TRAFFIC & PARKING ASSESSMENT

ALTERATIONS & ADDITIONS TO EXISTING MEDICAL CENTRE
LOWER HUNTER MEDICAL CENTRE

LOTS 1 & 2 SECTION 2 IN DP 21143
269 – 271 NEW ENGLAND HIGHWAY, RUTHERFORD

PREPARED FOR: FLUIDITY SUPER FUND PTY LTD

SEPTEMBER 2022

REF: 22/081

TRAFFIC & PARKING ASSESSMENT REPORT
FLUIDITY SUPER FUND PTY LTD

ALTERATIONS AND ADDITIONS TO LOWER HUNTER MEDICAL CENTRE
LOTS 1 & 2, SECTION 2 IN DP 21143
269 – 271 NEW ENGLAND HIGHWAY, RUTHERFORD.

Intersect Traffic Pty Ltd (ABN: 43 112 606 952)

Address:
16 Mount Harris Drive Maitland Vale
PO Box 268
East Maitland NSW 2323

Contact:
(Mob) 0423 324 188
Email: jeff@intersecttraffic.com.au

QUALITY ASSURANCE

This document has been prepared, checked and released in accordance with the Quality Control Standards established by Intersect Traffic Pty Ltd.

Issue	Date	Description	By
A	03/08/22	Draft	JG
B	04/08/22	Edit	JG
C	20/09/22	Final Proof / Amended Plans	JG
D	20/09/22	Approved	JG

This document has been authorised by 

Date: - 20th September 2022

Disclaimer

This report has been prepared based on the information supplied by the client and investigation undertaken by Intersect Traffic Pty Ltd & other consultants. Recommendations are based on Intersect Traffic's professional judgement only and whilst every effort has been taken to provide accurate advice, Council and any other regulatory authorities may not concur with the recommendations expressed within this report. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Intersect Traffic Pty Ltd. Intersect Traffic makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or the information.

Confidentiality Statement

All information, concepts, ideas, strategies, commercial data and all other information whatsoever contained within this document as well as any and all ideas and concepts described during the presentation are provided on a commercial in confidence basis and remain the intellectual property and Copyright of Intersect Traffic Pty Ltd and affiliated entities.

CONTENTS

ATTACHMENTS

PHOTOGRAPHS

FIGURES

TABLES

1. INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) has been engaged by Skelcon Pty Ltd on behalf of Fluidity Super Fund Pty Ltd to undertake a traffic and parking assessment for alterations and additions to an existing medical centre known as the Lower Hunter Medical Centre on Lots 1 & 2 Section 2 in DP 21143, 269 – 271 New England Highway, Rutherford. The site currently contains a converted dwelling operating as the Lower Hunter Medical Centre at 271 New England Highway and an existing residence on 269 New England Highway. The development proposes alterations to the two existing buildings on the site as well as connection of the two buildings and the extension / reconfiguring of the existing car parking area servicing the existing medical centre. The concept plans for the development are provided in ***Attachment A.***

This traffic and parking assessment is required to support a development application to Maitland City Council seeking approval for the proposed development. The purpose of this document is to undertake an assessment of the likely traffic and parking impacts of the proposal on the local and state road network and associated roadside infrastructure. It will allow Maitland City Council (Council) to assess the merits of the application from a traffic impact perspective.

This report presents the findings of the traffic and parking assessment and includes the following:

- An outline of the existing situation in the vicinity of the site.
- An assessment of the traffic impacts of the proposed development including the predicted traffic generation and its impact on existing road and intersection capacities.
- Reviews the on-site parking provided within the proposed development and assesses it against Council and Australian Standards requirements.
- Presentation of conclusions and recommendations.

2. DEVELOPMENT PROPOSAL

2.1 Site Description

The site is located on the south-western side of the New England Highway, Rutherford immediately south of Arthur Street. It is adjacent to the Rutherford Shopping Precinct which is centred approximately 250 metres south of the shopping precinct and approximately 3.4 km's north-west of the Maitland CBD. The site is shown in the context of the surrounding areas in ***Figure 1*** below.

Figure 1 - Site Location

The site has the following property descriptors:

- Lots 1 & 2, Section 2 in DP 21143,
- Street address of 269 – 271 New England Highway, Rutherford,
- Total development site area of approximately 1,189 m^2, and
- Land zoning of R1 – General Residential pursuant to the Maitland LEP (MLEP 2011).

The site currently has an existing single width residential vehicular access off the New England Highway approximately 20 metres south of Arthur Street servicing the residential dwelling at 269 New England Highway and two single width concrete residential accesses off Arthur Street 26 metres and 36 metres west of the New England Highway (10 metre separation). ***Photograph 1*** below shows the site from the New England Highway including the existing vehicular access crossing off the Highway (269 New England Highway) and ***Photograph 2*** below show the site from Arthur Street including the existing vehicular access crossings to the site (271 New England Highway).

Photograph 1 – Existing site and vehicular access New England Highway

Photograph 2 – Existing site and vehicular access – Arthur Street

2.2 Development Proposal

The proposed development involves alterations and additions to an existing medical centre (Lower Hunter Medical Centre) at 271 New England Highway and an adjoining residential dwelling (269 New England Highway) including connection of the two buildings. A change of use of the residential dwelling to a medical centre will result in an expanded Lower Hunter medical Centre catering for more doctors and patients with expanded clinics and service.

- Alterations to the existing medical centre to increase the size of the waiting room and reception area as well as improved staff facilities and a consult room. This will include removal of the existing 2 car garage.
- Alterations and additions to the existing residential dwelling including provision of a first floor area and connection to the adjoining existing medical centre building to provide an additional 4 consult rooms, entry foyer, lift, stairs, training room, office space and amenities.
- Extended car parking area to provide a total of 15 on-site car parks including 3 stacked staff parking parks.
- Modification of the existing Arthur Street access to the site providing a 6 metre wide combined entry / exit access to the site and removal of the existing residential access off the New England Highway.
- Property drainage to Maitland City Council's requirements; and
- Landscaping.

The development concept plans are shown in ***Attachment A***.

It is understood the expansion of the Lower Hunter Medical Centre will increase staff on the site to a maximum of 4 practitioners and 8 other staff on-site from the current maximum of 2 practitioners and 5 staff on the site.

2.3 Existing Road Network

2.3.1 - New England Highway

The New England Highway near the site is an arterial road and is known as Highway HW 9 being a classified state highway. It is therefore under the care and control of TfNSW. However with the construction and operation of the nearby Hunter Expressway this section of New England Road now operates principally as a major collector road in the Maitland / Rutherford area directing local traffic to retail, industrial, medical and educational destinations in the area.

Near the site the New England Highway is a sealed four lane two way divided urban road with generally two travel lanes and a breakdown / parking lane in each direction except where additional lanes are provided for widening at intersections. Travel lanes vary between 3.2 to 3.5 metres in width with parking / breakdown lanes approximately 2.7 metres in width. The road is centre line and edge line marked and is signposted with a 60 km/h speed limit near the site.

Photograph 3 below shows the standard of the New England Highway near the site. At the time of inspection, the New England Highway was observed to be in good condition.

2.3.2 - Arthur Street

Arthur Street near the site is a sealed urban local road with its primary function to provide vehicular access to properties along its length. It is therefore under the care and control of Maitland City Council. It has kerb and gutter and with a carriageway width of approximately 9 metres allows a single travel lane in each direction and some on-street car parking.

Arthur Street was observed to be in fair condition as shown in ***Photograph 4*** below and a 50 km/h speed zoning applies to Arthur Street. The New England Highway / Arthur Street intersection is a signalised four way intersection with pedestrian crossing phases on both Arthur Street legs and the southern Highway leg as shown in ***Photograph 5*** below.

Photograph 3 – New England Highway near the site

Photograph 4 – Arthur Street near the site

Photograph 5 – New England Highway / Arthur Street signalised intersection

2.4 Existing Traffic

Existing traffic data for the intersection has been sourced from Northern Transport Planning and Engineering who undertook counts at the intersection in March 2017. This is the most recent data available and has been used in this assessment. The count identified the peak traffic periods as 8 am – 9 am and 4.30 pm – 5.30 pm which will coincide with likely peak traffic generation periods for the development. The count tally sheets are shown in ***Attachment B*** while the peak two-way mid-block traffic volumes used in this assessment based on these counts are shown below in ***Table 1***. Note current (2022) and future traffic (2022) have been estimated using a background traffic growth rate of 1.5 % per annum as recommended for use in the Lower Hunter area by TfNSW.

Table 1 – Existing and Future Peak Hour Traffic Volumes

Road	Section	2022		2032 @ 1.5%	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
New England Highway	south of Arthur Street	2563	2950	2974	3423
New England Highway	north of Arthur Street	2188	2395	2539	2779
Arthur Street	east of New England Highway	607	933	704	1083
Arthur Street	west of New England Highway	76	107	89	124

2.5 Traffic Generation

General guidelines on traffic generation are provided within TfNSW's *RTA's Guide to Traffic Generating Developments.* The applicable rate for the proposed development, taken from the Issue 2.2, October 2002 of the *Guide to Traffic Generating Developments*, are:

Extended Hours Medical Centre

Whilst the development is not an extended hours medical centre, rather being a specialists medical centre traffic generation from the site would be expected to be lower than that for an extended hours medical centre. However, adoption of the extended hours medical centre rates ensures a robust, worst case traffic impact assessment is carried out. The relevant AM and PM peak traffic generation rates for an extended hours medical centre are as follows;

AM peak = 10.4 vehicles/hr/100 m^2 gross floor area; and
PM peak = 8.8 vehicles/hr/100 m^2 gross floor area

Therefore noting the additional medical centre GFA is approximately 350 m^2 GFA and the existing dwelling on the site which is to have a change of use would have generated approximately 1 vtph in both the AM and PM peaks the additional traffic generation from the proposed development can be calculated as follows (rounded up);

AM peak = 350/100 x 10.4 - 1 = 36 vtph; and
PM peak = 350/100 x 8.8 - 1 = 30 vtph.

This traffic associated with the development needs to be distributed through the road network and the likely traffic distribution assumptions adopted for this assessment are:

- 50 % of traffic will enter the site and 50 % of traffic will exit the site in a peak hour,
- The traffic entering / exiting the site will have origins / destinations:
  - New England Highway north – 30 %.
  - New England Highway south – 40 %.
  - Arthur Street east – 20 %; and
  - Arthur Street west – 10 %.

The resulting trip distribution adopted in this assessment is presented diagrammatically in ***Figure 2*** below.

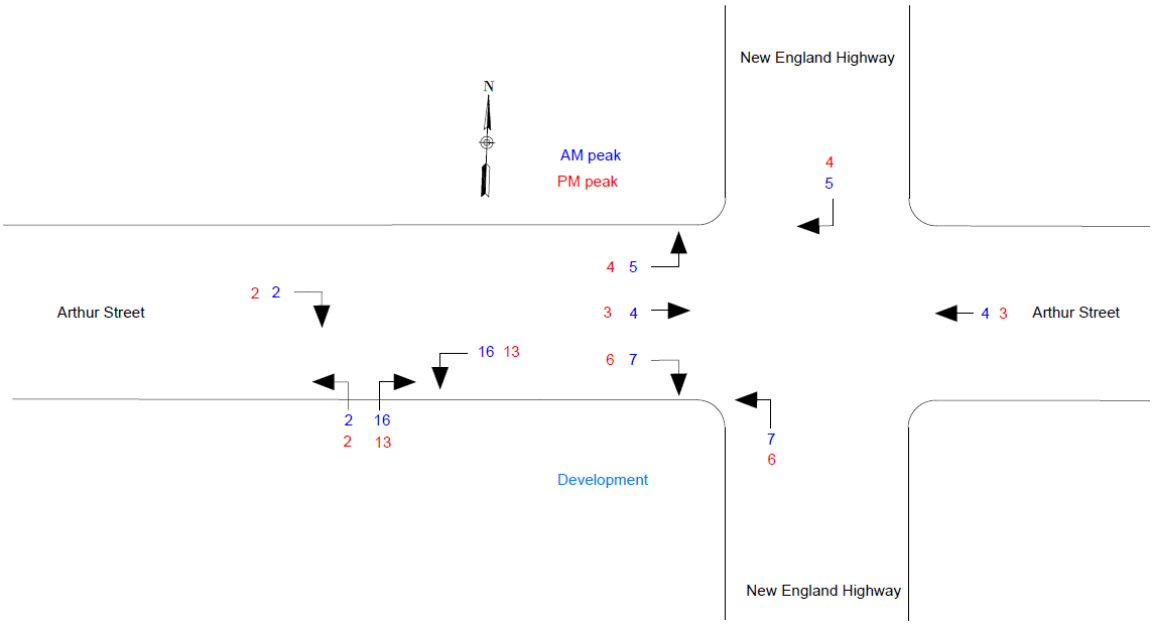


Figure 2 – Development Trip Distributions

2.6 Traffic Impacts and Considerations

2.6.1 Road Network Capacity

The capacity of the road network is generally determined by the capacity of intersections. However, for urban roads *Table 4.3* of the *RTA's Guide to Traffic Generating Developments*, reproduced below, provides some guidance on mid-block capacities for a level of service (LoS) C.

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: - RTA's Guide to Traffic Generating Developments (2002).

Noting that the New England Highway is a four lane divided road with little on-street car parking then the one way capacity is considered to be 1,800 vtph and the two way mid-block capacity is 3,600 vtph . Therefore, the adopted two-way mid-block capacity for the New England Highway is 3,600 vtph.

Arthur Street east of the New England Highway is a two lane two way road with no on-street car parking therefore has a one way capacity of 900 vtph and a two-way mid-block capacity of 1,800 vtph. Arthur Street west of the New England Highway is a two lane two way road with occasional parked cars therefore has a one way capacity of 600 vtph and a two way mid-block capacity of 1,200 vtph. These capacities for Arthur Street have been adopted in this assessment.

As existing traffic volumes on the New England Highway and Arthur Street shown in ***Section 2.4***, are below the local road network two-way mid-block capacity determined above it is reasonable to conclude the local and state road network currently has spare capacity to cater for additional development in the area. When distributing the development traffic, as shown in ***Figure 2***, the resulting maximum additional traffic on the New England Highway and Arthur Street is not sufficient for the local and state road network to reach its two-way mid-block capacities as shown in ***Table 2*** below.

Table 2 – Capacity and two-way traffic mid-block peak hour traffic volumes post-development

Road	Section	Capacity	2022 + development		2032 + development		Development traffic	
		vtph	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	AM	PM
New England Highway	south of Arthur Street	3,600	2577	2962	2988	3435	14	12
New England Highway	north of Arthur Street	3,600	2198	2403	2549	2787	10	8
Arthur Street	east of New England Highway	1,800	615	939	712	1089	8	6
Arthur Street	west of New England Highway	1,200	80	111	93	128	4	4

Therefore, it is reasonable to conclude that the development will not adversely impact on the levels of service experienced on the state and local road network near the site.

2.6.2 Intersection Capacity

The major intersection likely to be impacted by this development is the New England Highway / Arthur Street signalised cross intersection. As the traffic gets distributed further through the road network the impact of the development becomes significantly less and they would be expected to easily cater for any additional traffic generated by the development.

To analyse the impact of the additional traffic from the development on the New England Highway / Arthur Street intersection it has been modelled using the Sidra intersection modelling software. This micro-analytical program identifies "Level of Service" (LoS) criteria for intersection analysis which range from LoS A to LoS F. Assessment is then based on the level of service requirements of the RMS shown below.

Table 4.2
Level of service criteria for intersections

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

Source: - RTA's Guide to Traffic Generating Developments (2002)

The results of the modelling are summarised below in ***Table 3*** for the 'all vehicles' case and the full movement summary tables generated by the models are provided in ***Attachment C***.

In undertaking this assessment, the following assumptions were made:

- The intersection layout is as constructed,
- 2022 existing traffic volumes is as per traffic counts in ***Attachment B*** with a 1.5 % per annum background traffic growth rate applied***.***
- 2032 traffic volumes were determined by applying a background traffic growth factor of 1.5 % p.a. on the road network.
- The model phasing was set to determine the Optimum Cycle Time to reduce overall delay at the intersection.
- The post development traffic distributions are as shown above in the Development Trip Distribution Diagram, ***Figure 2*** of ***Section 2.5***.

Table 3 – New England Highway / Arthur Street signalised intersection – Sidra results summary

Modelled Peak	Cycle Time (s)	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2022 AM	75	0.793	26.1	B	18.7
2022 PM	120	0.953	53.4	D	47.7
2022 AM + development	75	0.793	26.3	B	18.9
2022 PM + development	120	0.953	53.7	D	48.1
2032 AM no development	80	0.9	38.6	C	31.5
2032 PM no development	150	1.136	155.8	F	111.2
2032 AM + development	80	0.904	39.1	C	31.6
2032 PM + development	150	1.137	157.0	F	112.1

The modelling for the New England Highway / Arthur Street signalised cross intersection shows the intersection will continue operate satisfactorily post development, in accordance with TfNSW criteria, with the increase in average delays and back of queue being minimal (less than 0.5 seconds and 0.4 vehicles, respectively). The modelling also shows that with background traffic growth only through to 2032, while the AM peak will continue to operate satisfactorily the PM peak will fail before 2032. This is an issue for the road authority as this will occur with just background traffic growth. The impact of the development on the operation of the intersection in 2032 however remains negligible with average delay and back of queue length increases being less than 1.2 seconds and 0.9 vehicles, respectively. Most importantly the development does not result in any deterioration in the overall LoS occurring at the intersection. Therefore, it is reasonable to conclude that the proposed development will not adversely impact on the efficiency and effectiveness of the local road network.

2.6.3 Site Access

To assess the performance of the Arthur Street access to the site, the table below, taken from Austroads *Guide to Traffic Management – Part 6 – Intersections, Interchanges & Crossings (2009)*, for which the guide states a detailed analysis to demonstrate adequate capacity is available is unlikely to be necessary as uninterrupted flow conditions would prevail, is utilised.

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).
2. Major road flow includes all major road traffic with priority over minor road traffic.
3. Minor road design volumes include through and turning volumes.

Source: - Austroads Guide to Traffic Management – Part 6 – Intersections, Interchanges & Crossings (2009)

It is noted that the 2032 peak hour mid-block two-way traffic, including development traffic, is likely to be a maximum of less than 128 vtph on Arthur Street and 36 vtph on the access. The traffic volumes predicted for the intersection are well below the lower volume amounts in the table above and would result in uninterrupted flow conditions. Therefore, it can be concluded that the modified Arthur Street access to the site will operate with uninterrupted flow conditions and an urban BAR / BAL treatment would be sufficient at the access (normal property access with no dedicated turning lanes).

The site access is proposed to service a car park with lower than 25 spaces. Under Table 3.1 of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking* a car park with 0 - 25 spaces accessed via a local road providing short term parking (Class 3A) is required to have a Category 1 access facility. A Category 1 access facility is a combined entry / exit driveway between 3 metres and 5.5 metres wide. The proposal is to modify the existing separate entry and exit access to a combined entry / exit access 6 metres wide. Therefore the proposal is compliant with the Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking* requirement as this exceeds the requirements of a Category 1 access facility.

Under Figure 3.2 of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking the sight distance* requirements for the access needs to be a minimum of 45 metres for a 50 km/h speed environment. The available sight distance at the proposed access to the car park to the site exceed this requirement therefore the access is also compliant with the Standard in this regard.

Therefore it is considered that the proposed access arrangements for the development car park are considered satisfactory and compliant with Council and Australian Standard requirements.

2.6.4 On-site parking and servicing

The Development Control Plan (2011) sets out the requirements for on-site parking to be provided for new developments in Section C11. However there are no rates contained in the DCP for medical centres. Therefore the default parking provision requirement is the RTA's Guide to Traffic Generating Developments which recommends a minimum parking rate of 1 space per 25 m^2 GFA for on-site car parking.

It is noted the existing medical centre provides a total of 5 on-site car spaces including a double garage. The additional medical centre floor area is approximately 350 m^2 GFA, however approximately 100 m^2 of this is a training room for staff which in effect is ancillary to the medical centre and will not generate additional car parking. Therefore the additional on-site car parking requirement for the development can be calculated as follows;

Additional on-site car parking = 250 / 25 = 10 spaces.

The total car parking requirement for the site therefore is as follows;

Required on-site car parking = existing parking + additional parking
= 5 space + 10 spaces
= 15 spaces.

The plans currently show provision of 15 car spaces, including 3 stacked staff spaces along the southern side of the building. Therefore the on-site car parking provision is considered compliant with the *RTA's Guide to Traffic Generating Developments*. (RTA Guide.

The internal car park designs should comply with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities.* Having reviewed the plans (scaling), it is considered the proposed car parking layout complies with the relevant Australian Standard for car spaces of a minimum of 5.4 metre long by 2.6 metre wide spaces with blind aisle extensions of 1.0 metre and aisle widths 5.8 metres for a User Class 3 (short term medical centre parking) carpark, however this should be confirmed at Construction Certificate stage.

The development is currently serviced via kerbside waste collection and generally light vehicles using available car parking. This is acceptable as servicing is generally a maximum of 1 per day or 2 or 3 per week. Overall, it is concluded that the proposed on-site car parking and servicing facilities can comply with Maitland City Council's DCP (2011) and Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities* as well as the *RTA's Guide to Traffic Generating Developments (2002)*.

2.6.5 Alternative Transport Modes

Currently Hunter Valley Buses run public transport services into the Rutherford CBD from all areas around Maitland as shown in the bus network map below (***Figure 4***). The nearest bus stops are located on the new England Highway along the site frontage Street (see ***Photograph 6*** below) and on Hillview Street approximately 100 metres north of the site. These are within convenient walking distance of the site ensuring the site is well serviced by public transport (bus) services for use by staff and patients. No additional public transport services or facilities are considered warranted resulting from this development.

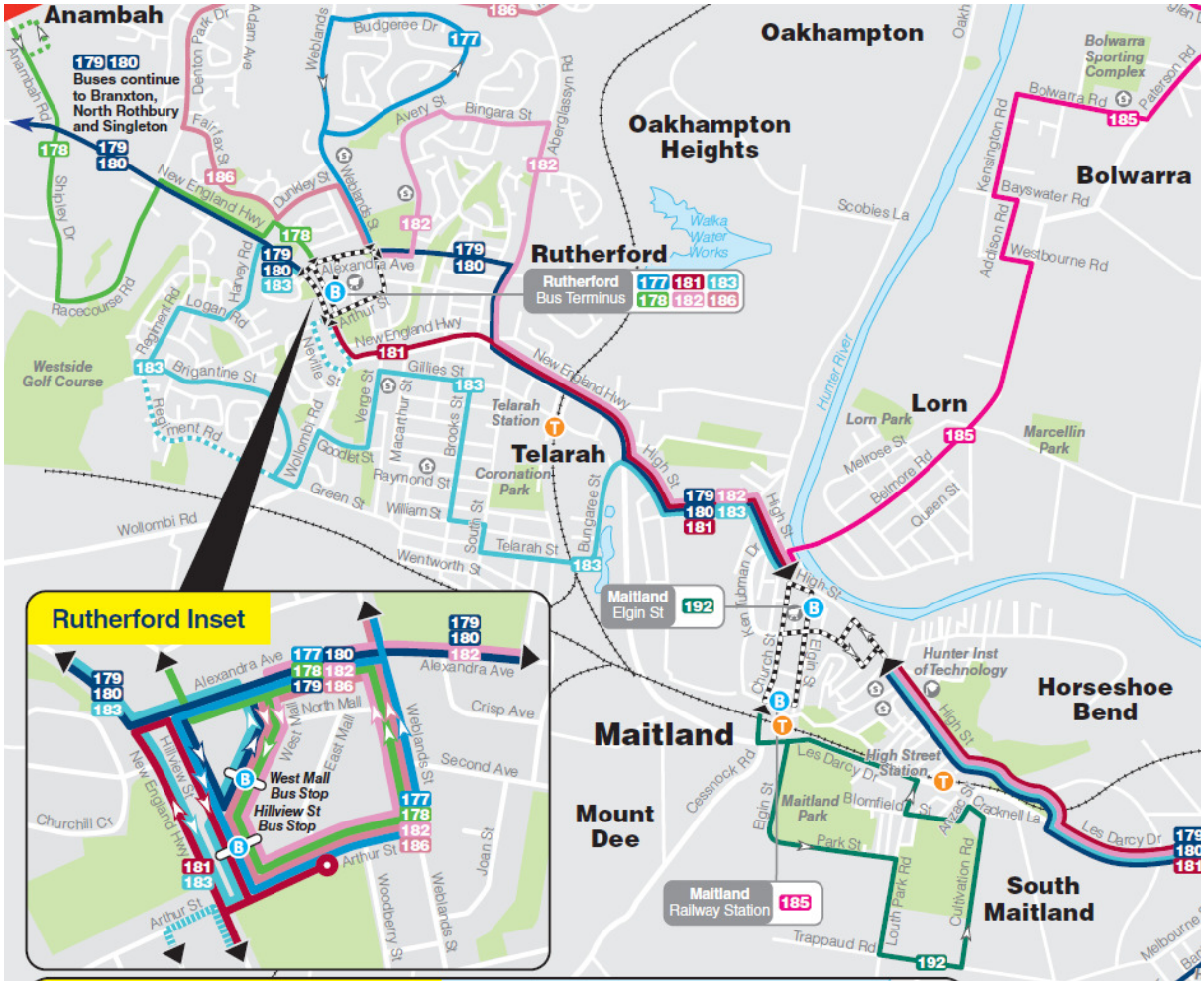


Figure 3 – Hunter Valley Buses routes – Rutherford

Pedestrian and cycle facilities around the site are also considered excellent with suitable concrete and or asphalt / paver footpaths provided within the New England Highway and Rutherford CBD linking to nearby bus stops and the CBD area. A shared pathway for pedestrians and cyclists runs along the eastern side of the New England Highway near the site. Pedestrian crossing facilities / phases are provided within the signalised intersection of the New England Highway and Arthur Street as well as marked foot crossings within the Rutherford CBD area. ***Photographs 6 & 7*** below show pedestrian and bicycle infrastructure around the site. Overall it is considered the development is unlikely to generate any significant additional pedestrian or bicycle traffic therefore no nexus exists for the provision of additional infrastructure. The existing pedestrian facilities around the site are also considered suitable for the level of demand generated by the development.

Photograph 6 – Bus Stop and Footpaths – New England Highway – site frontage

Photograph 7 – Pedestrian crossing phases New England Highway at Arthur Street

3. CONCLUSIONS

This traffic and parking assessment for alterations and additions to an existing medical centre known as the Lower Hunter Medical Centre on Lots 1 & 2 Section 2 in DP 21143, 269 – 271 New England Highway, Rutherford has concluded:

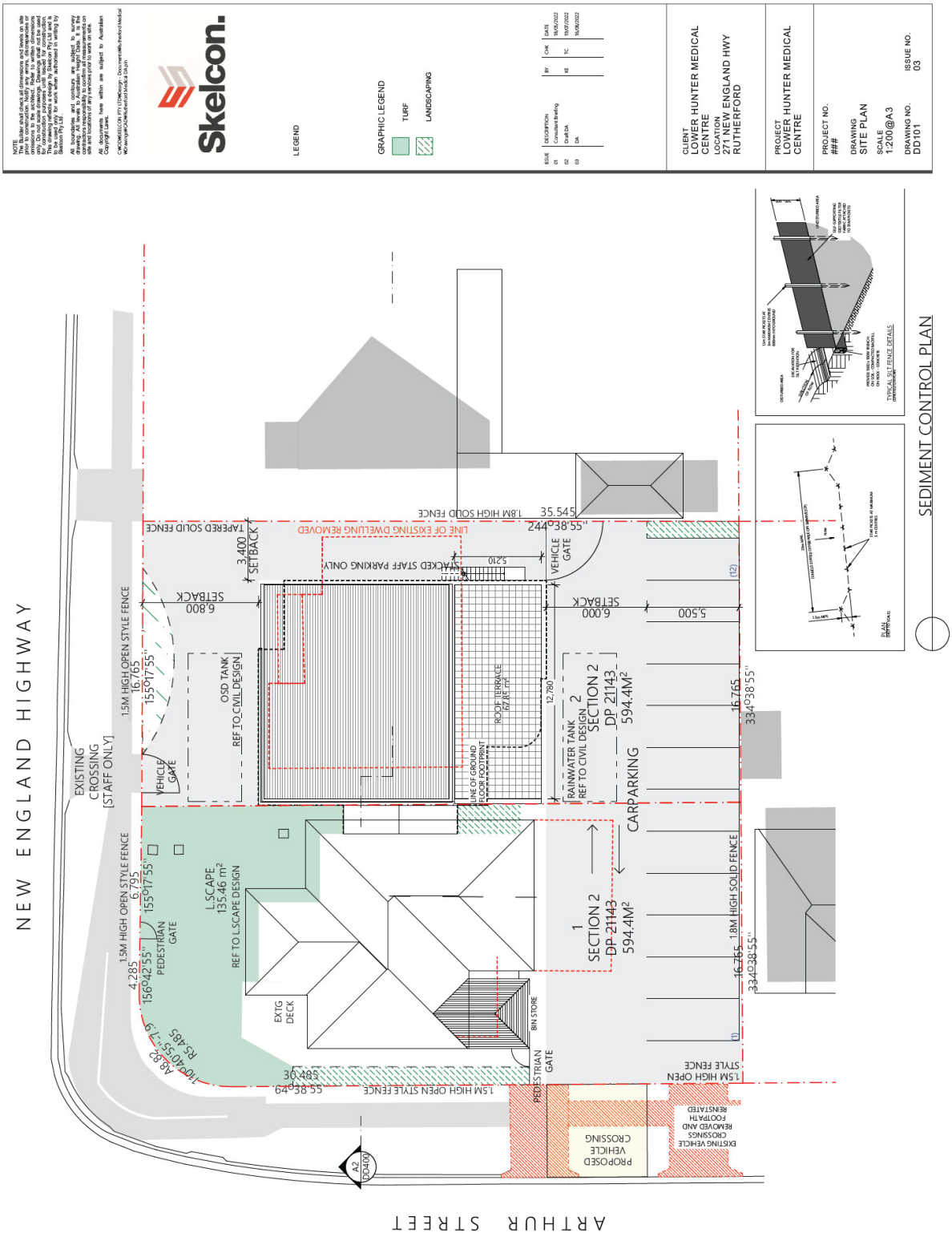
- The local and state road network have sufficient available two way mid-block capacity to cater for the development without the need to further upgrade the local road network.
- The development is likely to generate an additional approximately 36 vtph during the AM peak traffic period and 30 vtph during the PM peak traffic period.
- The additional traffic on the local and state road network will not adversely impact on the two-way mid-block efficiency of the local and state road network.
- Sidra Intersection modelling has shown the proposed development will not adversely impact on the operation of the New England Highway / Arthur Street signalised cross intersection. Therefore, the proposal will not adversely impact on the efficiency and effectiveness of the local road network.
- The proposed modified vehicular access (combined entry and exit) driveway off Arthur Street for the development is compliant with the requirements of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities* in regard to width and sight lines. The access will continue to operate with uninterrupted flow conditions and will be suitable and safe for use by all vehicles accessing the site.
- The proposed on-site car parking supply and servicing facilities are deemed to comply with Maitland City Council's DCP (2010), Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities* and the *RTA's Guide to Traffic Generating Developments (2002)*.
- The development will not generate any significant additional pedestrian and bicycle traffic therefore no nexus exists for the provision of additional pedestrian and bicycle facilities. The existing pedestrian and bicycle travel infrastructure around the site is considered suitable to cater for any minor increase in pedestrian and bicycle traffic resulting from the development.
- Hunter Valley buses already provides an excellent public transport (bus) service around the site and the additional public transport demand resulting from the development would not be considered sufficient to require additional services or facilities. Therefore no nexus exist for the provision of additional services and infrastructure resulting from the development as the existing services and infrastructure is suitable for the development.

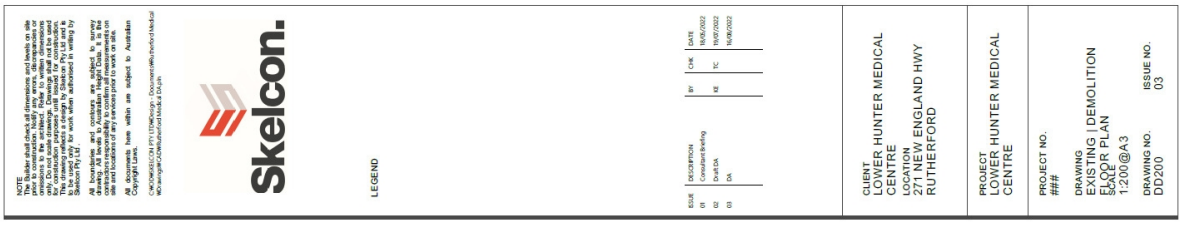
4. RECOMMENDATION

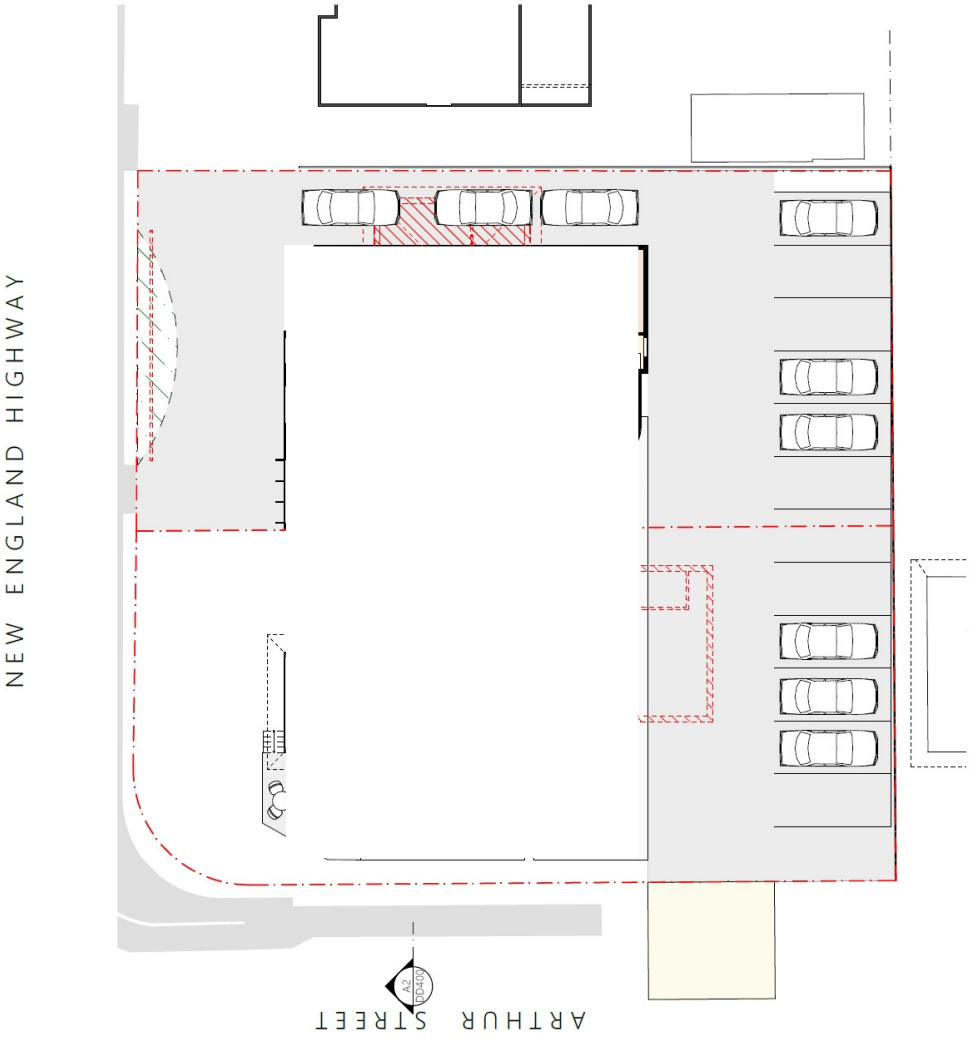
Having carried out this traffic and parking assessment for the alterations and additions to an existing medical centre known as the Lower Hunter Medical Centre on Lots 1 & 2 Section 2 in DP 21143, 269 – 271 New England Highway, Rutherford it is recommended that the proposal can be supported as it is considered that it would not adversely impact on the local and state road network and could meet all the requirements of Maitland City Council, TfNSW and Australian Standards.

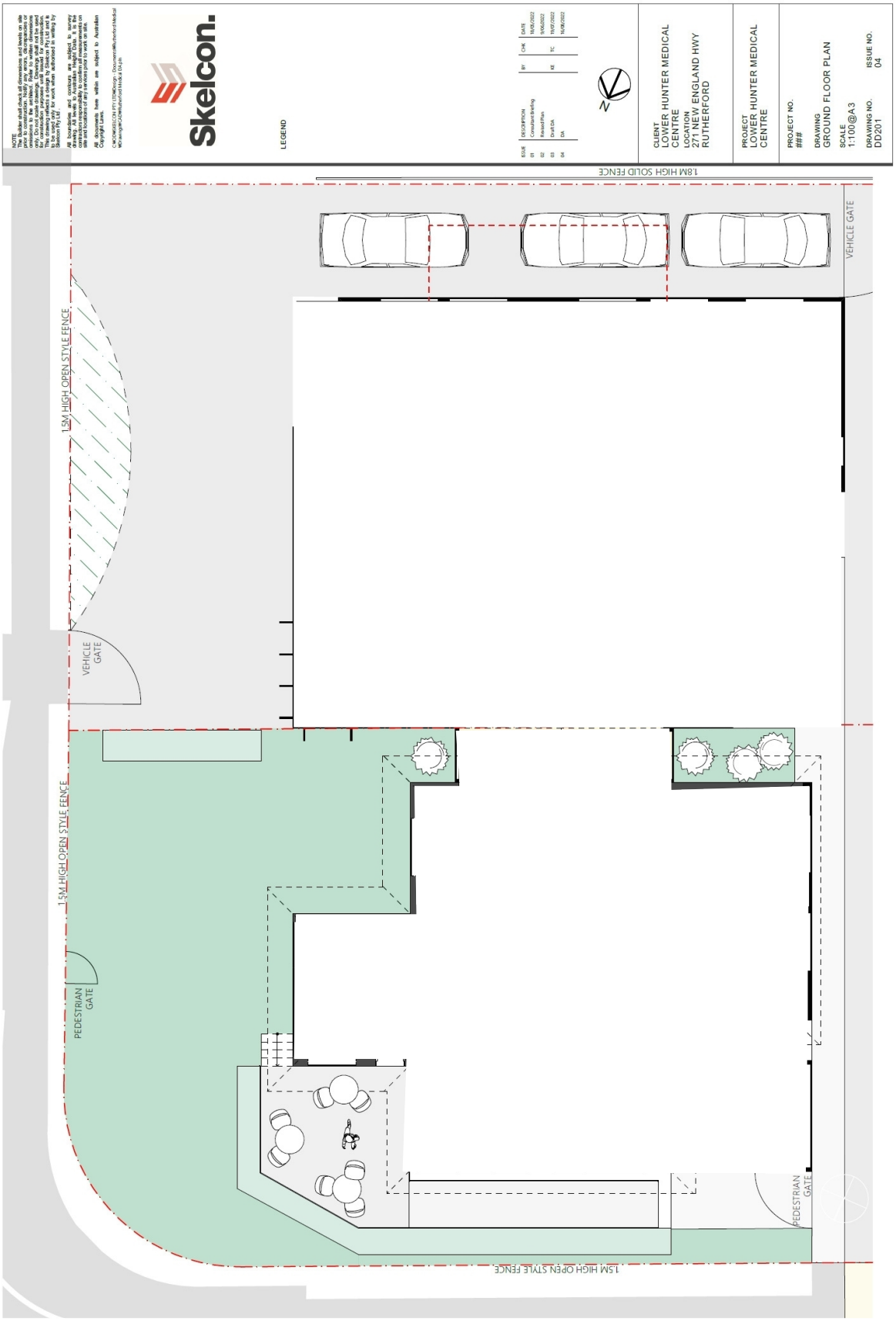
J.R. Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

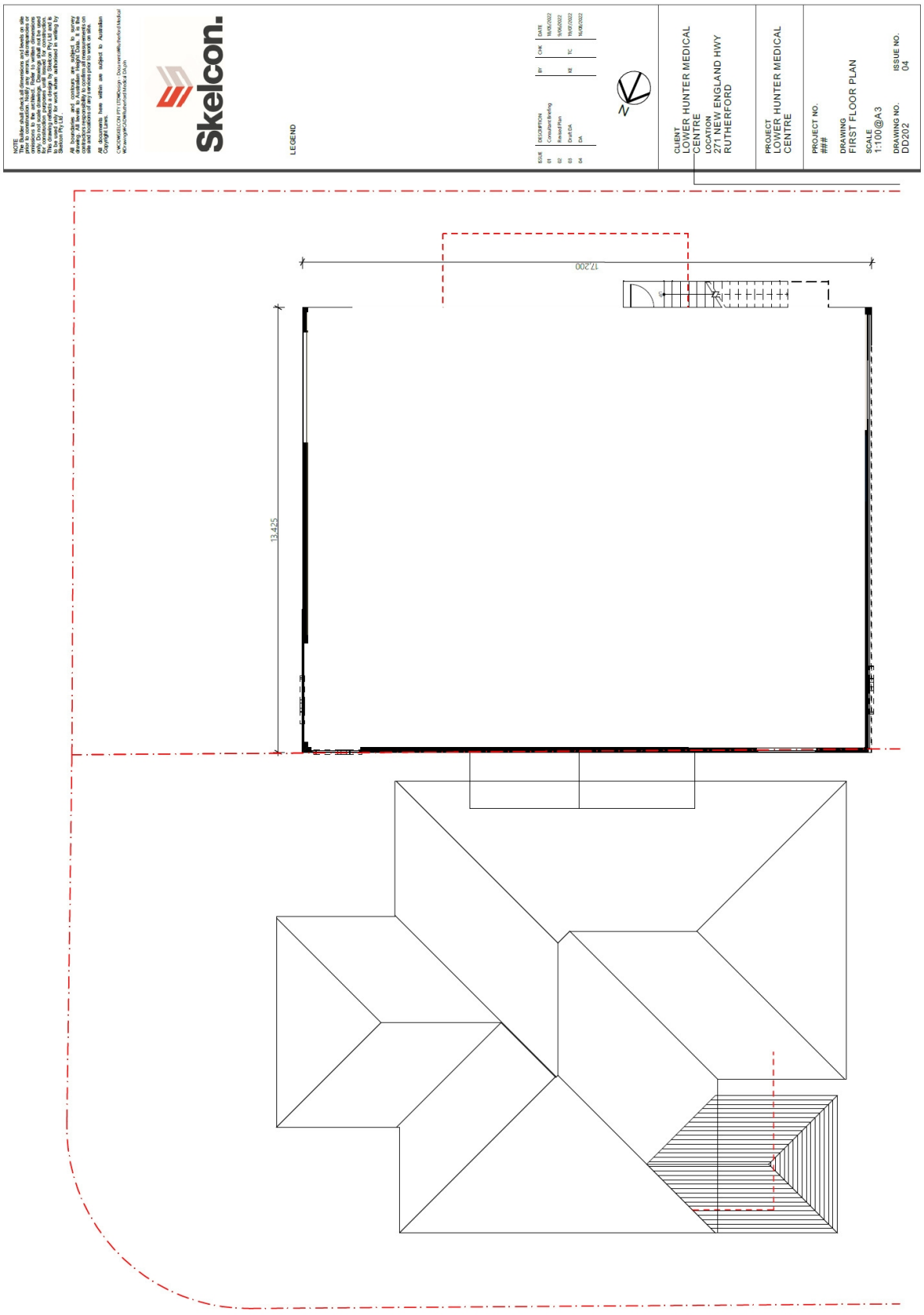
ATTACHMENT A
DEVELOPMENT PLANS

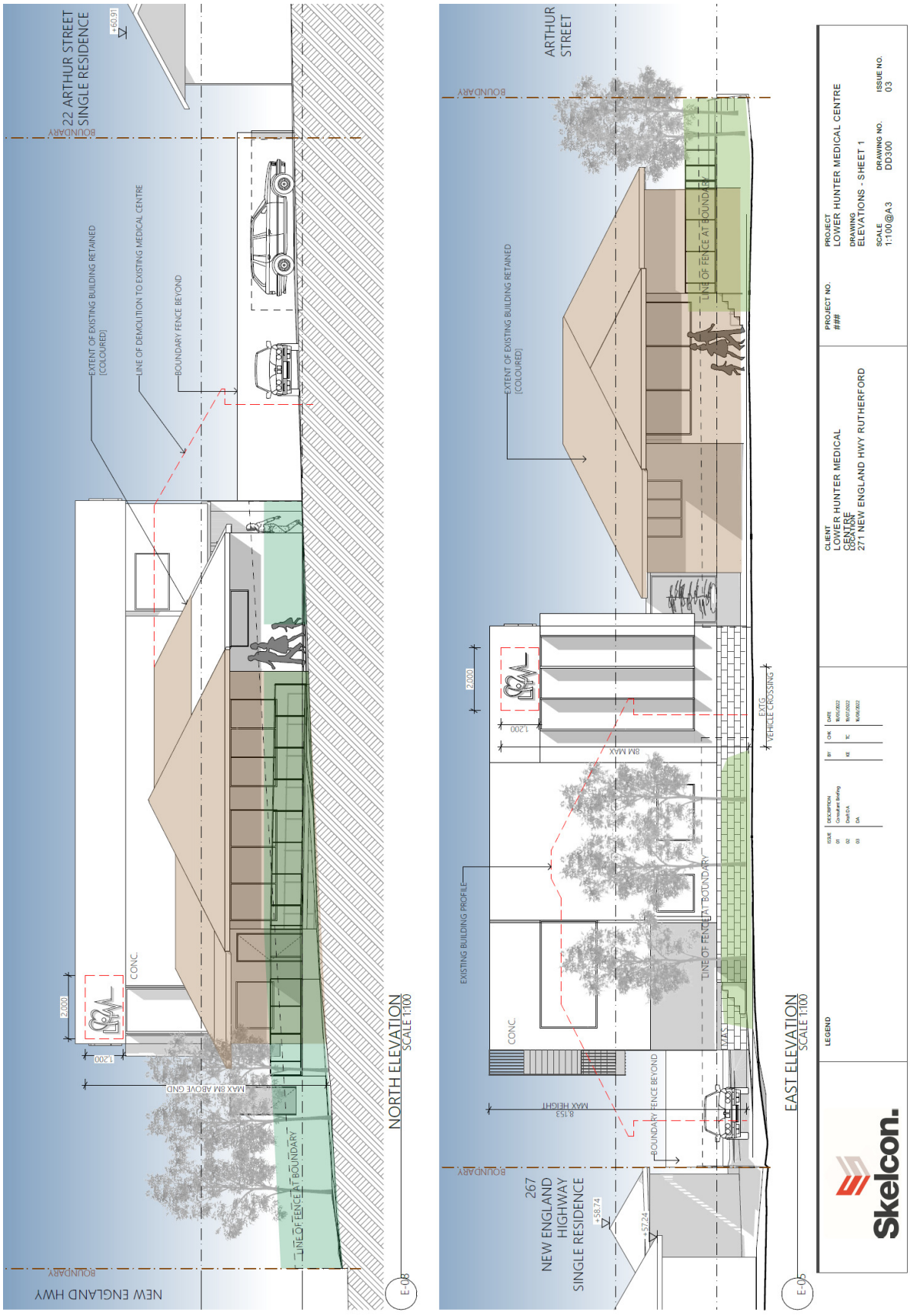

Skelcon.
LEGEND
GRAPHIC LEGEND
TURF
LANDSCAPING
CLIENT
LOWER HUNTER MEDICAL CENTRE
LOCATION
271 NEW ENGLAND HWY
RUTHERFORD
PROJECT
LOWER HUNTER MEDICAL CENTRE
PROJECT NO.
###
DRAWING
SITE PLAN
SCALE
1:200@A3
DRAWING NO.
DD101
ISSUE NO.
03
NEW ENGLAND HIGHWAY
ARTHUR STREET
EXISTING CROSSING [STAFF ONLY]
1.5M HIGH OPEN STYLE FENCE
OSD TANK
REF TO CIVIL DESIGN
VEHICLE GATE
SETBACK
6.800
3.400
TAPERED SOLID FENCE
LINE OF EXISTING DWELLING REMOVED
1.8M HIGH SOLID FENCE
35.545
244°38'55"
VEHICLE GATE
5.210
LOCKED STAFF PARKING ONLY
6.000
5.500
(12)
ROOF TERRACE
67.82 m²
12.780
LINE OF GROUND FLOOR BELOW
RAINWATER TANK
REF TO CIVIL DESIGN
SECTION 2
DP 21143
594.4M²
CARPARKING
16.765
334°38'55"
L.SCAPE
135.46 m²
REF TO L.SCAPE DESIGN
PEDESTRIAN GATE
4.285
156°42'55"
6.795
155°17'55"
EXTG DECK
BIN STORE
R5.485
A8.92
110°40'05"
1.5M HIGH OPEN STYLE FENCE
30.485
64°38'55"
PEDESTRIAN GATE
PROPOSED VEHICLE CROSSING
EXISTING VEHICLE CROSSING REMOVED AND FOOTPATH REINSTATED
(1)
A2
DD400
SEDIMENT CONTROL PLAN
TYPICAL SILT FENCE DETAILS

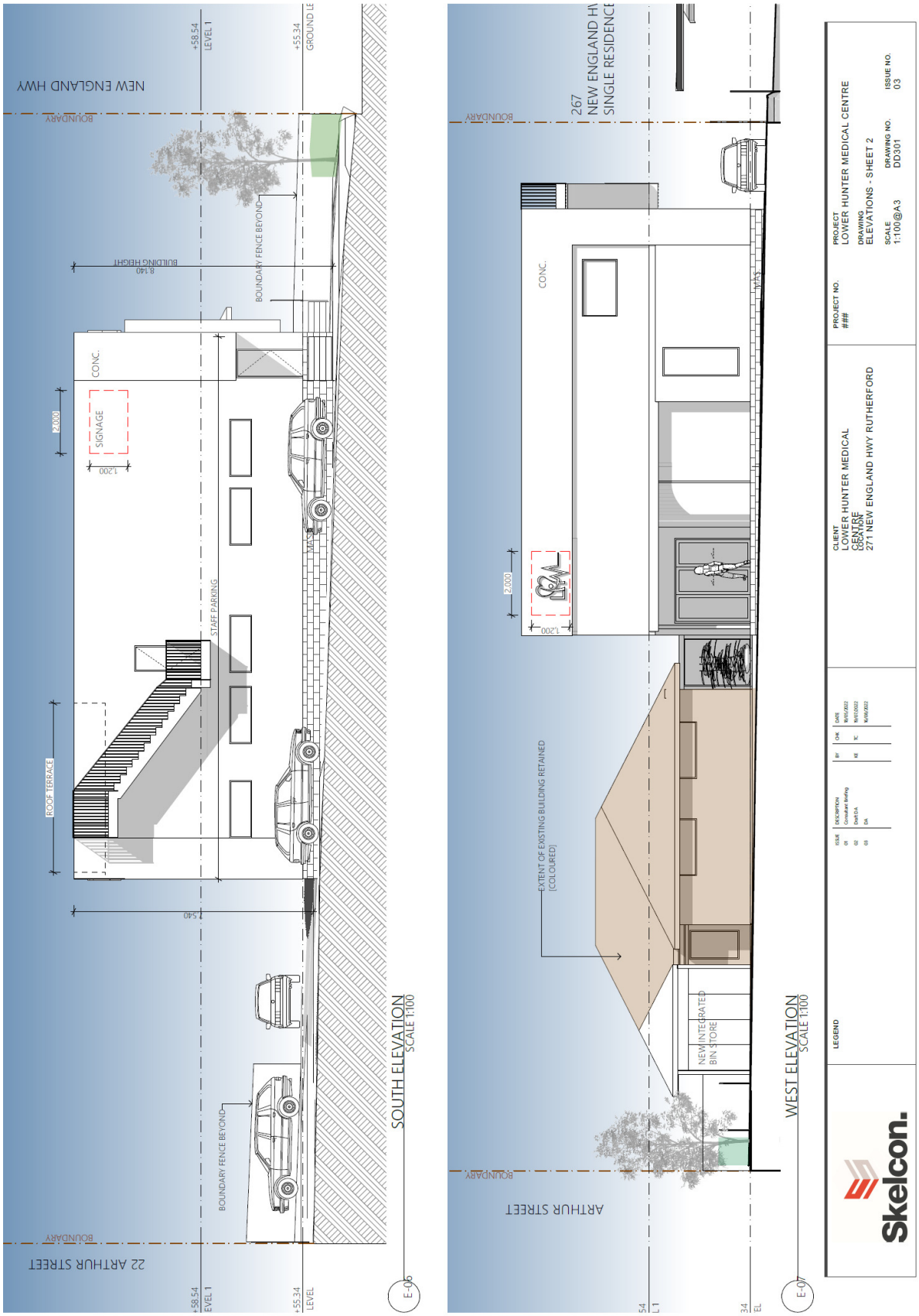

NOTE
Skelcon.
LEGEND
ISSUE
DESCRIPTION
BY
CHK
DATE
01
Consultant Briefing
AS
TC
14/06/2022
02
Draft DA
AS
TC
14/06/2022
03
DA
AS
TC
14/06/2022
CLIENT
LOWER HUNTER MEDICAL CENTRE
LOCATION
271 NEW ENGLAND HWY
RUTHERFORD
PROJECT
LOWER HUNTER MEDICAL CENTRE
PROJECT NO.
###
DRAWING
EXISTING | DEMOLITION FLOOR PLAN
SCALE
1:200@A3
DRAWING NO.
DD200
ISSUE NO.
03


NEW ENGLAND HIGHWAY
ARTHUR STREET


Skelcon.
LEGEND
CLIENT
LOWER HUNTER MEDICAL CENTRE
LOCATION
271 NEW ENGLAND HWY
RUTHERFORD
PROJECT
LOWER HUNTER MEDICAL CENTRE
PROJECT NO.
###
DRAWING
GROUND FLOOR PLAN
SCALE
1:100@A3
DRAWING NO.
DD201
ISSUE NO.
04
1.8M HIGH SOLID FENCE
VEHICLE GATE
1.5M HIGH OPEN STYLE FENCE
VEHICLE GATE
1.5M HIGH OPEN STYLE FENCE
PEDESTRIAN GATE
PEDESTRIAN GATE
1.5M HIGH OPEN STYLE FENCE


NOTE
Skelcon.
LEGEND
ISSUE
DESCRIPTION
DATE
CLIENT
LOWER HUNTER MEDICAL CENTRE
LOCATION
271 NEW ENGLAND HWY
RUTHERFORD
PROJECT
LOWER HUNTER MEDICAL CENTRE
PROJECT NO.
###
DRAWING
FIRST FLOOR PLAN
SCALE
1:100@A3
DRAWING NO.
DD202
ISSUE NO.
04
17,200
13,425

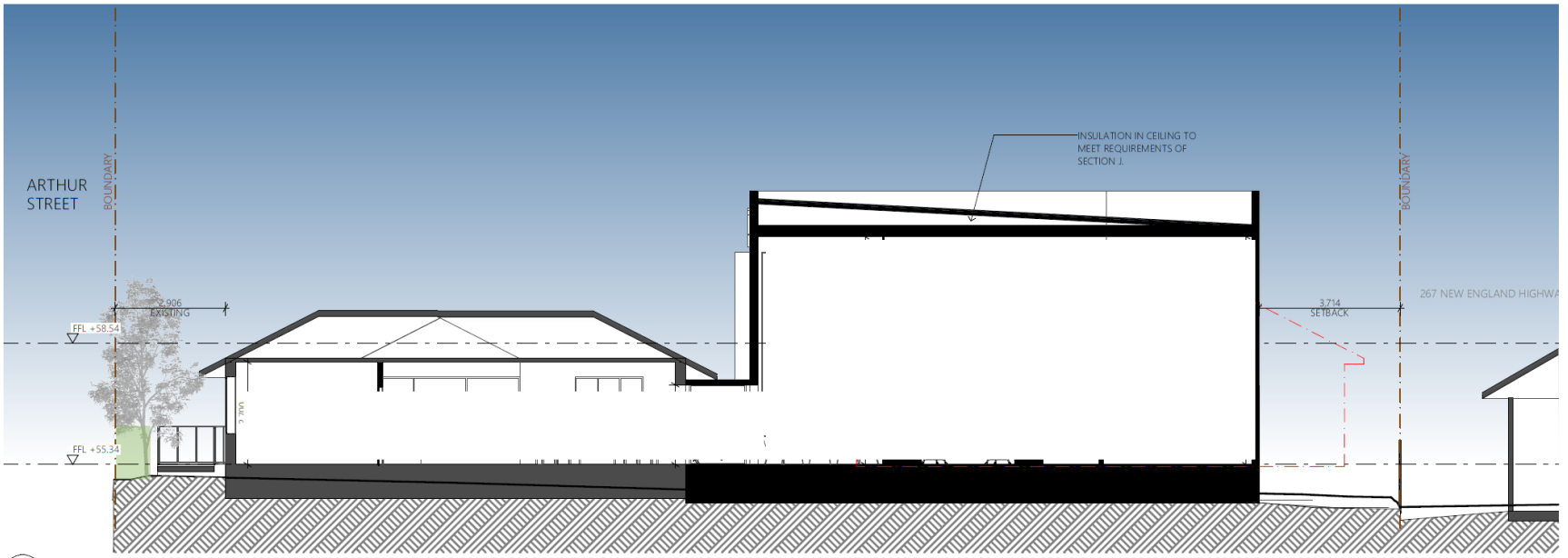

22 ARTHUR STREET SINGLE RESIDENCE
+60.91
BOUNDARY
EXTENT OF EXISTING BUILDING RETAINED [COLOURED]
LINE OF DEMOLITION TO EXISTING MEDICAL CENTRE
BOUNDARY FENCE BEYOND
2000
1200
CONC.
MAX 8M ABOVE GND
LINE OF FENCE AT BOUNDARY
NEW ENGLAND HWY
NORTH ELEVATION
SCALE 1:100
E-08
ARTHUR STREET
EXTENT OF EXISTING BUILDING RETAINED [COLOURED]
LINE OF FENCE AT BOUNDARY
2000
1200
8M MAX
EXTG VEHICLE CROSSING
EXISTING BUILDING PROFILE
CONC.
LINE OF FENCE AT BOUNDARY
MAX
MAX HEIGHT 8.153
BOUNDARY FENCE BEYOND
267 NEW ENGLAND HIGHWAY SINGLE RESIDENCE
+58.74
57.24
EAST ELEVATION
SCALE 1:100
E-09
LEGEND
ISSUE DESCRIPTION BY CHK DATE
01 Consultant Briefing KB TC 18/05/2022
02 Draft D.A. 19/07/2022
03 DA 16/08/2022
CLIENT
LOWER HUNTER MEDICAL CENTRE
271 NEW ENGLAND HWY RUTHERFORD
PROJECT NO.
###
PROJECT
LOWER HUNTER MEDICAL CENTRE
DRAWING
ELEVATIONS - SHEET 1
SCALE
1:100@A3
DRAWING NO.
DD300
ISSUE NO.
03
Skelcon.


NEW ENGLAND HWY
BOUNDARY
+58.54
LEVEL 1
+55.34
GROUND LE
BOUNDARY FENCE BEYOND
BUILDING HEIGHT
8,140
CONC.
SIGNAGE
2,000
1,200
STAFF PARKING
ROOF TERRACE
5,540
BOUNDARY FENCE BEYOND
22 ARTHUR STREET
BOUNDARY
+58.54
LEVEL 1
+55.34
LEVEL
SOUTH ELEVATION
SCALE 1:100
E-06
267
NEW ENGLAND H
SINGLE RESIDENCE
BOUNDARY
CONC.
2,000
1,200
EXTENT OF EXISTING BUILDING RETAINED
[COLOURED]
NEW INTEGRATED
BIN STORE
ARTHUR STREET
BOUNDARY
54
L1
34
EL
WEST ELEVATION
SCALE 1:100
E-07
LEGEND
ISSUE
DESCRIPTION
BY
CHK
DATE
CLIENT
LOWER HUNTER MEDICAL CENTRE
LOCATION
271 NEW ENGLAND HWY RUTHERFORD
PROJECT NO.
###
PROJECT
LOWER HUNTER MEDICAL CENTRE
DRAWING
ELEVATIONS - SHEET 2
SCALE
1:100@A3
DRAWING NO.
DD301
ISSUE NO.
03
Skelcon.

NOTE
The Builder shall check all dimensions and levels on site prior to construction. Notify any errors, discrepancies or omissions to the architect. Refer to written dimensions only. Do not scale drawings. Drawings shall not be used for construction purposes until issued for construction. This drawing reflects a design by Skelcon Pty Ltd and is to be used only for work when authorised in writing by Skelcon Pty Ltd .

All boundaries and contours are subject to survey drawing. All levels to Australian Height Data. It is the contractors responsibility to confirm all measurements on site and locations of any services prior to work on site.

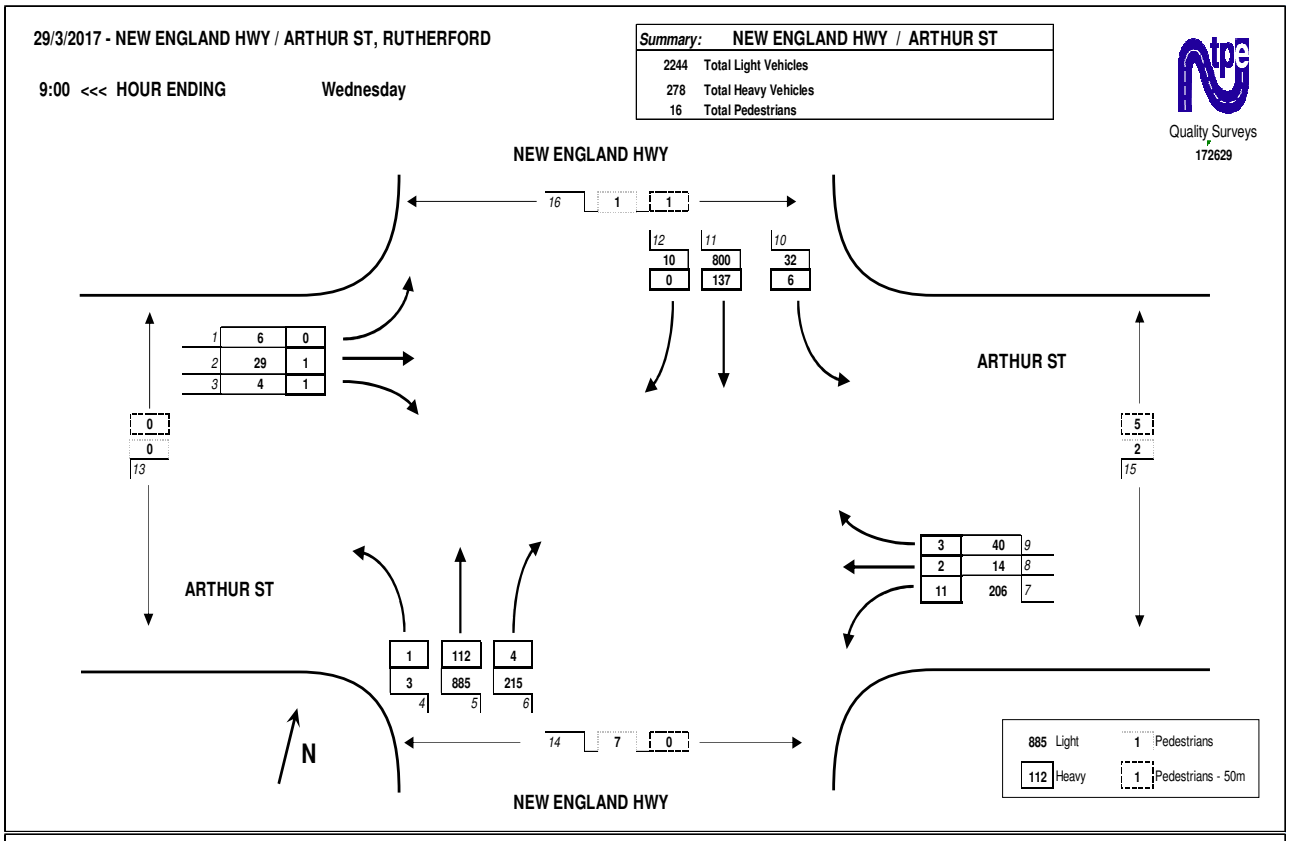
C:\WORKSKELCON PTY LTD\Design - Documents\Rutherford Medical W\Drawings\WCAD\Rutherford Medical DA.pln

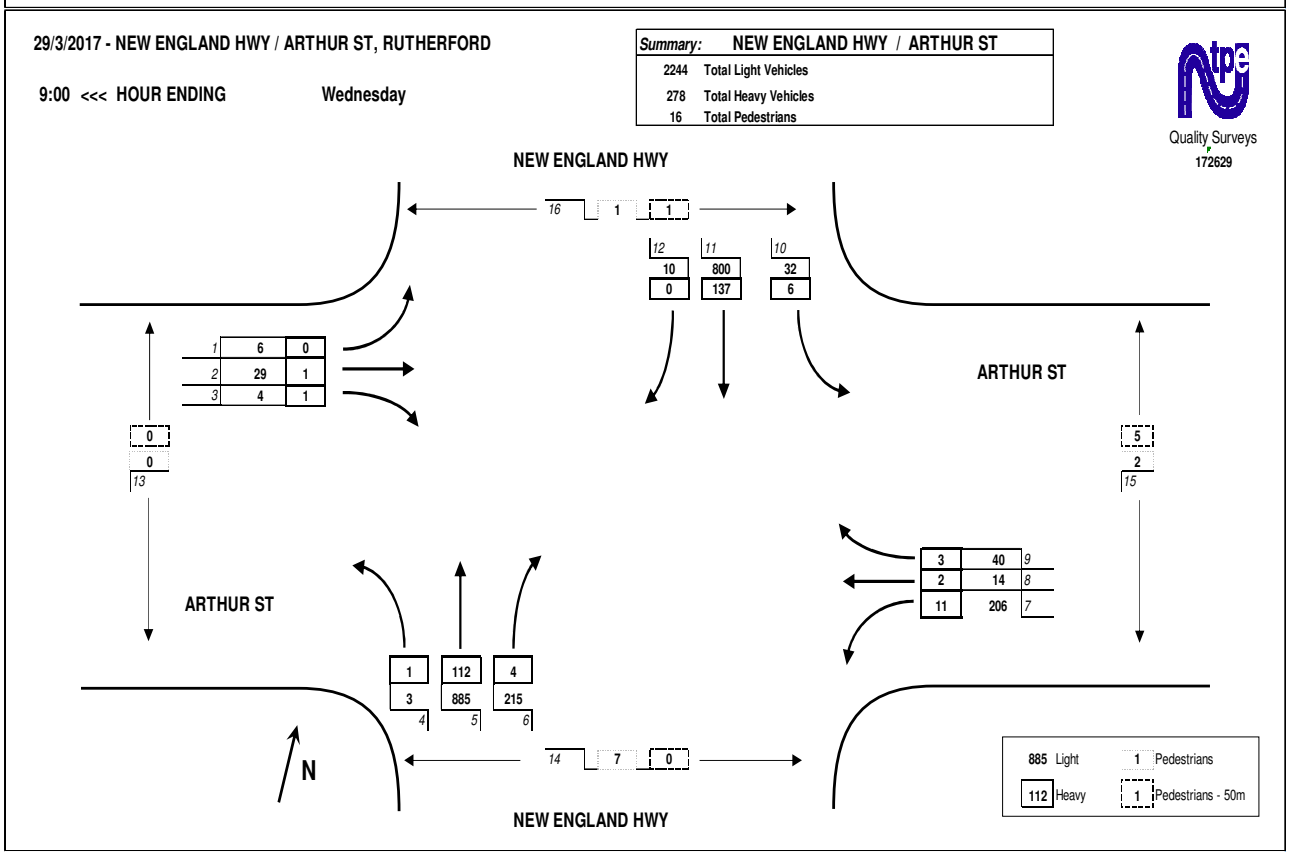


A2 SECTION A-A
SCALE 1:100

Skelcon.	LEGEND ISSUE 01 02 / DESCRIPTION Draft DA DA / BY KE / CHK TC / DATE 16/07/2022 16/08/2022	CLIENT LOWER HUNTER MEDICAL CENTRE LOCATION 271 NEW ENGLAND HWY RUTHERFORD	PROJECT NO. ###	PROJECT LOWER HUNTER MEDICAL CENTRE DRAWING SECTIONS - SHEET 1 SCALE @A3 / DRAWING NO. DD400 / ISSUE NO. 02	

ATTACHMENT B
TRAFFIC COUNT TALLY SHEETS


29/3/2017 - NEW ENGLAND HWY / ARTHUR ST, RUTHERFORD
9:00 <<< HOUR ENDING
Wednesday
Summary: NEW ENGLAND HWY / ARTHUR ST
2244 Total Light Vehicles
278 Total Heavy Vehicles
16 Total Pedestrians
Quality Surveys
172629
NEW ENGLAND HWY
ARTHUR ST
ARTHUR ST
N
NEW ENGLAND HWY
885 Light
112 Heavy
1 Pedestrians
1 Pedestrians - 50m


29/3/2017 - NEW ENGLAND HWY / ARTHUR ST, RUTHERFORD
9:00 <<< HOUR ENDING
Wednesday
Summary: NEW ENGLAND HWY / ARTHUR ST
2244 Total Light Vehicles
278 Total Heavy Vehicles
16 Total Pedestrians
Quality Surveys
172629
NEW ENGLAND HWY
ARTHUR ST
ARTHUR ST
N
NEW ENGLAND HWY
885 Light
112 Heavy
1 Pedestrians
1 Pedestrians - 50m

ATTACHMENT C
SIDRA MOVEMENT SUMMARY TABLES

MOVEMENT SUMMARY

Site: 101 [2022AM (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 75 seconds (Site Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	4	1	4	25.0	0.006	19.5	LOS B	0.1	0.8	0.60	0.63	0.60	41.8
2	T1	1074	121	1131	11.3	0.754	22.0	LOS B	18.7	143.7	0.91	0.85	0.97	41.2
3	R2	236	4	248	1.7	*0.781	42.1	LOS C	9.7	68.8	1.00	0.91	1.21	27.4
Approach		1314	126	1383	9.6	0.781	25.6	LOS B	18.7	143.7	0.93	0.86	1.01	38.4
East: Arthur Street														
4	L2	234	12	246	5.1	*0.793	41.7	LOS C	9.7	71.1	1.00	0.94	1.23	27.0
5	T1	17	2	18	11.8	0.250	30.1	LOS C	2.2	16.4	0.90	0.73	0.90	28.5
6	R2	46	3	48	6.5	0.250	34.7	LOS C	2.2	16.4	0.90	0.73	0.90	23.6
Approach		297	17	313	5.7	0.793	40.0	LOS C	9.7	71.1	0.98	0.89	1.16	26.7
North: New England Highway														
7	L2	40	6	42	15.0	0.757	28.0	LOS B	18.5	145.6	0.92	0.86	0.97	29.3
8	T1	1010	148	1063	14.7	*0.757	22.3	LOS B	18.5	145.6	0.91	0.86	0.97	40.9
9	R2	11	0	12	0.0	0.036	33.7	LOS C	0.4	2.5	0.86	0.67	0.86	32.5
Approach		1061	154	1117	14.5	0.757	22.6	LOS B	18.5	145.6	0.91	0.85	0.97	40.5
West: Arthur Street														
10	L2	6	0	6	0.0	0.178	36.0	LOS C	1.5	11.0	0.91	0.69	0.91	32.8
11	T1	32	1	34	3.1	0.178	31.4	LOS C	1.5	11.0	0.91	0.69	0.91	29.0
12	R2	5	1	5	20.0	0.178	36.1	LOS C	1.5	11.0	0.91	0.69	0.91	35.9
Approach		43	2	45	4.7	0.178	32.6	LOS C	1.5	11.0	0.91	0.69	0.91	30.5
All Vehicles		2715	299	2858	11.0	0.793	26.1	LOS B	18.7	145.6	0.93	0.86	1.01	37.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	9	31.8	LOS D	0.0	0.0	0.92	0.92	203.9	223.8	1.10
East: Arthur Street												
P2	Full	8	8	31.8	LOS D	0.0	0.0	0.92	0.92	196.3	213.9	1.09

MOVEMENT SUMMARY

Site: 101 [2022PM (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	9	1	9	11.1	0.014	28.5	LOS B	0.3	2.5	0.62	0.65	0.62	38.0
2	T1	970	70	1021	7.2	0.707	31.9	LOS C	25.2	187.1	0.89	0.79	0.89	36.1
3	R2	386	18	406	4.7	*0.935	76.0	LOS F	29.4	214.4	1.00	1.02	1.37	19.3
Approach		1365	89	1437	6.5	0.935	44.3	LOS D	29.4	214.4	0.92	0.85	1.02	30.0
East: Arthur Street														
4	L2	334	14	352	4.2	*0.953	82.3	LOS F	26.4	191.5	1.00	1.07	1.46	18.1
5	T1	28	0	29	0.0	0.358	45.1	LOS D	6.5	46.1	0.91	0.77	0.91	23.9
6	R2	92	3	97	3.3	0.358	49.7	LOS D	6.5	46.1	0.91	0.77	0.91	19.2
Approach		454	17	478	3.7	0.953	73.4	LOS F	26.4	191.5	0.98	0.99	1.31	18.5
North: New England Highway														
7	L2	66	4	69	6.1	0.924	60.9	LOS E	47.7	350.1	1.00	1.08	1.23	17.6
8	T1	1236	70	1301	5.7	*0.924	55.2	LOS D	47.7	350.1	1.00	1.08	1.23	27.9
9	R2	20	1	21	5.0	0.049	42.8	LOS D	0.9	6.8	0.80	0.70	0.80	29.5
Approach		1322	75	1392	5.7	0.924	55.3	LOS D	47.7	350.1	1.00	1.08	1.23	27.5
West: Arthur Street														
10	L2	10	1	11	10.0	0.522	68.0	LOS E	3.2	23.2	1.00	0.75	1.01	23.6
11	T1	25	0	26	0.0	0.522	63.4	LOS E	3.2	23.2	1.00	0.75	1.01	20.3
12	R2	15	1	16	6.7	0.522	67.9	LOS E	3.2	23.2	1.00	0.75	1.01	27.3
Approach		50	2	53	4.0	0.522	65.7	LOS E	3.2	23.2	1.00	0.75	1.01	23.3
All Vehicles		3191	183	3359	5.7	0.953	53.4	LOS D	47.7	350.1	0.96	0.96	1.15	27.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	9	54.2	LOS E	0.0	0.0	0.95	0.95	226.3	223.8	0.99
East: Arthur Street												
P2	Full	8	8	54.2	LOS E	0.0	0.0	0.95	0.95	218.7	213.9	0.98

MOVEMENT SUMMARY

Site: 101 [2022AM + development (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 75 seconds (Site Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	11	1	12	9.1	0.016	19.5	LOS B	0.2	1.9	0.61	0.65	0.61	41.9
2	T1	1074	121	1131	11.3	0.757	22.1	LOS B	18.9	144.7	0.91	0.85	0.97	41.1
3	R2	236	4	248	1.7	*0.781	42.1	LOS C	9.7	68.8	1.00	0.91	1.21	27.4
Approach		1321	126	1391	9.5	0.781	25.7	LOS B	18.9	144.7	0.93	0.86	1.01	38.4
East: Arthur Street														
4	L2	234	12	246	5.1	*0.793	41.7	LOS C	9.7	71.1	1.00	0.94	1.23	27.0
5	T1	21	2	22	9.5	0.260	30.2	LOS C	2.3	17.4	0.90	0.73	0.90	28.6
6	R2	46	3	48	6.5	0.260	34.8	LOS C	2.3	17.4	0.90	0.73	0.90	23.7
Approach		301	17	317	5.6	0.793	39.9	LOS C	9.7	71.1	0.98	0.89	1.16	26.7
North: New England Highway														
7	L2	40	6	42	15.0	0.760	28.1	LOS B	18.6	146.5	0.92	0.86	0.98	29.2
8	T1	1010	148	1063	14.7	*0.760	22.3	LOS B	18.6	146.5	0.91	0.86	0.97	40.9
9	R2	16	0	17	0.0	0.052	33.9	LOS C	0.5	3.7	0.86	0.69	0.86	32.5
Approach		1066	154	1122	14.4	0.760	22.7	LOS B	18.6	146.5	0.91	0.85	0.97	40.4
West: Arthur Street														
10	L2	11	0	12	0.0	0.291	38.7	LOS C	2.2	15.8	0.95	0.73	0.95	31.6
11	T1	36	1	38	2.8	0.291	34.2	LOS C	2.2	15.8	0.95	0.73	0.95	27.7
12	R2	12	1	13	8.3	0.291	38.8	LOS C	2.2	15.8	0.95	0.73	0.95	35.0
Approach		59	2	62	3.4	0.291	36.0	LOS C	2.2	15.8	0.95	0.73	0.95	30.2
All Vehicles		2747	299	2892	10.9	0.793	26.3	LOS B	18.9	146.5	0.93	0.86	1.01	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	9	31.8	LOS D	0.0	0.0	0.92	0.92	203.9	223.8	1.10
East: Arthur Street												
P2	Full	8	8	31.8	LOS D	0.0	0.0	0.92	0.92	196.3	213.9	1.09

MOVEMENT SUMMARY

Site: 101 [2022PM + development (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	15	1	16	6.7	0.022	28.5	LOS C	0.5	4.0	0.63	0.67	0.63	38.0
2	T1	970	70	1021	7.2	0.712	31.9	LOS C	25.1	186.9	0.89	0.79	0.89	36.1
3	R2	386	18	406	4.7	*0.935	76.0	LOS F	29.4	214.4	1.00	1.02	1.37	19.3
Approach		1371	89	1443	6.5	0.935	44.2	LOS D	29.4	214.4	0.92	0.85	1.02	30.1
East: Arthur Street														
4	L2	334	14	352	4.2	*0.953	82.5	LOS F	26.4	191.7	1.00	1.08	1.46	18.1
5	T1	31	0	33	0.0	0.367	45.2	LOS D	6.6	47.4	0.91	0.77	0.91	23.9
6	R2	92	3	97	3.3	0.367	49.8	LOS D	6.6	47.4	0.91	0.77	0.91	19.2
Approach		457	17	481	3.7	0.953	73.4	LOS F	26.4	191.7	0.98	0.99	1.31	18.5
North: New England Highway														
7	L2	66	4	69	6.1	0.927	61.6	LOS E	48.1	353.0	1.00	1.08	1.24	17.5
8	T1	1236	70	1301	5.7	*0.927	55.8	LOS D	48.1	353.0	1.00	1.09	1.24	27.7
9	R2	24	1	25	4.2	0.058	42.9	LOS D	1.1	8.2	0.80	0.71	0.80	29.4
Approach		1326	75	1396	5.7	0.927	55.9	LOS D	48.1	353.0	1.00	1.08	1.23	27.3
West: Arthur Street														
10	L2	14	1	15	7.1	0.722	71.5	LOS F	4.2	30.3	1.00	0.84	1.20	23.0
11	T1	28	0	29	0.0	0.722	66.8	LOS E	4.2	30.3	1.00	0.84	1.20	19.6
12	R2	21	1	22	4.8	0.722	71.4	LOS F	4.2	30.3	1.00	0.84	1.20	26.6
Approach		63	2	66	3.2	0.722	69.4	LOS E	4.2	30.3	1.00	0.84	1.20	22.9
All Vehicles		3217	183	3386	5.7	0.953	53.7	LOS D	48.1	353.0	0.96	0.97	1.15	26.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	9	54.2	LOS E	0.0	0.0	0.95	0.95	226.3	223.8	0.99
East: Arthur Street												
P2	Full	8	8	54.2	LOS E	0.0	0.0	0.95	0.95	218.7	213.9	0.98

MOVEMENT SUMMARY

Site: 101 [2032PM (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site Practical Cycle Time)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	9	1	11	11.1	0.017	36.0	LOS C	0.5	3.7	0.65	0.66	0.65	35.2
2	T1	970	70	1185	7.2	0.974	86.0	LOS F[11]	64.1	476.6	0.96	1.14	1.31	21.5
3	R2	386	18	472	4.7	*1.136	211.3	LOS F[11]	66.1	481.0	1.00	1.29	2.02	8.6
Approach		1365	89	1668	6.5	1.136	121.1	LOS F[11]	66.1	481.0	0.97	1.18	1.51	16.0
East: Arthur Street														
4	L2	334	14	408	4.2	*1.129	205.1	LOS F[11]	55.6	402.9	1.00	1.34	2.00	8.8
5	T1	28	0	34	0.0	0.398	55.5	LOS D[11]	9.3	66.5	0.91	0.78	0.91	21.5
6	R2	92	3	112	3.3	0.398	60.1	LOS E[11]	9.3	66.5	0.91	0.78	0.91	16.9
Approach		454	17	555	3.7	1.129	166.5	LOS F[11]	55.6	402.9	0.98	1.19	1.71	9.8
North: New England Highway														
7	L2	66	4	81	6.1	1.130	198.1	LOS F[11]	111.2	816.6	1.00	1.61	1.92	6.5
8	T1	1236	70	1510	5.7	*1.130	192.6	LOS F[11]	111.2	816.6	1.00	1.63	1.92	11.7
9	R2	20	1	24	5.0	0.049	47.2	LOS D[11]	1.3	9.4	0.76	0.70	0.76	28.2
Approach		1322	75	1615	5.7	1.130	190.7	LOS F[11]	111.2	816.6	1.00	1.62	1.90	11.6
West: Arthur Street														
10	L2	10	1	12	10.0	0.666	85.5	LOS F[11]	4.7	34.2	1.00	0.81	1.11	20.6
11	T1	25	0	31	0.0	0.666	80.8	LOS F[11]	4.7	34.2	1.00	0.81	1.11	17.5
12	R2	15	1	18	6.7	0.666	85.4	LOS F[11]	4.7	34.2	1.00	0.81	1.11	24.2
Approach		50	2	61	4.0	0.666	83.1	LOS F[11]	4.7	34.2	1.00	0.81	1.11	20.4
All Vehicles		3191	183	3898	5.7	1.136	155.8	LOS F[11]	111.2	816.6	0.98	1.36	1.69	13.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	11	69.2	LOS F[12]	0.0	0.0	0.96	0.96	241.3	223.8	0.93
East: Arthur Street												

MOVEMENT SUMMARY

Site: 101 [2032AM + development (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	11	1	13	9.1	0.019	20.4	LOS B	0.3	2.3	0.61	0.66	0.61	41.5
2	T1	1074	121	1312	11.3	*0.904	38.5	LOS C	31.6	242.6	0.99	1.12	1.30	33.3
3	R2	236	4	288	1.7	*0.898	53.1	LOS D[11]	13.6	96.8	1.00	1.03	1.46	24.1
Approach		1321	126	1614	9.5	0.904	41.0	LOS C	31.6	242.6	0.99	1.10	1.32	31.7
East: Arthur Street														
4	L2	234	12	286	5.1	*0.851	46.7	LOS D[11]	12.6	92.3	1.00	0.99	1.32	25.5
5	T1	21	2	26	9.5	0.282	32.0	LOS C	2.9	21.4	0.91	0.74	0.91	27.9
6	R2	46	3	56	6.5	0.282	36.6	LOS C	2.9	21.4	0.91	0.74	0.91	23.0
Approach		301	17	368	5.6	0.851	44.1	LOS D[11]	12.6	92.3	0.98	0.93	1.23	25.4
North: New England Highway														
7	L2	40	6	49	15.0	0.884	40.8	LOS C	29.1	229.4	0.99	1.08	1.24	23.3
8	T1	1010	148	1234	14.7	0.884	35.1	LOS C	29.1	229.4	0.99	1.08	1.24	34.7
9	R2	16	0	20	0.0	0.060	35.6	LOS C	0.6	4.5	0.86	0.70	0.86	31.8
Approach		1066	154	1302	14.4	0.884	35.3	LOS C	29.1	229.4	0.99	1.07	1.23	34.3
West: Arthur Street														
10	L2	11	0	13	0.0	0.359	41.9	LOS C	2.7	19.8	0.96	0.75	0.96	30.5
11	T1	36	1	44	2.8	0.359	37.3	LOS C	2.7	19.8	0.96	0.75	0.96	26.7
12	R2	12	1	15	8.3	0.359	42.0	LOS C	2.7	19.8	0.96	0.75	0.96	33.9
Approach		59	2	72	3.4	0.359	39.1	LOS C	2.7	19.8	0.96	0.75	0.96	29.2
All Vehicles		2747	299	3356	10.9	0.904	39.1	LOS C	31.6	242.6	0.99	1.06	1.27	31.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	11	34.2	LOS D	0.0	0.0	0.93	0.93	206.4	223.8	1.08
East: Arthur Street												
P2	Full	8	10	34.2	LOS D	0.0	0.0	0.93	0.93	198.8	213.9	1.08

MOVEMENT SUMMARY

Site: 101 [2032PM + development (Site Folder: General)]

New England Highway / Arthur Street signalised intersection
2017 count + 1.5 % p.a. background traffic growth
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site Practical Cycle Time)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: New England Highway														
1	L2	15	1	18	6.7	0.027	36.1	LOS C	0.8	6.1	0.65	0.68	0.65	35.2
2	T1	970	70	1185	7.2	0.979	88.4	LOS F[11]	64.5	479.6	0.96	1.16	1.33	21.2
3	R2	386	18	472	4.7	*1.137	211.9	LOS F[11]	66.2	481.6	1.00	1.29	2.02	8.6
Approach		1371	89	1675	6.5	1.137	122.6	LOS F[11]	66.2	481.6	0.97	1.19	1.52	15.9
East: Arthur Street														
4	L2	334	14	408	4.2	*1.129	205.2	LOS F[11]	55.6	403.0	1.00	1.34	2.00	8.8
5	T1	31	0	38	0.0	0.412	56.5	LOS D[11]	9.6	68.7	0.92	0.78	0.92	21.3
6	R2	92	3	112	3.3	0.412	61.1	LOS E[11]	9.6	68.7	0.92	0.78	0.92	16.7
Approach		457	17	558	3.7	1.129	166.1	LOS F[11]	55.6	403.0	0.98	1.19	1.71	9.9
North: New England Highway														
7	L2	66	4	81	6.1	1.133	200.3	LOS F[11]	112.1	823.0	1.00	1.62	1.93	6.4
8	T1	1236	70	1510	5.7	*1.133	194.9	LOS F[11]	112.1	823.0	1.00	1.64	1.93	11.6
9	R2	24	1	29	4.2	0.058	47.4	LOS D[11]	1.5	11.2	0.76	0.71	0.76	28.2
Approach		1326	75	1620	5.7	1.133	192.5	LOS F[11]	112.1	823.0	1.00	1.62	1.91	11.5
West: Arthur Street														
10	L2	14	1	17	7.1	0.916	97.7	LOS F[11]	6.5	46.8	1.00	1.00	1.52	19.0
11	T1	28	0	34	0.0	0.916	93.1	LOS F[11]	6.5	46.8	1.00	1.00	1.52	15.9
12	R2	21	1	26	4.8	0.916	97.7	LOS F[11]	6.5	46.8	1.00	1.00	1.52	22.3
Approach		63	2	77	3.2	0.916	95.6	LOS F[11]	6.5	46.8	1.00	1.00	1.52	18.9
All Vehicles		3217	183	3930	5.7	1.137	157.0	LOS F[11]	112.1	823.0	0.98	1.36	1.71	12.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: New England Highway												
P1	Full	9	11	69.2	LOS F[12]	0.0	0.0	0.96	0.96	241.3	223.8	0.93
East: Arthur Street												