



# TRAFFIC & PARKING ASSESSMENT

**CHILD CARE CENTRE**

**PROPOSED LOTS 307 - 310,  
ROBERT ROAD  
LOCHINVAR**

**PREPARED FOR: GWH**

**DECEMBER 2022**

REF: 22/151

**TRAFFIC AND PARKING ASSESSMENT****CHILD CARE CENTRE  
GWH****PROPOSED LOTS 307 – 310,  
ROBERT ROAD, LOCHINVAR**

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A	05/12/22	Draft	JG
B	06/12/22	Edit	JG
C	06/12/22	Final Proof	JG
D	06/12/22	Approved	JG

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This document has been authorised by

  
Date 6<sup>th</sup> December 2022**Disclaimer**

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# 1. INTRODUCTION

Intersect Traffic Pty Ltd has been engaged by GWH to prepare a Traffic and Parking Assessment Report for a proposed Child Care Centre on proposed Lots 307 - 310 Robert Road, Lochinvar. The site is currently vacant rural land but is within the Lochinvar Urban Release area (Lochinvar URA) and has been zoned as a local business centre to service the Lochinvar URA. The child care centre will operate as long day care centre operating between 6.30 am and 6.30 pm Mondays to Fridays and will cater for up to 128 children with approximately 25 staff. The site is immediately south of the proposed Lochinvar Shopping Village for which a separate development application and traffic impact assessment report has been undertaken. The proposed development plans for the site are provided within **Appendix 1**.

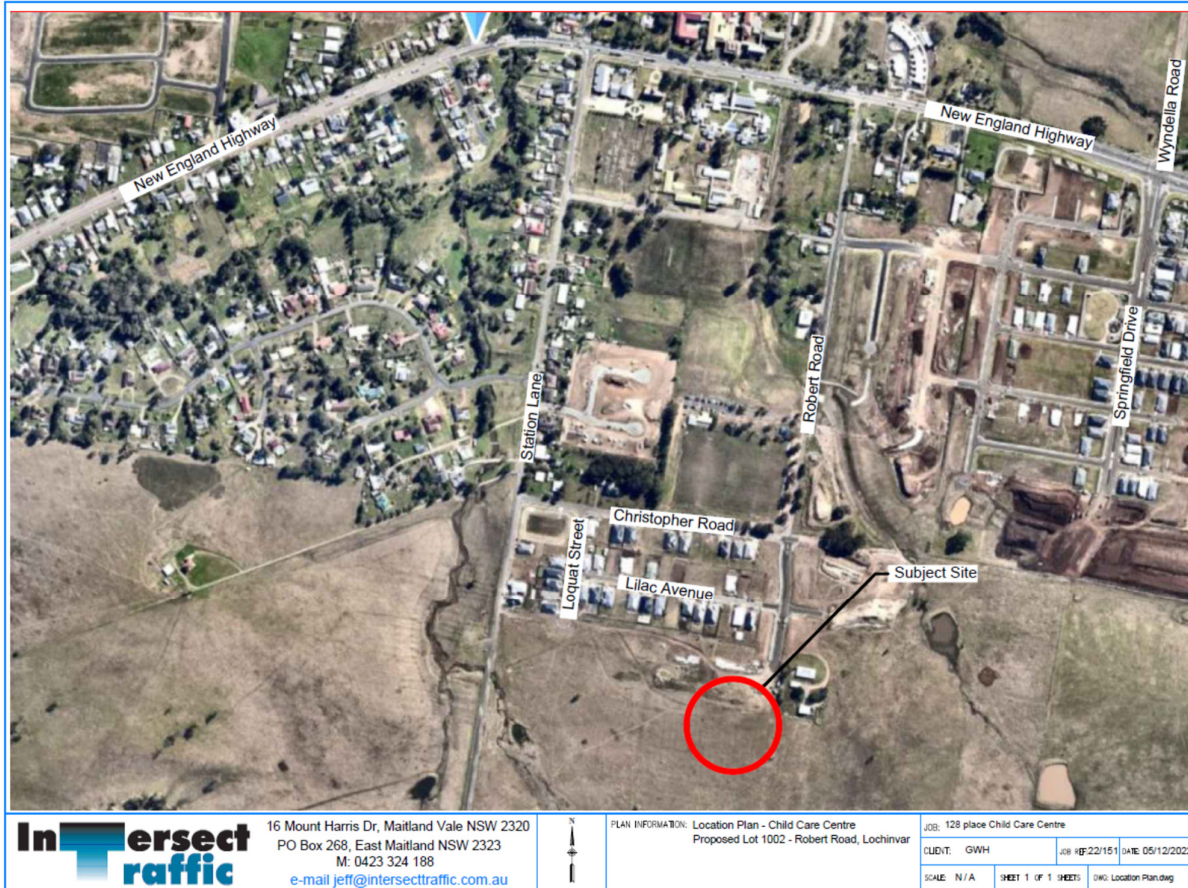
Access to the development will be via the recent extension of Robert Road as part of the yet to be completed Lochinvar URA Road network in accordance with the approved Lochinvar URA structure plan which was supported by a Traffic Impact Assessment report (*URaP-TTW September 2012 v10*). This report anticipated residential on the site however in terms of total traffic generated by the Lochinvar URA and noting most of the traffic generated by the development is internal traffic already considered in the study as trips to and from work it is reasonable to conclude that subject to the road network being constructed in accordance with the structure plan it would have sufficient capacity to cater for the proposed development. The aim of this assessment is to determine the likely impact of the proposal on the adjacent existing local and state road network as a result of the additional traffic generated by the development.

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

1. An outline of the existing road network in the vicinity of the proposed development.
2. An assessment of the likely peak traffic generation from the development.
3. An assessment of the likely traffic impacts of the proposal on the adjacent road network in particular in regard to the capacity of the existing road network.
4. An assessment of the proposed development access and on-site parking.
5. An assessment of the impact of the development on alternate transport mode services and facilities in the vicinity of the site.
6. Presentation of conclusions and any recommendations.

## 2. SITE DESCRIPTION

The subject site is located in the Lochinvar URA south of the New England Highway and east of Station Lane adjacent to the Lochinvar Downs and Hereford Park residential estates. It is approximately 1.2 km south-east of the existing Lochinvar shops and 6.5 kms and 9.3 kms west of the Rutherford and Maitland CBD areas, respectively. **Figure 1** below shows the site amidst the residential developments, roads, and parkland surrounds.



**Figure 1 – Site Location**

Currently the site contains the following property descriptors:

- ◆ Formal land title of proposed Lots 307 - 310 in a subdivision of Lot 200 in DP 1269482.
- ◆ Street address of 30 Christopher Road, Lochinvar.
- ◆ Total development site area of approximately 3,157 m<sup>2</sup>; and
- ◆ Land zoning of B2 – Local Centre pursuant to Maitland LEP (2011).

The site currently contains vacant rural land as shown in **Photograph 1**. The main access to the site will be via the recently extended Robert Road most likely from the yet to be constructed section of Springfield Drive which is the main southern collector road for the Lochinvar URA which connects to the New England Highway via a signalised intersection as shown in **Photograph 2**.



*Photograph 1 – Existing site conditions.*



*Photograph 2 – New England Highway / Springfield Drive signalised intersection.*

## 3. EXISTING ROAD NETWORK

### 3.1 New England Highway (A43)

The New England Highway is part of the classified State Highway network and is a major sub-arterial road in the region. It is currently under the care and control of Transport for NSW (TfNSW). With the opening of the Hunter Expressway, it now performs the function of a sub-arterial road connecting Maitland to the rural areas of Lochinvar, Greta, and Branxton. In the vicinity of the site the New England Highway is a two-lane two-way sealed urban road constructed to highway standards. Lane widths are in the vicinity of 3.4 to 3.8 metres with a left turn lane into Station Lane and Cantwell Road and sealed shoulders being provided. A 60 km/h speed limit applies to this section of road with a 40 km/h school zone operating during school start and finish times. At the time of inspection, the New England Highway was observed to be in good condition (**Photograph 3**).

### 3.2 Station Lane

Station Lane in the vicinity of the site is a local access road under the care and control of Maitland City Council with its primary function providing access to properties on its length. In the vicinity of the site, it is a two lane two way sealed urban road with some kerb and gutter. The total sealed carriageway width is approximately 8 metres wide. A 50 km/h speed limit applies to this section of road and at the time of inspection Station Lane in the vicinity of the site was observed to be in fair condition. (See Photograph 4). In the future with the development of the Lochinvar URA Station Lane will become a collector road and will be upgraded and widened as development occurs.



**Photograph 3 – New England Highway near Springfield Drive.**



**Photograph 4 – Station Lane near New England Highway.**

### **3.3 Springfield Drive**

Springfield Drive is the major north-south local collector road within the eastern section of the Lochinvar URA and connects from the New England Highway to Station Lane. It is currently only constructed from the New England Highway for a length of 475 metres within the Hereford Park Estate. Advice from the applicant is that this connection will be established within the next 12 months.

Springfield Drive as a local collector road is under the care and control of Maitland City Council. In the vicinity of the site, it will be a two lane two way sealed urban road with kerb and gutter and a central vegetated median with lane widths of 3.5 metres wide with parking / break down lanes on each side of the road as well as on-road cycle lanes in both directions. The total sealed carriageway width is 7.5 metres for each travel direction. A 50 km/h speed limit will apply to this section of road and at the time of inspection constructed section of Springfield Drive, being a relatively new construction, is in excellent condition (**see Photograph 5**).

### **3.4 Robert Road**

Robert Road in the vicinity of the site is a local access road under the care and control of Maitland City Council with its primary function providing access to properties on its length. In the vicinity of the site, it is a two lane two way sealed urban road 11.5 metres wide some kerb and gutter. It is noted Robert Road has recently been extended within the Lochinvar Downs residential estate to immediately north of the subject site. A 50 km/h speed limit applies to this section of road and at the time of inspection Robert Road near the site was observed to be in excellent condition. (See **Photograph 6**). In the future with the development of the Lochinvar URA, Robert Road will become a collector road and will be upgraded and widened as development occurs. Current works between Christopher Road and the New England Highway associated with an adjoining subdivision is currently widening and upgrading the road to an 8.5 metre width.





*Photograph 5 – Springfield Drive near New England Highway.*

## 4. ROAD NETWORK IMPROVEMENTS

Future upgrades to the road network will occur as the Lochinvar URA develops. The works that will impact on the development will be the future conversion of the New England Highway / Robert Road intersections to a left in and left out only intersection. The extension of Springfield Drive to Station Lane will improve both the efficiency and safety of access to the site for motorists. Whilst a timeframe for all these changes is currently unknown at the current rate of development in the area these road network changes / improvements are likely to occur within 5 years.



*Photograph 6 – Robert Road near site.*

## 5. TRAFFIC VOLUMES

Northern Transport Planning and Engineering on behalf of Intersect Traffic undertook intersection traffic counts at the New England Highway / Station Lane and New England Highway / Robert Road intersections during likely AM and PM peak traffic periods. These counts were undertaken on Wednesday 14<sup>th</sup> July 2021 (PM peak) and Thursday 15<sup>th</sup> July 2021 (AM peak) and the peak hour periods found to be 8 am – 9 am and 3 pm to 4 pm. The count results sheets are provided in **Attachment B**. There is insufficient traffic using the New England Highway / Springfield Drive / Wyndella Road intersection for it to be counted at this stage, so reference is made to the traffic report for the Lochinvar URA in determining future traffic volumes on Springfield Drive.

The existing 2022 two-way mid-block traffic volumes extracted from this data and the predicted 2032 two-way mid-block traffic volumes predicted from this data using a 1.5 % p.a. background traffic growth rate are as shown in **Table 1** below.

**Table 1 – Two-way mid-block traffic volume data.**

Road	Section	2022	2022	2032	2032
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
New England Highway	west of Station Lane	1285	1346	1491	1562
New England Highway	east of Station Lane	1422	1406	1650	1631
New England Highway	east of Robert Road	1524	1438	1768	1669
Station Lane	south of New England Highway	275	180	319	208
Robert Road	south of New England Highway	246	102	285	118
Cantwell Road	north of New England Highway	11	13	13	15

These current and future traffic volumes without development have been adopted in this assessment.

## 6. ROAD CAPACITIES

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

**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)*.

From this table the local road network around the site as a two-way two-lane network would have a one-way capacity of 900 vtpm or a two-way road capacity of at least 1,800 vtpm on the basis a LoS C is considered satisfactory. However, as a sub-arterial road it is still acceptable for the New England Highway to have a (LoS) D with one lane capacities of at least 1,100 vtpm. Therefore, the New England Highway is considered to have a two-way mid-block capacity of at least 2,200 vtpm.

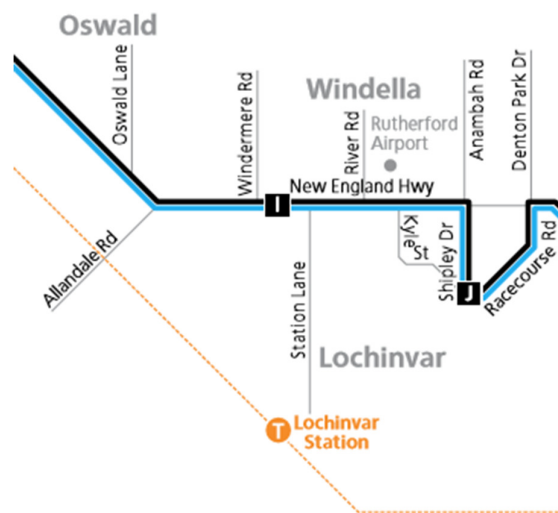
Therefore, the local road network capacities adopted in this assessment are.

- ◆ New England Highway – 2,200 vtpm; and
- ◆ Station Lane, Springfield Drive and Robert Road (as all upgraded / widened) – 1,800 vtpm.

As existing traffic volumes are below this capacity threshold it is reasonable to conclude that the existing road network has spare capacity to cater for additional development in the area.

## 7. ALTERNATIVE TRANSPORT MODES

Hunter Valley Buses run public transport (bus) services in the area. Routes 179, 180, 401, 402 and 403 (Singleton to Maitland) runs along the New England Highway through Lochinvar (see **Figure 2** below). The nearest bus stops are located within convenient walking distance of the site (400 metres) on the New England Highway. This provides a frequent and regular public transport service to the Lochinvar area.



**Figure 2 – Bus route map.**

There are constructed pedestrian footpaths along the New England Highway directing pedestrians to the signalised pedestrian crossing of the Pacific Highway in front of the two catholic schools on both sides of the Highway while pedestrian footpaths and on-road cycle lanes are being provided on Springfield Drive from the New England Highway that will eventually be extended to the site as the Lochinvar URA continues to develop. There are also on-road cycle lanes on the New England Highway running through the recently constructed signalised intersection of the Highway with Springfield Drive and Wyndella Road as well as the new channelised give way intersection at Station Lane and Cantwell’s Road.

The newly constructed section of Springfield Drive has been provided with a number of bus stops to cater for the future diversion of public transport (bus) services into the Lochinvar URA along Springfield Drive once demand is established for these services as more additional dwellings are developed within the URA.

Springfield Drive which is to be extended to the site has been constructed with concrete pedestrian footpaths on both sides of the road and on-road cycle lanes again on both sides of the road. Robert Road which has been extended to the site has also been provided with an off-road shared concrete pedestrian / bicycle path along the western side of the road. **Photograph 7** below shows the footpaths and bus stops being constructed on Springfield Drive while **Photograph 5** shows the on-road cycle lanes on Springfield Drive.



*Photograph 7 - Footpath and bus stop – Springfield Drive*

## 8. DEVELOPMENT PROPOSAL

The proposed development involves the construction of a long day child care centre with associated on-site car parking for staff and the dropping off and picking up of children by parents. The centre will operate between 6.30 am and 6.30 pm Mondays to Fridays. The proposed development plans are provided within **Appendix 1**. Specifically, the proposal includes the following:

- ◆ Construction of a child care building (915 m<sup>2</sup> GFA) for 128 children with the following age splits;
  - 0 – 1 years – 12 babies.
  - 0 – 2 years – 16 babies.
  - 2 – 3 years – 20 children.
  - 3 – 4 years – 20 children; and
  - 4 – 5 years – 60 children.
- ◆ Reception area, kitchen, Director's office, laundry, staff facilities and amenities.
- ◆ Outdoor play area (910 m<sup>2</sup> GFA)
- ◆ On-site car parking for staff and parents totalling 32 spaces with 1 accessible space and 10 stacked staff car parks; and
- ◆ A combined entry / exit access to Robert Road south of Springfield Drive in accordance with Australian Standards requirements and constructed to Maitland City Council specifications.

## 9. TRAFFIC GENERATION

The *RTA's Guide to Traffic Generating Development's* provides specific advice on the traffic generation potential of various land uses. In regard to Child Care Centres the following advice is provided.

**Table 3.6**  
Traffic generation rates

Centre Type	Peak Vehicle Trips / Child		
	7.00-9.00am	2.30-4.00pm	4.00-6.00pm
Pre-school	1.4	0.8	-
Long-day care	0.8	0.3	0.7
Before/after care	0.5	0.2	0.7

Therefore, the potential traffic generation from the retail space on the site can be calculated as follows (rounded up).

### AM peak

$$PVT = 0.8 \times 128 = 103 \text{ vtp}$$

### PM peak

$$PVT = 0.7 \times 128 = 90 \text{ vtp}$$

## 10. TRAFFIC IMPACTS OF DEVELOPMENT

### 10.1 – Road Network and Intersection Capacity

It has previously been shown in **Section 6** of this report that the adjoining road network is currently operating within its technical mid-block capacity. As a local child care centre, the majority of trips generated by the development will be internal subdivision trips or trips already generated by the subdivision for travel to and from work to schools and shops which have already been considered within the traffic assessment prepared for the Lochinvar URA (*URaP-TTW September 2012 v10*). The additional external trips will be generated by employees and servicing of the site. However, the URaP traffic assessment considered a large commercial zoned area between Station Lane and Robert Road south of Springfield Drive in the vicinity of the proposed site. The area considered within the URaP traffic study was significantly larger than the proposed development. Therefore, it is considered the proposed development is consistent with the development considered in the URaP study and that the URaP study has already assessed the traffic impacts of the development in regard to the efficiency and effectiveness of the local and state road network in the Lochinvar area.

As such it is reasonable to conclude that subject to the road network being constructed in accordance with the adopted structure plan and the recommendations of the URaP traffic assessment then the proposal will not adversely impact on the local and state road network adjacent to the site. Noting the site has direct access to Robert Road immediately south of Springfield Drive which is the main collector road within this part of the URA it is considered the development is supported by the road network structure used in the URaP traffic assessment therefore it will not adversely impact on the local and state road network near the site.

## 10.2 – Site Access

The proposed development is serviced by a combined entry / exit driveway 8 metres wide which is consistent with a Category 2 Driveway.

This access will service a 32-space car park for Class 1 employee and Class 3 short term parking accessed off a local road therefore in accordance with Table 3.1 of *AS2890.1-2004* is required to be a Category 2 access. *Table 3.2 of AS2890.1-2004* identifies a Category 2 access as a combined entry / exit driveway between 6 to 9 metres wide. The development plans show a combined entry / exit access 8 metres wide therefore access to the car park is compliant with *AS2890.1-2004*.

With Robert Road being a 50 km/h road the required vehicular sight lines from the access needs to be a minimum 45 metres or 69 metres desirable. Given the location of the access and the relatively straight alignment of Robert Road the only constraint to the provision of suitable sight lines is likely to be on-street car parking adjacent to the access. Therefore, it is recommended that on-street car parking be prohibited within 10 metres of the access through appropriate regulatory signage approved by Maitland City Council's Traffic Committee. Provision of such signage will ensure suitable vehicular sight lines are available for exiting traffic from these accesses.

The requirements for pedestrian sight lines within *AS2890.1-2004* can be ensured through conditioning of the consent to ensure no walls, fencing or landscaping above 1.2 metres high exists within the pedestrian sight triangle required by *AS2890.1-2004*.

Overall, it is concluded that the proposed access arrangements to the development are satisfactory and would comply with the requirements of Australian Standards. It is however also recommended that approval be sought from Maitland City Council's Traffic Committee for the installation of on-street regulatory parking signage to prohibit on-street car parking within 10 metres of the proposed accesses to the site.

## 10.3 – On-Site Car Parking

On-site parking and manoeuvrability should comply with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking and Maitland City Council's DCP (2011) – Part C11 – Vehicular access & parking*.

The parking provision rates applicable for the development taken from the DCP are.

### Child Care Centre

*1 space per 4 children in attendance or part thereof.*

Therefore, the likely peak parking demand (DCP compliant) generated by this development is calculated as follows.

$$\begin{aligned} \text{DCP Parking requirement} &= 128 / 4 = 32 \text{ car spaces.} \\ &= 150 + 26.1 + 62.4 + 27.1 + 45.1 \end{aligned}$$

With the proposed development providing 32 car spaces on the site, it is considered the development has provided sufficient car spaces to meet the likely peak parking demand for the development therefore is compliant with the Maitland DCP car parking rates. Note - Compliance is assessed on the basis that the 10 stacked car parking spaces be specifically delineated as staff car parking.

In considering the car parks compliance with *AS2890.1 – 2004* the following design detail is noted.

- ◆ Car spaces are a minimum of 2.6 metres wide x 5.5 metres long.
- ◆ Minimum aisle width of 6.6 metres has been provided.

- ◆ The long blind aisle has been provided with a 1-metre-wide blind aisle extension and suitable turning bay to facilitate convenient forward entry and exit from the site.
- ◆ A clearly defined pedestrian ramp and footpath from the car park to the building entry has been provided within the car park.

Therefore, on review it is determined that the proposed car parking design is compliant with AS2890.1-2004 and that overall suitable and sufficient on-site car parking has been provided within the development.

#### 10.4 – Site servicing

In terms of servicing of the site it should be noted that as a child care centre:

- ◆ Most consumables are purchased by staff and transported to site within private light vehicles.
- ◆ Waste collection has been designed as an on-site collection by private contractor using the turning bay during non-operating hours for the child care centre so as to not interfere with the drop-off and pick-up of children. The collection vehicle enters the site in a forward direction and manoeuvres into the turn bay before reversing out the turning bay and driving forward out of the site; and
- ◆ Other deliveries to the site will be infrequent (once or twice a day) using smaller light vehicles who can use the vacant car parks during non-peak drop off and pick up times. All these deliveries would occur outside the peak parking demand periods for the child care centre and will not conflict with the majority of child drop off and pick up traffic movements. No separate service bay for these deliveries is required.

Overall, it is concluded the use of the site turning bay for servicing during non-operating periods of the child care centre or even outside the peak drop off and pick up times for the centre will ensure suitably safe and convenient servicing of the child care centre will occur.

#### 10.5 - Construction Traffic

The construction of the development will result in additional traffic entering and exiting the site. It is estimated that during the peak construction periods up to 10 construction employees will be on-site at any one time. If a car occupancy rate of 1.2 is assumed for employee traffic this would result in an AM and PM peak traffic flow to the site of in the order of 8 vph. This of course will also increase the peak parking demand at the site by a similar number during construction.

Material deliveries will add to this traffic with peak materials delivery traffic expected during the pouring of concrete slabs within the construction period. It is likely that a further 5 vph could occur during the AM peak period as a result of this construction activity. Therefore overall, it is estimated that the peak construction traffic generation resulting from the construction of the development will be in the order of up to 10 – 13 vph during the AM peak or PM peak traffic periods. This is still significantly less than the operational traffic generation from the site and thus would not adversely impact on the local road network.

Construction traffic is a short-term traffic impact that is best managed through the preparation of a construction traffic management plan prepared and implemented by the building contractor prior to commencement of construction activities. This plan may seek to minimise the impacts of construction activities by designating travel routes, access points, construction employee parking areas, material delivery procedures and times etc. This plan is best prepared, implemented and enforced by the head contractor. It is recommended that a construction traffic management plan be prepared and implemented prior to the commencement of construction activities.

# 11. ALTERNATE TRANSPORT MODE FACILITIES

The proposed development is unlikely to generate any significant additional external pedestrian and bicycle traffic from both staff and parents. Some parents may choose to walk to the centre, but most parents will be driving to and from the centre on the way to and from work. However, a concrete shared pathway is provided in Robert Road to the site that is suitable for use by any likely additional pedestrian or cycle traffic resulting from the development.

Once the public transport service is extended to the site it would be expected that the development could generate a small additional demand for its service however this would not be significant enough to warrant the provision of additional or modified services. Extension of the service to the site will be a matter for the bus company and Department of Transport to determine however suitable bus stops and shelters should be provided within the extension of Springfield Drive to the site that would adequately service the proposed child care centre.

# 12. CONCLUSIONS

This traffic and parking assessment for a 128-place long day child care centre on proposed Lots 307 - 310 Robert Road, Lochinvar has concluded the following.

- ◆ Existing traffic volumes on the adjacent road network are below the two-way mid-block road capacity thresholds of the existing road network indicating the existing adjacent road network has spare capacity to cater for development in the area.
- ◆ It is expected that the additional traffic generated by the development will be a maximum of 103 vtpm in the AM peak period and 90 vtpm in the PM peak period.
- ◆ As a local child care centre, the majority of trips generated by the development will be internal subdivision trips or trips already generated by the subdivision for travel to and from work to schools and shops which have already been considered within the traffic assessment prepared for the Lochinvar URA (*URaP-TTW September 2012 v10*).
- ◆ As such it is reasonable to conclude that subject to the road network being constructed in accordance with the adopted structure plan and the recommendations of the URaP traffic assessment then the proposal will not adversely impact on the local and state road network adjacent to the site. Noting the site has direct access to Robert Road immediately south of Springfield Drive being the main collector road within this part of the URA it is considered the development is supported by the road network structure used in the URaP traffic assessment therefore it will not adversely impact on the local and state road network near the site.
- ◆ The proposed access arrangements to the development are satisfactory and would comply with the requirements of Australian Standards. It is however also recommended that approval be sought from Maitland City Council's Traffic Committee for the installation of on-street regulatory parking signage to prohibit on-street car parking within 10 metres of the proposed accesses to the site.
- ◆ With the proposed development providing 32 car spaces on the site within the customer car parking, it is considered the development has provided sufficient car spaces to meet the likely peak parking demand for the development and is compliant with the Maitland DCP car parking rates. Compliance is assessed on the basis that the 10 stacked car parking spaces be specifically delineated as staff car parking.
- ◆ The proposed car parking design is compliant with AS2890.1-2004 and that overall suitable and sufficient on-site car parking has been provided within the development.
- ◆ Overall, it is considered that the proposed servicing facilities provided for the development are satisfactory and suitable for the development.



- ◆ That a construction traffic management plan be prepared and implemented prior to the commencement of construction activities.
- ◆ The extension of Springfield Drive and Robert Road to the site will ensure suitable pedestrian footpaths and on and off-road bicycle lanes / paths are provided connecting the residential areas around the site, to the site.
- ◆ Once the public transport service is extended to the site it would be expected that the development could generate a small additional demand for its service however this would not be significant enough to warrant the provision of additional or modified services. Extension of the service to the site will be a matter for the bus company and Department of Transport to determine however suitable bus stops and shelters should be provided within the extension of Springfield Drive to the site that would adequately service the proposed child care centre.

## 13. RECOMENDATION

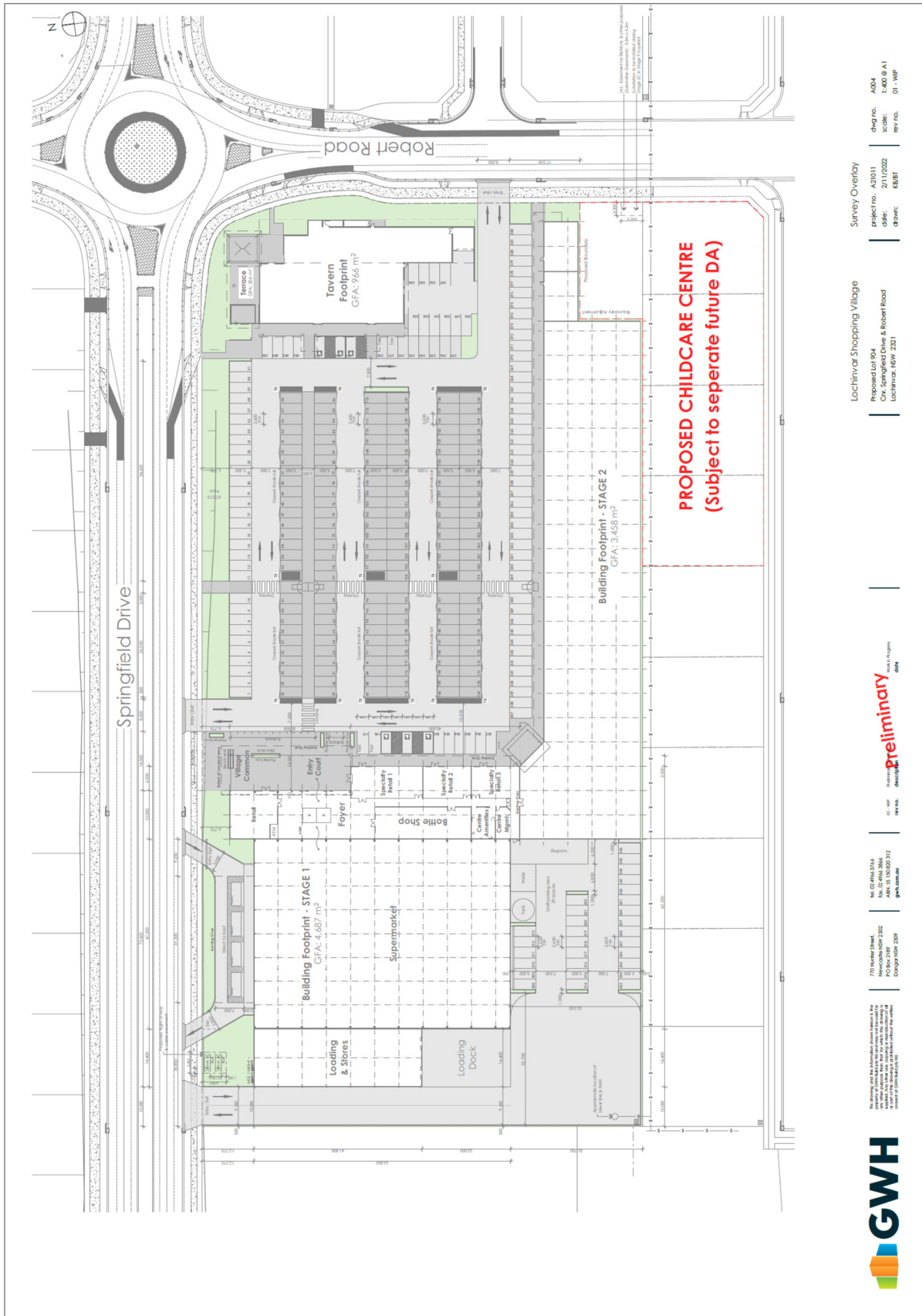
Having carried out this traffic and parking assessment for a proposed 128 place long day childcare centre on proposed Lots 307 - 310 Robert Road, Lochinvar, it is recommended that the proposal can be supported as it will not have an adverse impact on the adjacent road network and would comply with all relevant Maitland City Council, Australian Standards and TfNSW requirements.



**JR Garry BE (Civil), Masters of Traffic**  
**Director**  
**Intersect Traffic Pty Ltd**



# APPENDIX 1 DEVELOPMENT PLANS



Survey Overlay  
 Project no. A20111  
 date: 2/1/2022  
 draw: N&BT

Lochinvar Shopping Village  
 Proposed Lot 904  
 Crs. Springfield Drive & Robert Road  
 Lochinvar, NSW 2321

preliminary  
 GWH

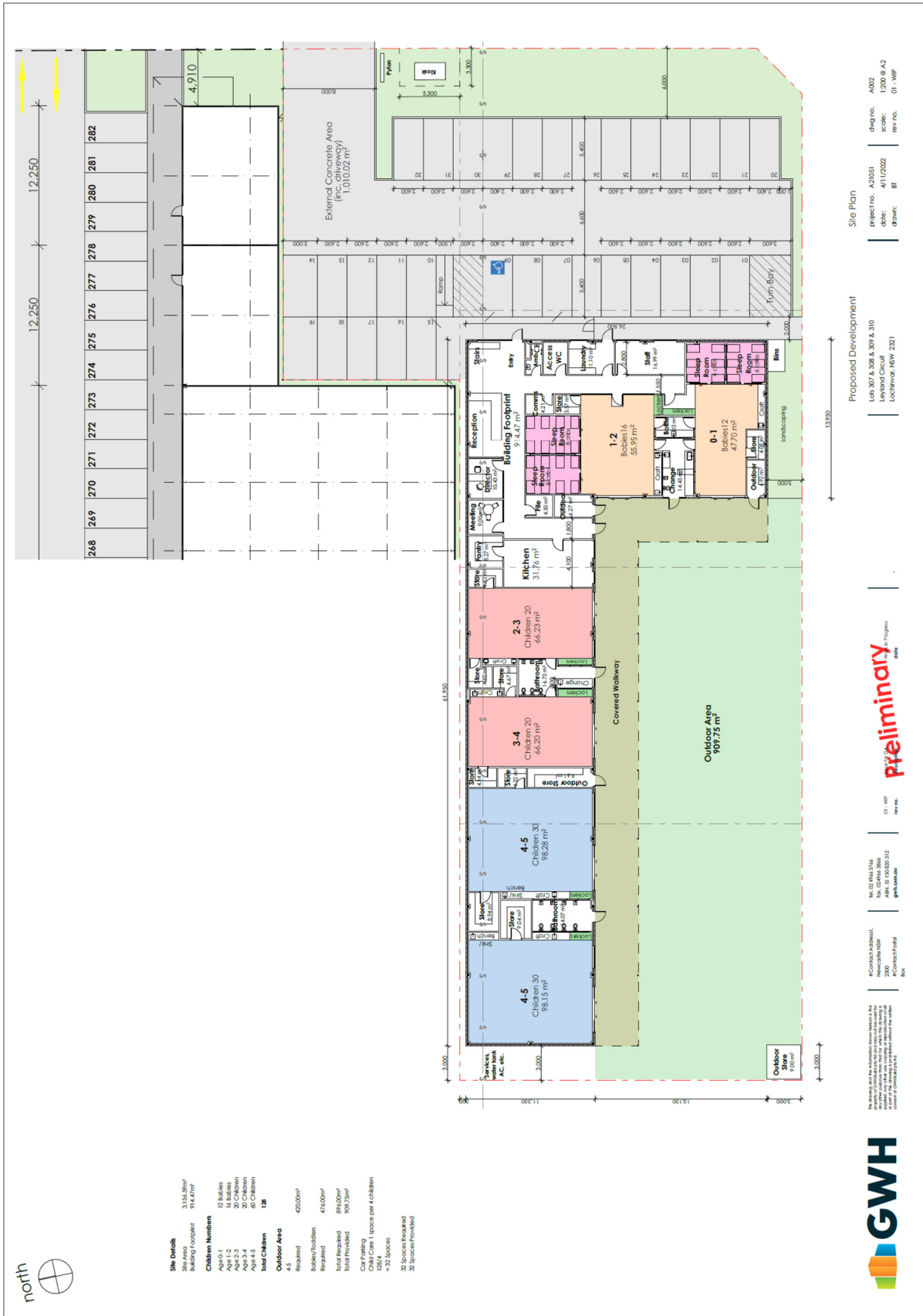
770 North Street,  
 Newcastle NSW 2300  
 Design No: 2209

Mc (02) 4943 3746  
 Fax: (02) 4943 3866  
 Email: info@GWH.com.au  
 www.GWH.com.au

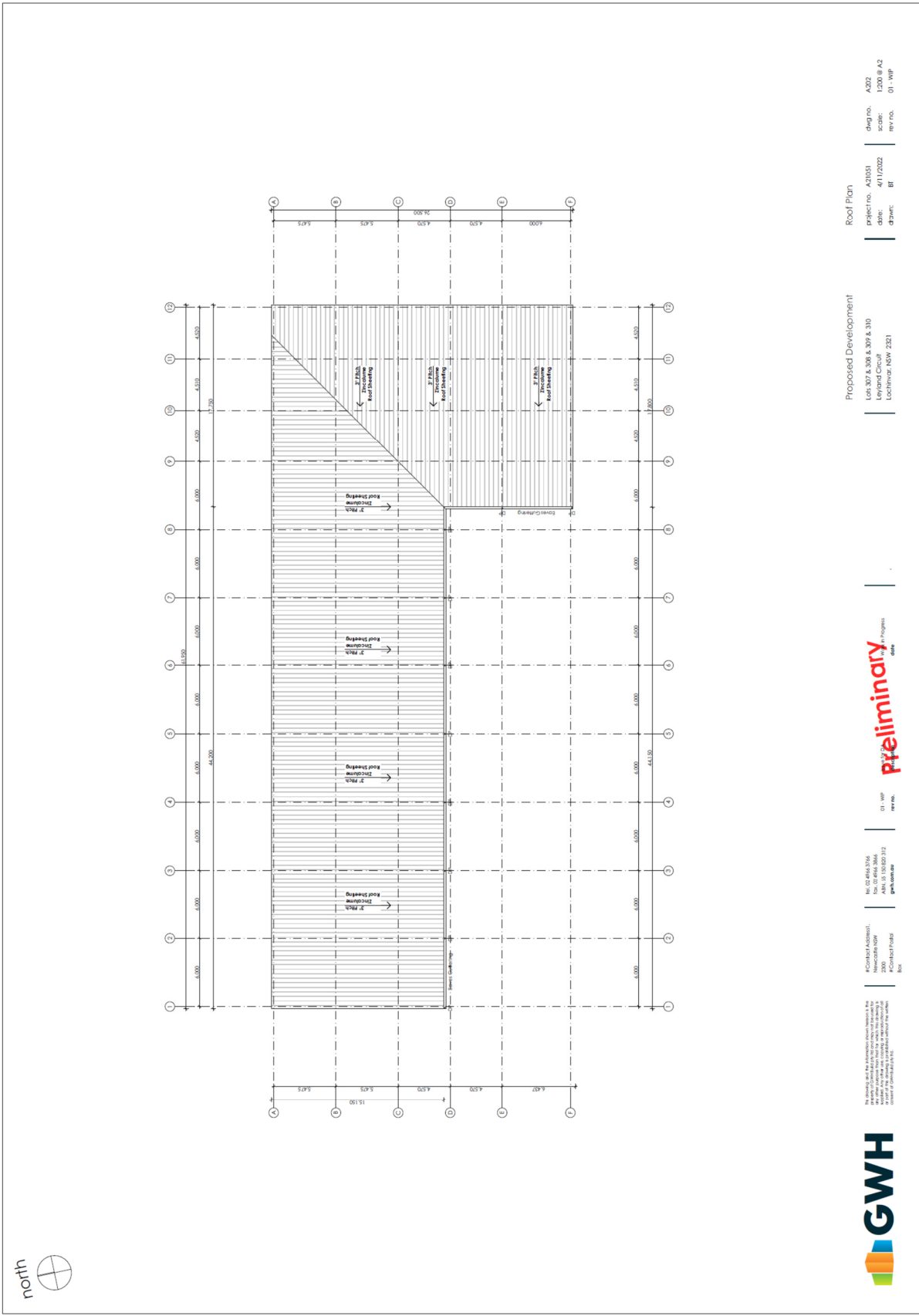


By drawing out the information shown herein to the  
 extent of the information shown herein, the  
 information herein is not intended to be used as  
 a basis for any other project or for any other  
 purpose without the written consent of GWH.

A004  
 1:400 @ A1  
 01 - WIP







Proposed Development  
 Lot 307 & 308 & 309 & 310  
 Leyland Circuit  
 Lochinvar, NSW 2301

Project no. A21051  
 Date: 4/1/2022  
 Drawn: BF

Rev no. 01 - WIP  
 Scale: 1:200 @ A2  
 Drawn: BF

Contract Address:  
 2301  
 #Contract Postal Box

Lot 307 & 308 & 309 & 310  
 #Contract Postal Box

Lot 307 & 308 & 309 & 310  
 #Contract Postal Box

Lot 307 & 308 & 309 & 310  
 #Contract Postal Box



Lot 307 & 308 & 309 & 310  
 #Contract Postal Box









**Proposed Development**  
 Lot 307 & 308 & 309 & 310  
 Leysford Circuit  
 Lochinvar NSW 2321

**Sediment Control Plan**  
 project no. A21031  
 date: 4/11/2022  
 client: BT

drawn: BT  
 rev no. 01 - WP  
 scale: 1:200, 1:100 @ A2  
 A1002  
 rev no. 01 - WP

**Preliminary**  
 01 - WP  
 rev no. 01 - WP

Mc Graw Hill  
 100 Mc Graw Hill  
 2000 Sydney  
 NSW 2000  
 Australia

Contract Address:  
 Leysford Circuit  
 Lochinvar NSW 2321

Contractor:  
 BT



# APPENDIX 2 TRAFFIC COUNT DATA

