 5.2 – RESULTS OF SIDRA ANALYSIS OF FOREST ROAD AND
NORTHERN EXIT DRIVEWAY**

<u>2024 Conditions</u>	Level of Service	Degree of Saturation	Total Average Vehicle Delay (sec)
AM Peak	A	0.439	0.6
PM Peak	A	0.450	1.3

In the circumstances, it can be concluded that the proposed development has no unacceptable traffic implications.



Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation.	Good operation.
B	15 to 28	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
C	29 to 42	Satisfactory.	Satisfactory but accident study required.
D	43 to 56	Operating near capacity.	Near capacity and accident study required.
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals¹ both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

¹

The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.



TERRAFFIC PTY LTD

APPENDIX A

PLANS OF PROPOSED DEVELOPMENT PREPARED BY TVS ARCHITECTS



07/13 ARCHITECTS
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2	DA House	16.04.14	DA
2	DA House	16.03.14	DA
Revision	Drawn/Checked	Date	Drawn/Checked

TVS architects
Orange Private Hospital Site

Client
James Richmark Pty Ltd

Drawing Title
Private Hospital Precinct -
Site Plan

Project Architect/Designer
M. Boulton
Scale 1:500
Drawing No.
5420.3S.01.104
Revision
2





APPENDIX B

TRAFFIC COUNT DATA

**Traffic Count*****Forest Road and Base Hospital Access Driveway*****Friday 7th March 2014**

Time Period	A	B	C	D	E	F	Total
	Northbound	Right In	Southbound	Left In	Right Out	Left Out	
0700 - 0715	63	2	39	30	26	2	162
0715 - 0730	81	2	40	45	23	4	195
0730 - 0745	47	1	61	36	24	0	169
0745 - 0800	40	2	67	82	15	0	206
0800 - 0815	47	3	43	66	17	3	179
0815 - 0830	59	4	67	65	18	0	213
0830 - 0845	77	4	57	50	22	1	211
0845 - 0900	46	2	38	55	18	0	159
0900 - 0915	38	1	60	41	19	1	160
0915 - 0930	48	4	49	33	19	2	155
0930 - 0945	27	3	41	27	18	2	118
0945 - 1000	43	4	29	41	32	1	150
Total	616	32	591	571	251	16	2077

Time Period	A	B	C	D	E	F	Total
	Northbound	Right In	Southbound	Left In	Right Out	Left Out	
1500 - 1515	87	4	40	24	48	1	204
1515 - 1530	83	3	43	26	78	2	235
1530 - 1545	65	3	43	23	68	2	204
1545 - 1600	63	0	48	20	50	3	184
1600 - 1615	67	0	46	20	32	3	168
1615 - 1630	90	0	47	22	38	1	198
1630 - 1645	113	1	43	15	67	2	241
1645 - 1700	55	2	53	27	60	0	197
1700 - 1715	75	1	59	15	66	0	216
1715 - 1730	59	0	48	15	35	1	158
1730 - 1745	48	1	67	17	39	0	172
1745 - 1800	19	2	88	16	27	3	155
Total	824	17	625	240	608	18	2332



Traffic Count

Forest Road and Base Hospital Access Driveway

Friday 7th March 2014

Time Period	A	B	C	D	E	F	Total
	Northbound	Right In	Southbound	Left In	Right Out	Left Out	
0700 - 0800	231	7	207	193	88	6	732
0715 - 0815	215	8	211	229	79	7	749
0730 - 0830	193	10	238	249	74	3	767
0745 - 0845	223	13	234	263	72	4	809
0800 - 0900	229	13	205	236	75	4	762
0815 - 0915	220	11	222	211	77	2	743
0830 - 0930	209	11	204	179	78	4	685
0845 - 0945	159	10	188	156	74	5	592
0900 - 1000	156	12	179	142	88	6	583

Peak	223	13	234	263	72	4	809
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Time Period	A	B	C	D	E	F	Total
	Northbound	Right In	Southbound	Left In	Right Out	Left Out	
1500 - 1600	298	10	174	93	244	8	827
1515 - 1615	278	6	180	89	228	10	791
1530 - 1630	285	3	184	85	188	9	754
1545 - 1645	333	1	184	77	187	9	791
1600 - 1700	325	3	189	84	197	6	804
1615 - 1715	333	4	202	79	231	3	852
1630 - 1730	302	4	203	72	228	3	812
1645 - 1745	237	4	227	74	200	1	743
1700 - 1800	201	4	262	63	167	4	701

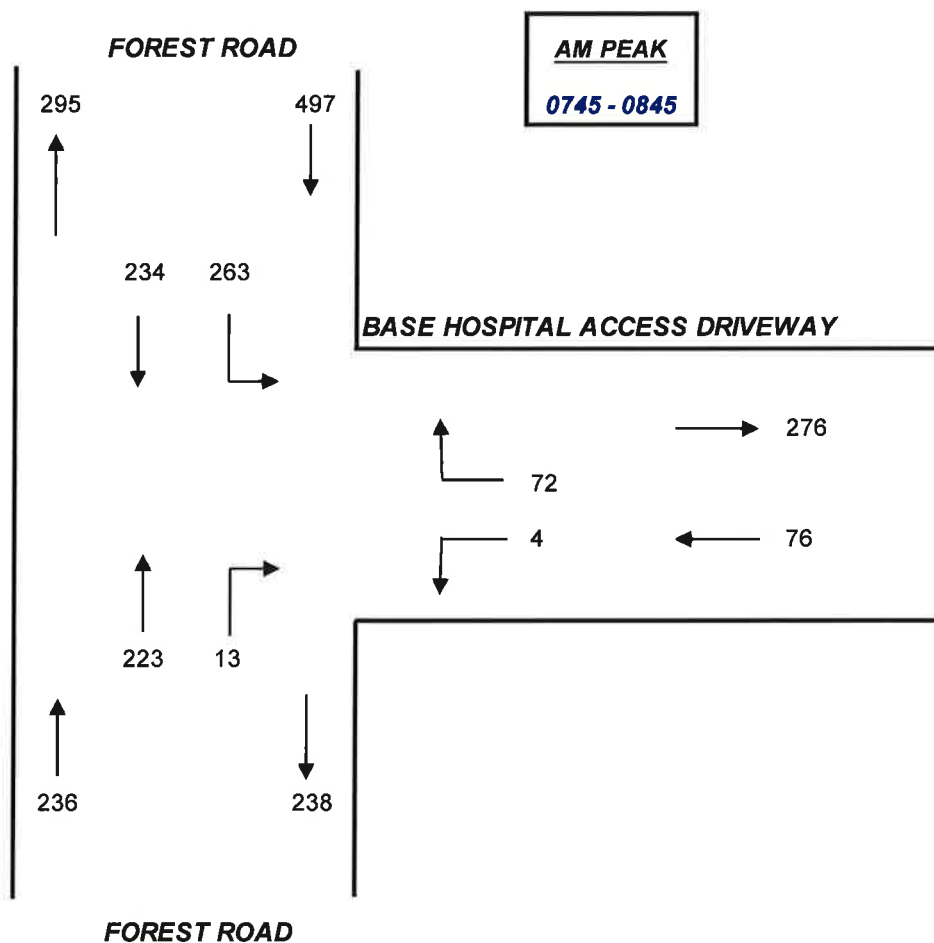
Peak	333	4	202	79	231	3	852
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Traffic Count

Forest Road and Base Hospital Access Driveway

Friday 7th March 2014

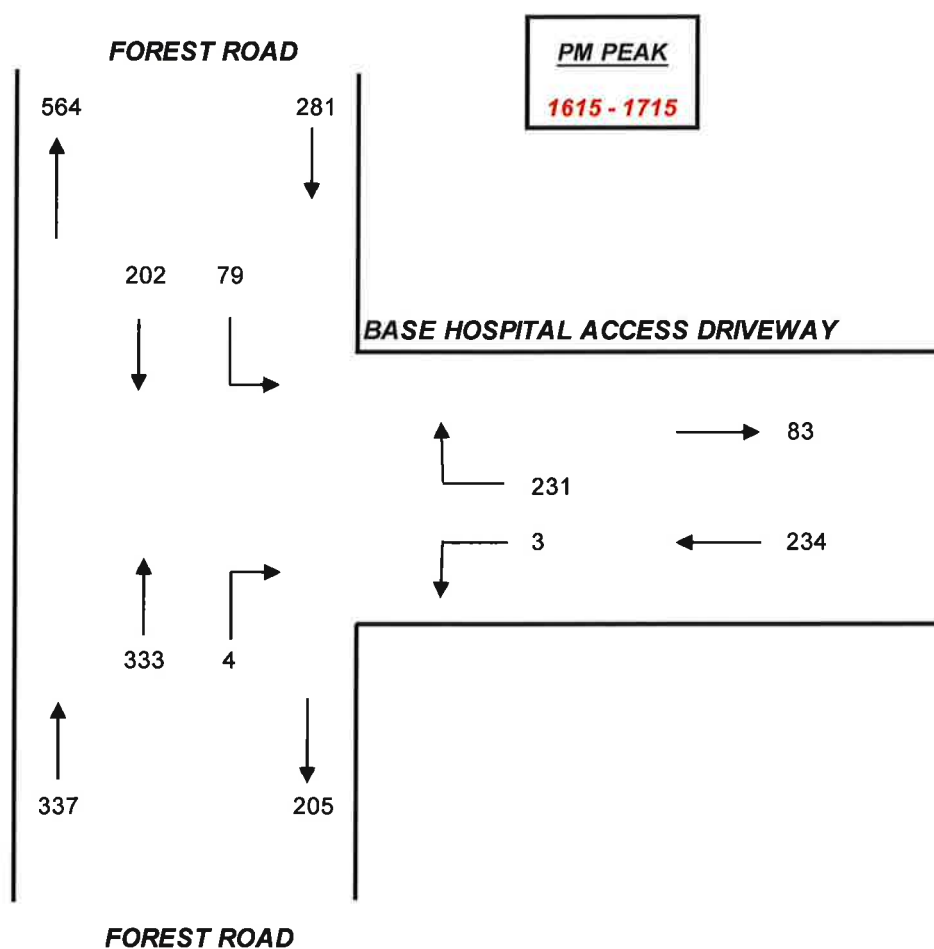




Traffic Count

Forest Road and Base Hospital Access Driveway

Friday 7th March 2014





APPENDIX C

SIDRA MOVEMENT SUMMARY SHEETS FOR THE FOREST ROAD/BASE HOSPITAL/SUBJECT SITE ACCESS DRIVEWAY

**MOVEMENT SUMMARY****Site: Forest Road Traffic Signals - AM Peak**

2024 Traffic Signals

Signals - Fixed Time Cycle Time = 50 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	DD Mov	Demand Flows Total veh/h	HV %	Cap. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Forest Road											
1	L2	12	0.0	0.130	17.3	LOS B	1.5	10.8	0.70	0.58	38.8
2	T1	349	5.0	0.395	12.9	LOS A	5.1	37.1	0.77	0.64	49.4
3	R2	13	0.0	0.038	21.1	LOS B	0.2	1.7	0.77	0.68	25.8
Approach		374	4.7	0.395	13.3	LOS A	5.1	37.1	0.77	0.64	47.6
East: Base Hospital											
4	L2	4	0.0	0.005	9.6	LOS A	0.1	0.4	0.62	0.40	27.3
6	R2	72	0.0	0.124	10.2	LOS A	1.1	8.0	0.66	0.49	27.2
Approach		76	0.0	0.124	10.1	LOS A	1.1	8.0	0.66	0.49	27.2
North: Forest Road											
7	L2	263	0.0	0.402	17.3	LOS B	5.6	39.5	0.71	0.76	26.9
8	T1	352	5.0	0.402	12.5	LOS A	5.6	39.5	0.77	0.69	49.0
9	R2	217	0.0	0.631	25.3	LOS B	5.2	36.1	0.94	0.85	31.3
Approach		832	2.1	0.631	17.3	LOS B	5.6	39.5	0.79	0.75	35.3
West: Development Site											
10	L2	55	0.0	0.073	10.1	LOS A	0.8	5.9	0.65	0.49	38.0
12	R2	9	0.0	0.014	9.5	LOS A	0.1	0.9	0.62	0.40	38.5
Approach		64	0.0	0.073	10.0	LOS A	0.8	5.9	0.64	0.48	38.1
All Vehicles		1346	2.6	0.631	15.5	LOS B	5.6	39.5	0.77	0.69	37.9

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	19.4	LOS B	0.0	0.0	0.88	0.88
P2	East Full Crossing	10	18.5	LOS B	0.0	0.0	0.86	0.86
P3	North Full Crossing	10	19.4	LOS B	0.0	0.0	0.88	0.88
P4	West Full Crossing	10	18.5	LOS B	0.0	0.0	0.86	0.86
All Pedestrians		40	18.9	LOS B			0.87	0.87

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

**MOVEMENT SUMMARY****Site: Forest Road Traffic Signals - PM Peak**

2024 Traffic Signals

Signals - Fixed Time Cycle Time = 50 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Cap. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Forest Road											
1	L2	10	0.0	0.184	17.6	LOS B	2.2	15.7	0.72	0.59	38.9
2	T1	499	5.0	0.557	13.7	LOS A	7.7	56.3	0.82	0.70	48.9
3	R2	4	0.0	0.010	19.1	LOS B	0.1	0.5	0.72	0.64	26.1
Approach		513	4.9	0.557	13.8	LOS A	7.7	56.3	0.82	0.69	48.4
East: Base Hospital											
4	L2	3	0.0	0.004	9.6	LOS A	0.0	0.3	0.62	0.39	27.3
6	R2	231	0.0	0.438	13.4	LOS A	4.5	31.3	0.80	0.66	26.6
Approach		234	0.0	0.438	13.3	LOS A	4.5	31.3	0.80	0.66	26.6
North: Forest Road											
7	L2	79	0.0	0.270	18.6	LOS B	3.3	23.7	0.71	0.67	27.2
8	T1	303	5.0	0.270	12.0	LOS A	3.3	23.7	0.73	0.64	49.4
9	R2	189	0.0	0.701	29.1	LOS C	4.9	34.4	0.98	0.90	29.5
Approach		571	2.7	0.701	18.5	LOS B	4.9	34.4	0.81	0.73	38.6
West: Development Site											
10	L2	121	0.0	0.161	10.5	LOS A	1.9	13.5	0.67	0.54	37.7
12	R2	13	0.0	0.021	9.6	LOS A	0.2	1.4	0.63	0.41	38.4
Approach		134	0.0	0.161	10.4	LOS A	1.9	13.5	0.67	0.53	37.8
All Vehicles		1452	2.8	0.701	15.3	LOS B	7.7	56.3	0.80	0.69	38.5

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akoelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	19.4	LOS B	0.0	0.0	0.88	0.88
P2	East Full Crossing	10	18.5	LOS B	0.0	0.0	0.86	0.86
P3	North Full Crossing	10	19.4	LOS B	0.0	0.0	0.88	0.88
P4	West Full Crossing	10	18.5	LOS B	0.0	0.0	0.86	0.86
All Pedestrians		40	18.9	LOS B			0.87	0.87

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



APPENDIX D

SIDRA MOVEMENT SUMMARY SHEETS FOR THE FOREST ROAD NORTHERN SITE EXIT DRIVEWAY



MOVEMENT SUMMARY

▽ Site: Forest Road Exit Driveway - AM Peak

2024 Flows

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop Queued	Effective Stop Rate per veh	Average Speed km/h
South: Forest Road											
2	T1	473	5.0	0.250	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		473	5.0	0.250	0.0	NA	0.0	0.0	0.00	0.00	59.9
North: Forest Road											
8	T1	830	5.0	0.439	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		830	5.0	0.439	0.1	NA	0.0	0.0	0.00	0.00	59.9
West: Site Access Driveway											
10	L2	113	0.0	0.111	7.5	LOS A	0.4	3.0	0.48	0.70	52.1
Approach		113	0.0	0.111	7.5	LOS A	0.4	3.0	0.48	0.70	52.1
All Vehicles		1416	4.6	0.439	0.6	NA	0.4	3.0	0.04	0.06	59.2

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akoelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



MOVEMENT SUMMARY

▽ Site: Forest Road Exit Driveway - PM Peak

2024 Flows

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deq Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop Queued	Effective Stop Rate per veh	Average Speed km/h
South: Forest Road											
2	T1	849	5.0	0.450	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		849	5.0	0.450	0.1	NA	0.0	0.0	0.00	0.00	59.9
North: Forest Road											
8	T1	186	5.0	0.098	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		186	5.0	0.098	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: Site Access Driveway											
10	L2	124	0.0	0.215	11.2	LOS A	0.8	5.5	0.70	0.88	49.5
Approach		124	0.0	0.215	11.2	LOS A	0.8	5.5	0.70	0.88	49.5
All Vehicles		1159	4.5	0.450	1.3	NA	0.8	5.5	0.08	0.09	58.6

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akgelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Annexure C

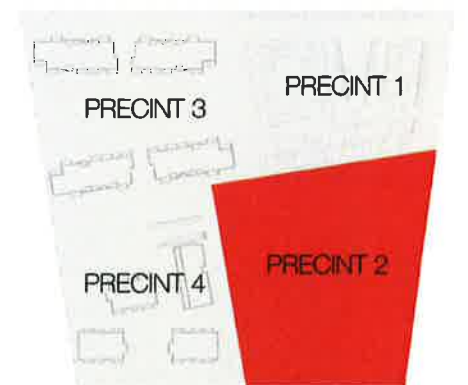
Landscaping Plans by McGregor Coxall



- Site boundary
- - - Precinct 2 boundary
- Main vehicle access
- Main boulevard
- Paved with feature tree
- Grass mounds - The 'Heath Garden'
- Covered pedestrian crossing
- Covered/raised pedestrian crossing
- Drop off zone
- Future pedestrian connection
- Stormwater filtration with native wetland planting

- SEATING WALL
- QUALITY PAVING
- CONCRETE PEDESTRIAN PAVING
- VEHICLE CARRIAGE WAY
- PARKING BAY - UNIT PAVERS
- DECOMPOSED GRANITE
- VEHICLE DIRECTIONAL MARKING
- OUTDOOR FURNITURE
- SEATING BENCH

- IRRIGATED LAWN IN 150MM GARDEN SOIL MIX AT GRADE
- PROPOSED NATIVE SHRUBS/GROUNDCOVERS PLANTING IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- PROPOSED NATIVE GRASSES IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- FILTRATION BIOTONE BIOSWALL WITH NATIVE GRASS/WETLAND PLANTING IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- PROPOSED NATIVE SHADE TOLERANT SHRUB/GROUNDCOVER PLANTING IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- PROPOSED NATIVE FLOWERING GRASS/SHRUB/GROUNDCOVER PLANTING IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- HEDGE PLANTING IN 300MM DEPTH GARDEN SOIL MIX AT GRADE
- SHADE GARDEN/UTRN GARDEN PLANTERS AND SEATING AREAS
- PROPOSED NATIVE TREE PLANTING
- PROPOSED NATIVE SMALL TREE PLANTING
- PROPOSED EXOTIC TREE PLANTING



ORANGE PRIVATE HOSPITAL SITE - PRECINCT 2

Forest Road

Orange

LANDSCAPE MASTERPLAN

REVISION E | SCALE 1:350 @ A1

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MCGREGOR COXALL
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LANDSCAPE DESIGN
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MELBOURNE
3-457 DUFF STREET E. 4010 BAYVIEW
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Annexure D

Confirmation of Physical Commencement

D13/25002
PR4072

8 November 2013

Mr Peter Basha
Peter Basha Planning and Development
PO Box 1827
ORANGE NSW 2800

Dear Mr Basha

**PHYSICAL COMMENCEMENT OF WORKS - PRIVATE HOSPITAL DEVELOPMENT
(MAJOR PROJECTS MP07_0072; MP08_0230 & MP08_0233) AT LOT 1 DP 549856 1517
FOREST ROAD.**

Reference is made to your letter dated 7 November 2013 in which you request advice relating to the physical commencement of the Private Hospital development (Major Projects MP07_0072; MP08_0230 & MP08_0233) at Lot 1 DP 549856 1517 Forest Road.

It is our opinion that by carrying out the extensive demolition works on the site, as detailed within your letter, the development has attained physical commencement.

I trust this clarifies the matter for you. I wish you well with the continued development of this site and look forward to discussing the development further with you when it comes to the time of appointing the Principal Certifying Authority for the construction works.

Yours faithfully



Mark Hodges
MANAGER BUILDING AND ENVIRONMENT