TRAFFIC IMPACT ASSESSMENT

SERVICE STATION UPGRADE
(Incorporating a Convenience Store)

For

Maria Galis
370-372 Carrington Road
LONDONDERRY

August 2018

Prepared by

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370-372 Carrington Road
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1. Introduction

Winning Traffic Solutions Pty Ltd (WTS), an established consultancy in providing traffic engineering solutions and advice, has been engaged to assess the traffic impacts by the development of the subject site as a Service Station Upgrade (incorporating a convenience store), of an existing service station that occupies the site (refer Appendix 1) and is planned for demolition to make way for planned upgrade of buildings and fuel outlets (refer Appendix 2).

The site is located within the within the Penrith City Council administration boundaries (refer Figure 1 below).

Figure 1

It is understood the site has operated as a service station for a number of years. It is a family owned business operating under licence for fuel distribution for Caltex Australia. The Owner is looking to demolish the existing premises and upgrade the site and facilities with a focus to customer needs.

Discussions were undertaken with RMS relating to vehicle access of the subject site and the safety and efficiency of the adjoining road network. RMS in its e-mail dated 27 March 2018 to WTS (refer Appendix 5), requires some restrictions to the site in terms of vehicle access and queuing and that information to be provided to complete its assessment of the DA to be submitted.

The issues raised in this correspondence are addressed in this report relative to traffic, vehicle access and road user safety.

The site of the proposed development is confined to an existing area currently occupied and functioning as a Service Station having access, not only to Londonderry Road, an RMS classified Regional Road (RR 2063), but also Carrington Road, a local access road administered by Council (refer Figure 2).

Figure 2

This Traffic Impact Assessment Report is in support of the DA and addresses Council and RMS requirements for information as detailed in Council's DCP Part C – C10 Transport, Access and Parking and the above referenced RMS correspondence.

The submitted development application is to demolish the existing Service Station and construct state of the art Service Station (incorporating a convenience store).

Currently there are four (4) fuel (petrol) outlet dispensers and one (1) diesel dispenser pump operating on the existing site. The number of fuel outlet points (pumps) are reduced to four (4) with multi-product capability incorporating both fuel and high flow diesel.

It is proposed to operate under existing approved trading hours 5am to 7pm Mon-Fri; 7am to 5pm Sat and 8am to 5pm Sun for both light vehicle and heavy vehicle fueling and convenience store operations.

Vehicle access of the site proposes to retain existing access points but modified to accommodate largest vehicle entering and exiting the site and some restrictions to access (Refer Appendix 3).

In addition, traffic volume counts (refer Appendix 4) have been undertaken of the adjoining road network of Londonderry Road, Hughes Street (western side) and Carrington Road (Refer Appendix 4). Given the results of those surveys and anticipated traffic generation of the submitted development the existing Level Of Service (LoS) of the existing intersection is considered will not alter (estimated worst case at LoS B) and thus SIDRA computer analysis the subject development is not required.

2. Scope of Report

This report reviews the relative traffic, parking and road user safety operational aspects of a proposed Service Station (incorporating a convenience store) proposed for the site.

This report has been prepared by Terry Winning, Director of Winning Traffic Solutions Pty. Ltd. an RMS accredited Level 3 Road safety Auditor (RSA-02-0063) and addresses the above issues as well as the access and parking, road user safety operational aspects of the site accommodating a proposed Service Station (incorporating a convenience store).

Penrith City Council's Development Control Plan Part C 2014 – C10 Transport, Access and Parking is referenced as the basis for this report.

In addition reference is made to:

- RTA "Guide to Traffic Generating Developments" (Version 2.2 – 2002)
- AS/NZ Standard 2890.1:2004 – Part 1 Off-street Car Parking, 2890.2 – Part 2 - Off-street Commercial Vehicle Facilities (parking) and 2890.6 – Part 6 Off-street parking for people with disabilities
- Austroads Guide To Road Safety

The above have been applied to the site access and parking proposed and presents the assessment undertaken of traffic impacts of the development with due consideration of type of development, customer access needs, traffic generation, vehicle access, parking requirements, surrounding road network, overall road user safety and the current restrictions of the site.

3. The Site and Connecting Road Network

For the purpose of description Londonderry Road is orientated in a north/south direction and Carrington Road east/west passing the subject site (refer Figure 1 above).

The site is located on the south-eastern corner at the junction of Londonderry Road and Carrington Road and identified as 370-372 Carrington Road, Londonderry.

It is understood Londonderry Road is an RMS administered Road (RR 2063) whilst Carrington Road is a classified local road administered by Council.

The site is located within a predominantly residential area with some commercial development occupancy to the east and west (north of Carrington Road – refer Fig. 2 above).

Londonderry Road serves as a major precinct collector/distributor road between Richmond (in the north) and connecting with The Northern Road, Llindilo (in the south) and carries relative low volumes of traffic past the subject site (refer Appendix 4). The road is RMS approved to accommodate B-double heavy vehicles (HV) up to 26m in length.

Carrington Road is a local access collector/distributor road between Londonderry and Windsor Downs (in the east).

Londonderry Road operates as a two-lane two-way road with kerb and gutter accommodating generally, 3,5m travel lanes with a 3.2m wide northbound right turn storage lane to Carrington Road and unrestricted kerbside parking lanes 3.3m wide traffic calmed with edgeline markings. Footway areas both sides of the road (5,5m eastern side and 3.7m western side) provide concrete paved footpaths 1.2m wide. The road is speed regulated past the site to 60 km/hr with School Zone speed restrictions 8-9:30 AM and 2:30-4 PM School Days.

Similarly, Carrington Road operates as a two-lane two-way road with kerb and gutter accommodating generally 12.3m wide road carriageway divided by BB Barrier line with unrestricted kerbside parking. Footway areas both side (approx. 3.7m wide) provide concrete paved footpaths 1.2m wide. The road is speed regulated to 50 km/hr with School Zone speed restrictions 8-9:30 AM and 2:30-4 PM School Days, past the subject site.

The area is located in relatively flat terrain that accommodates good sight lines within the road network and at intersections, relative to the speed of the road that facilitates operational road user safety.

4. Traffic Flow

As existing traffic volumes were not available near the site, traffic flow count information was gathered to allow assessment of the impacts of additional traffic generated by the proposed development onto the road network. It should be noted that the survey included vehicles accessing the site as well as Hughes Street opposite the site access in Londonderry Road.

Traffic volume counts were undertaken during the weekday morning and afternoon peak times (Wednesday 4 April 2018) being 6-10 AM and 4-7 PM. For the purpose of evaluation these periods are considered the peak times where the higher (commuter) traffic demand will mix with traffic of the proposed development.

An hourly summary of the traffic survey is shown in Appendix 4. Should a full set of gathered data be required, this can be provided on request.

Generally, traffic flow along Londonderry Road, in the vicinity of the subject site, during the **AM peak hour** (0800-0900) accommodates in the northbound direction approximately 570 vph (80 of which turn right to Carrington Road) and in the southbound direction approximately 370 vph (40 turning left). In Carrington Road during the same period westbound accommodates approximately 120 vph (90 turning left – 30 turning right into Londonderry Road).

During **PM peak** (1630-1730) traffic flow in Londonderry Road accommodates in the northbound direction approximately 520 vph (90 of which turn right) and in the southbound direction approximately 470 vph (60 turning left). In Carrington Road during the same period westbound accommodates approximately 160 vph (90 turning left – 70 turning right).

It is interesting to note that from the survey of the Service Station, vehicle entry access of the site was predominantly from Carrington Road (eastern access) and exit via Londonderry Road.

5. Proposed Site Development

The existing service station facility is considered by the owners as outdated and in need of refurbishment. The light vehicle fuelling facilities are in need of upgrade and there is limited diesel facilities for the needs of both the local community and potential large vehicle customers.

Currently there are four (4) fuel (petrol) outlet dispensers and one (1) diesel dispenser pumps operating on the existing site. The number of fuel outlet points (pumps) are reduced to four (4) with multi-product capability incorporating both fuel and high flow diesel.

It is proposed to operate under existing approved trading hours 5am to 7pm Mon-Fri; 7am to 5pm Sat and 8am to 5pm Sun for both light vehicle and heavy vehicle fueling and convenience store operations. The Owner is looking to demolish the existing premises and upgrade the site and facilities with a focus to customer needs, not only for truck fueling facilities but to service the increase in the local fleet to diesel driven 4WD, AWD and family SUVs.

The site has been configured to allow the passing of stationary vehicles refueling at the pumps (refer Appendix 3).

Vehicle access of the site proposes to retain existing access points but modified to accommodate largest vehicle entering and exiting the site (Refer Appendix 3).

Note there are no “work bays” associated with the operation of the service station submitted for the development.

In addition, a function of the proposed new building, an area of 195m^2 GFA, is to accommodate office, console, sales area, cool room, storage area and toilet. The “sales area” is to provide basic staples (bread and milk), drinks and assorted confectionaries and occupies an area of approximately 90 m^2 with Office/Console area 40m^2 that forms the basis for parking assessment discussed below.

This building is serviced by a loading bay for a Medium Rigid Vehicle – (8.8m long)

Further, in Londonderry Road additional “No Entry” signposting (facing south) and “All Traffic Left” (at exit point) is to be provided at the access driveway of the site restricting vehicles to left in and left out only. Similarly in Carrington Road, at the western driveway “No Entry” signs are to be employed restricting entry into the site only from the eastern driveway. Exit is via western driveway.

6. ***Traffic Generation of Proposed Development.***

The greatest impact of generated traffic of the proposed development will be during the morning and afternoon peak periods where the higher (commuter) traffic demand will mix with traffic of the proposed development.

The RTA "Guide To Traffic Generation Developments" does not include information for Heavy Vehicle (HV trucks) refueling however, it is considered that for analysis purposes it is offered no more than a maximum of 2 to 4 heavy vehicles per hour would seek the services of the facility, on the basis of the observed low percentage of HVs within the traffic stream and no HVs were surveyed entering the Service Station during this time and have been included in the overall assessment of generated traffic volumes.

It should be noted that the focus of trade for the existing Service Station is to the PM peak commute times (refer appendix 4 –Service Station PM Peak Combined).

In addition, traffic volume counts undertaken of the adjoining road network of Londonderry Road, Hughes Street (western side) and Carrington Road and given the results of those surveys and anticipated traffic generation of the submitted development, the existing Level Of Service (LoS) of the existing intersection is considered will not alter (estimated worst case at LoS B but not on a regular basis) and thus SIDRA computer analysis the subject development is not required.

Notwithstanding, the RTA Guide does include the following two-way weekday afternoon peak hour traffic generation rates for other uses:

- 0.66 A(F) for service stations with convenience stores, where A(F) is the area of the convenience store; and
- five vehicles per 100m^2 for cafés/restaurants (indicative).

On this basis and to determine the traffic generation of the proposed new facility, the following assumptions have been made to determine the various components of generated traffic for the proposed development:

- It has been established for normal service stations alongside arterial roads that about 75% of patronage comes from the adjacent road with induced traffic from other locations and roads representing about 25% of patronage.
- Determination of trips aligns with RTA rates for PM (evening peak) vehicle trips.
- For the purpose of analysis, the PM Peak traffic flow information was applied to align with RTA Guidelines.
- Notwithstanding, and applying the of the above RTA rates for maximum impact, the anticipated traffic generated by the proposed development is:
    - Service Station/Convenience Store (195m^2) = 128 two-way vtph
    - Truck refueling facility (4 pumps) = 8 two-way vtph
    - **TOTAL trips 130 two-way vtph (**70 in – 70 out)

  NOTE: Due to site access restrictions it is unlikely this volume will be achieved but has been included for traffic distribution assessment.
- Existing traffic generation of the site has been surveyed at the highest during the PM peak commute times at 42 vtph – thus the traffic generation of the new site equates to 88 vtph (insufficient to apply SIDRA analysis).
- On the basis of the above existing distribution of traffic:
    - entering the site is estimated at 95% access via Carrington Road (50% right turn in – most assumed northbound from Londonderry Road and 50% left turn in)
    - exiting the site is estimated at 50% exit to Carrington Road and 50% exit to Londonderry Road - to travel south

- The following distribution of generated traffic of 130 two-way vehicle trips (70 in – 70 out) applied to the road network – note that it is estimated more vehicles will enter into the site via Londonderry Road due to improved access:

    - Entering the site;
        - Carrington Road 50 vtph (60% - 40 turn left,10 turn right – the later assumed northbound from Londonderry Road)
        - Londonderry Road 20 vtph (40% - all left turn)
    - Exiting the site:
        - Carrington Road 35 (50% - split 50/50 east and west)
        - Londonderry Road 35 (50% - all southbound)

7. ***Evaluation of Traffic Generation by the Proposed Development***

The capacity of the road network is largely determined by the capacity of its intersections to cater for peak traffic flows. The T-junction configuration at Londonderry Road and Carrington Road impacts the operation of Carrington Road and the right turn movement from Londonderry Road to Carrington Road – the later provided with a right turn storage lane separating the through traffic thus minimising impacts on capacity along Londonderry Road.

Though not used in this analysis, SIDRA provides a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. It must be noted the SIDRA software does not model "co-ordinated" intersections.

Based on average delay per vehicle, SIDRA estimates the following Levels of Service (LoS) for an intersection configuration operating under give way/stop signs, the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LoS:

0 to 14	=	"A" Good
15 to 28	=	"B" Acceptable delays and spare capacity
29 to 42	=	"C" Satisfactory but accident study required
43 to 56	=	"D" Near capacity and accident study required
57 to 70	=	"E" At capacity and requires other control mode
> 70	=	"F" unsatisfactory and requires other control mode

It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account in context of the whole of site operation. For example, an intersection where all movements are operating at a LoS "A" except one which is at LoS "E", may not necessarily define the intersection LoS if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

Given the additional small number of vehicles that is estimated to be generated by the subject development the existing Level Of Service (LoS) of the existing intersection is considered, will not alter (estimated worst case at LoS B but not on a regular basis) and thus SIDRA computer analysis the subject development is not required.

Due consideration has been given to the content of heavy vehicles within the traffic stream and it is considered that given the existing traffic volumes counts included heavy vehicles the percentage increase in this volume, due to the proposed development, would not be that great to influence the future LoS.

The distribution of generated traffic into the road network is based on observations and surveyed traffic data. It is considered that improving the driveway access into the site in Londonderry Road will induce more traffic to access the site directly from Londonderry Road that currently access the site via Carrington Road. This provides a benefit that fewer vehicles right turn into the site form Carrington Road.

It is considered the above addresses the RMS requirements for details of traffic volumes and impacts of generated traffic.

8. Evaluation of Vehicle Access and Movements Within the Site

Vehicle access provisions have been determined by the largest vehicle, a 19m articulated vehicle and Truck and Dog Trailer combination. A swept path analysis has been undertaken, demonstrating vehicle access to and from the site via access driveways and the adjoining road network (refer Appendix 3).

Vehicle access of the site proposes to retain existing access points but modified to accommodate largest vehicle entering and exiting the site.

As previously mentioned preliminary discussions were undertaken with RMS relating to vehicle access of the subject site and the safety and efficiency of the adjoining road network. RMS in its e-mail dated 27 March 2018 to WTS (refer Appendix 5), requires some restrictions to the site in terms of vehicle access and queuing and that information to be provided to complete its assessment of the DA to be submitted.

Firstly, the proposed driveway access of Londonderry Road (Points 1 & 2 of e-mail) is modified to generally accommodate vehicles simultaneously entering and leaving the site (refer Appendix 3). The storage capacity and flow through configuration within the site can adequately accommodate this activity given the anticipated traffic volumes. Guidance for this movement is provided by painted median within the site to direct exiting vehicles to the left hand side of the driveway with signposting “Left Turn Only” at the exit point. Raised median can not be employed as it would impede HV movements from the site to Londonderry Road (refer Appendix 3) that would require an AV (19m semi-trailer) to encroach across the centerline in Londonderry Road.

In addition, RMS do not support the right turn movement to/from Londonderry Road and it is proposed to provide “No Entry” signs (facing NB traffic in Londonderry Road) to control this movement. It should be noted from the traffic surveys that this is not a regular occurrence.

Secondly the location of the inlets to the underground fuel tanks are situated at the eastern fuel dispensing bowsers to accommodate a tanker (19m AV) discharging into the tanks without impeding access or circulation of other vehicles entering or leaving the site.

Further, RMS have raised concerns about the proximity of the western bowsers to Londonderry Road and the capacity to accommodate stored vehicles. Given the availability of bowsers and the number of anticipated vehicles accessing from Londonderry Road, sufficient storage is provided to accommodate two (2) vehicles at the western bowsers. The probability of this occurrence is considered would be remote.

In Carrington Road the western driveway access has been modified to accommodate truck and dog trailer exiting onto Carrington Road. RMS does not support the right turn movement from the service station onto Carrington Road.

Notwithstanding, it is submitted that that this is an existing movement and the demand would be light and given the width of driveway, would be difficult to control. This is a common access arrangement for “side road” connection for corner service stations and given the traffic volumes along Carrington Road, the limited queue in Carrington Road from Londonderry Road, the frequency of gaps in the traffic stream eastbound in Carrington Road, the regulated speed of the road (50 km/hr with School Zone) and available mutual vehicle/vehicle sight lines, it is considered the risk of an incident occurring is low with low severity outcome should an incident occur. Thus, it is considered road user safety is not compromised by retaining this existing movement.

In addition, exiting to Carrington Road via the eastern driveway is considered has a greater potential for incident (both internal and external), given the proposed layout of the site.

On the basis of the above it is submitted that “No Entry” signs be employed at the western driveway access in Carrington Road to separate right turn movements into (eastern driveway) and out of (western driveway) the site.

Internal to the site access of both light and heavy vehicle refueling facilities have been identified in the submitted plans (refer Appendix 3).

The site has been configured to allow the passing of stationary vehicles refueling at the pumps (refer Appendix 3).

Basically, traffic flow within the site is configured in a clockwise direction. The majority of vehicles (both light and heavy) will access the site via Carrington Road and exit via Londonderry Road/Carrington Road. It is anticipated a small percentage of vehicles will enter the site from Londonderry Road and exit via Carrington Road.

Service vehicle access is made available to accommodate a Small Rigid Vehicle (SRV) and a loading bay has been provided for access. Swept path analysis of this vehicle access in demonstrated in Appendix 3.

Exiting the site, it is expected that all vehicles (both light and heavy) will exit via the exit driveways provided. The road user safety issues of this exit arrangement have been discussed above.

9. ***Parking***

Parking assessment for the proposed new facility is based on Penrith City Council's Development Control Plan Part C 2014 – C10 Transport, Access and Parking; Clause 10.3 Parking, Access and Driveways and Table C10.2 Car Parking Rates.

On the basis of the above, the following parking rates have been applied to the new development, noting there are no work bays being considered (refer Appendix 2):

- Service Stations and Convenience Stores - 6 spaces per work bay plus 4 spaces per 100m^2 of gross floor area of convenience store.
- The proposed GFA of the Convenience Store is 195m^2

Therefore, employing the above rates to the new development, the following parking spaces are required:

- Service Station and convenience store = 1.95 m^2 x 4 = **7.8 spaces**

Applying this rate equates to 8 car spaces car parking spaces.

It is submitted that the purpose of the Service Station (accommodating a convenience store) associated with the site, primarily caters for refueling of vehicles. As such a "dual purpose" trip to shop at the convenience store, for the purpose of assessing the parking requirements for the site development, is aligned with the primary purpose of the site as a Service Station and needs to be considered.

Therefore, the submitted development accommodating a Service Station refueling facility (incorporating a convenience store) proposes the following:

- Car parking (including disabled) = 4 spaces
- Car parking (spaces available at pumps) = 8 spaces
- Loading Bay Truck parking = 1 space

In total **13 car parking spaces** are accommodated within the proposed development that caters for cars, heavy vehicles and 19m long articulated vehicles, satisfying both Council and RMS requirements.

All parking modules and access facilities have been designed in accordance with relevant Australian Standards 2890.1, 2890.2 and 2890.6 (refer Appendix 2).

Therefore, proposed parking provisions for the submitted development and whole of site operation is therefore considered compliant with Australian Standards and Council requirements.

10. Conclusion

RMS in its e-mail dated 27 March 2018 to WTS (refer Appendix 5), requires some restrictions to the site in terms of vehicle access and queuing and that information to be provided to complete its assessment of the DA to be submitted. The issues raised in this correspondence are addressed in this report relative to traffic and road user safety.

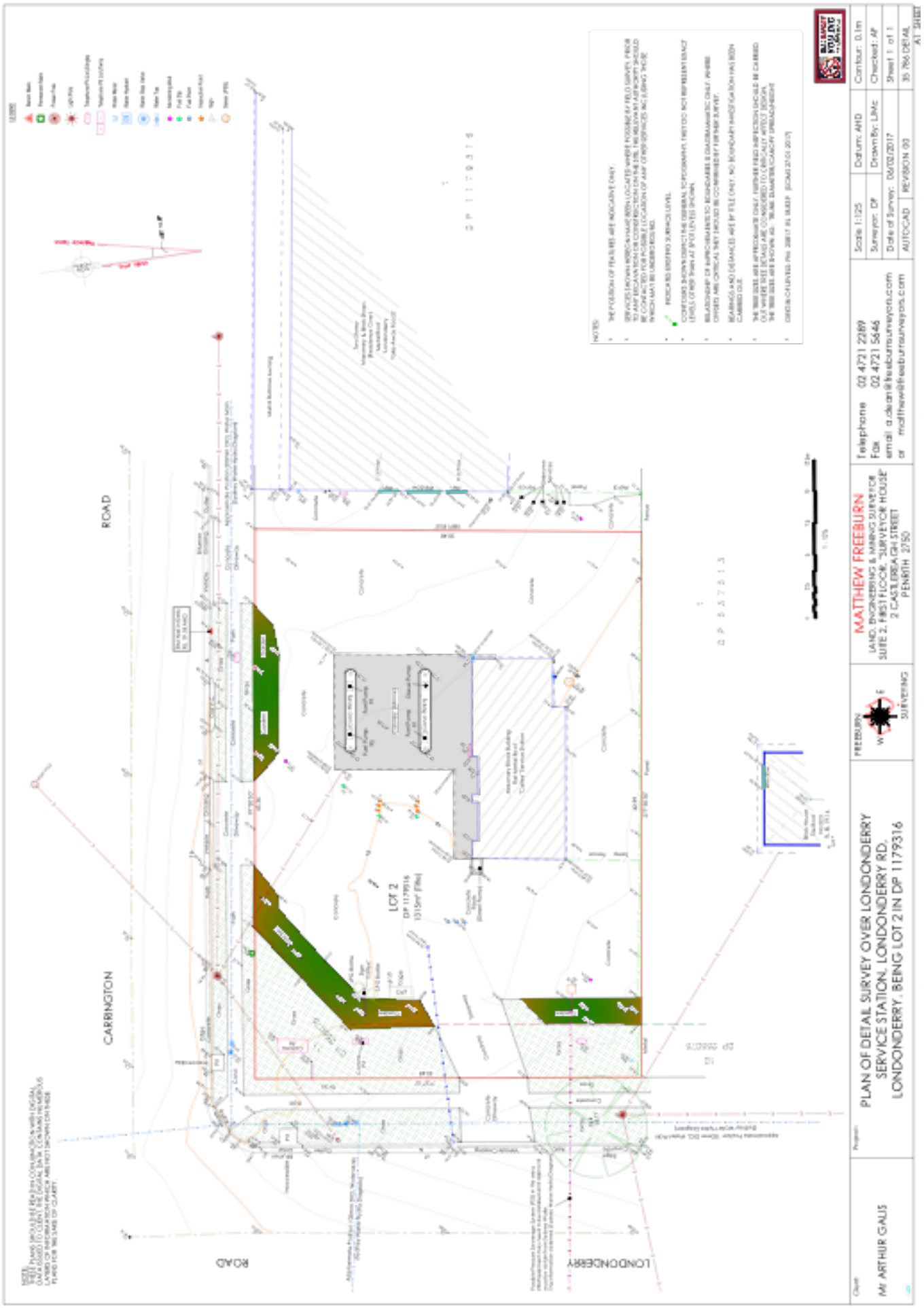
On the basis of this submission, it is considered that the assessment of the traffic and parking impacts and the assumptions and calculations made in determining those impacts are considered valid.

Therefore, it is submitted the proposed development of the subject site as a Service Station Refueling Facility (incorporating a convenience store) will not impact the existing Level of Service provided on the adjoining road network nor will access or road user safety be compromised by the operation shown in the submitted plans.

Terry Winning
Director
Winning Traffic Solutions P/L
(RSA - L3 RSA No. 0063)

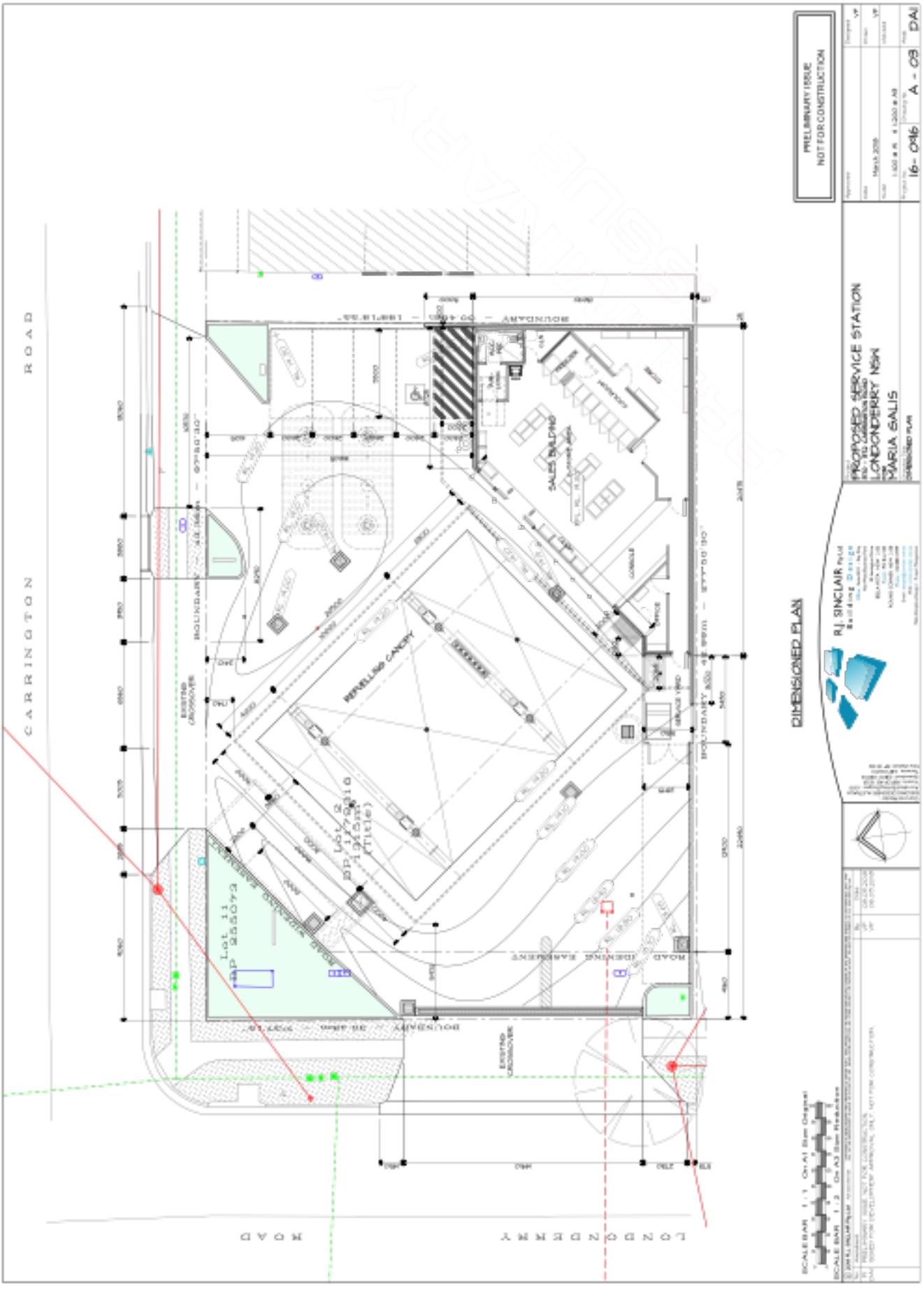
APPENDIX 1

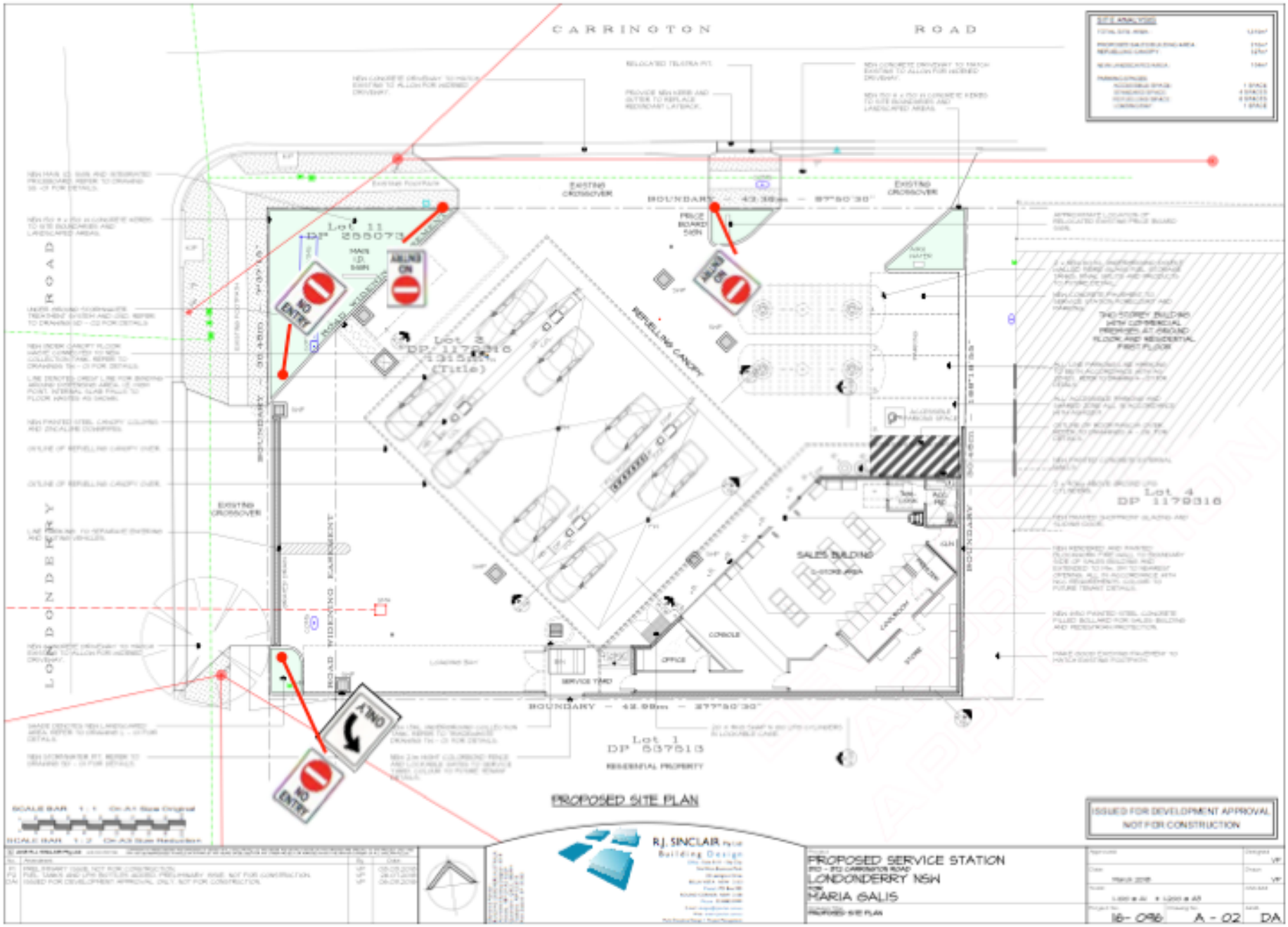
EXISTING SITE PLAN OF SURVEY

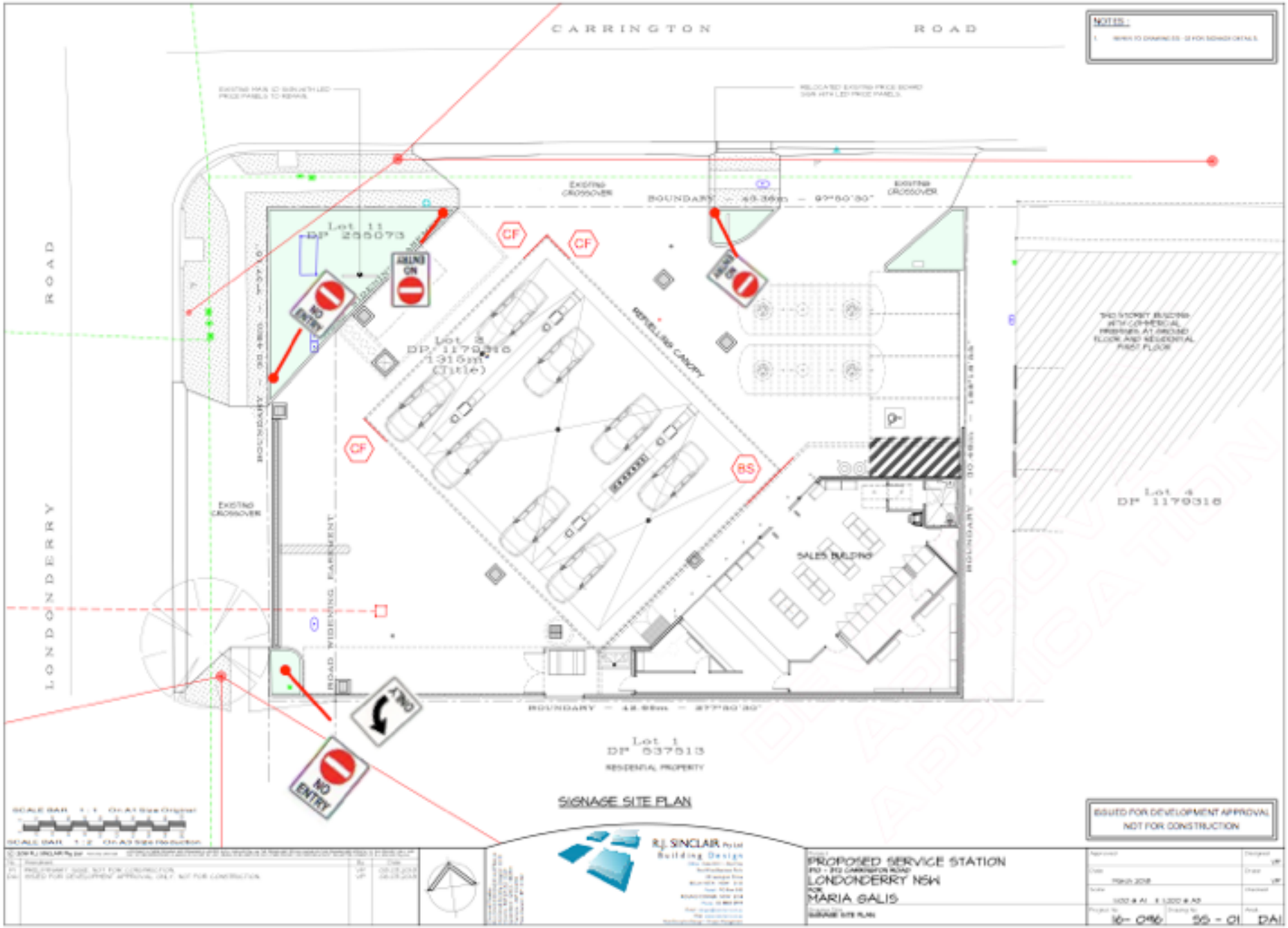


APPENDIX 2

EXTRACT OF SITE DEVELOPMENT PLANS







ISSUED FOR DEVELOPMENT APPROVAL
NOT FOR CONSTRUCTION

R.J. SINCLAIR Pty Ltd
Building Design

PROPOSED SERVICE STATION
LONDONDERRY NSW
FOR
MARIA GALIS

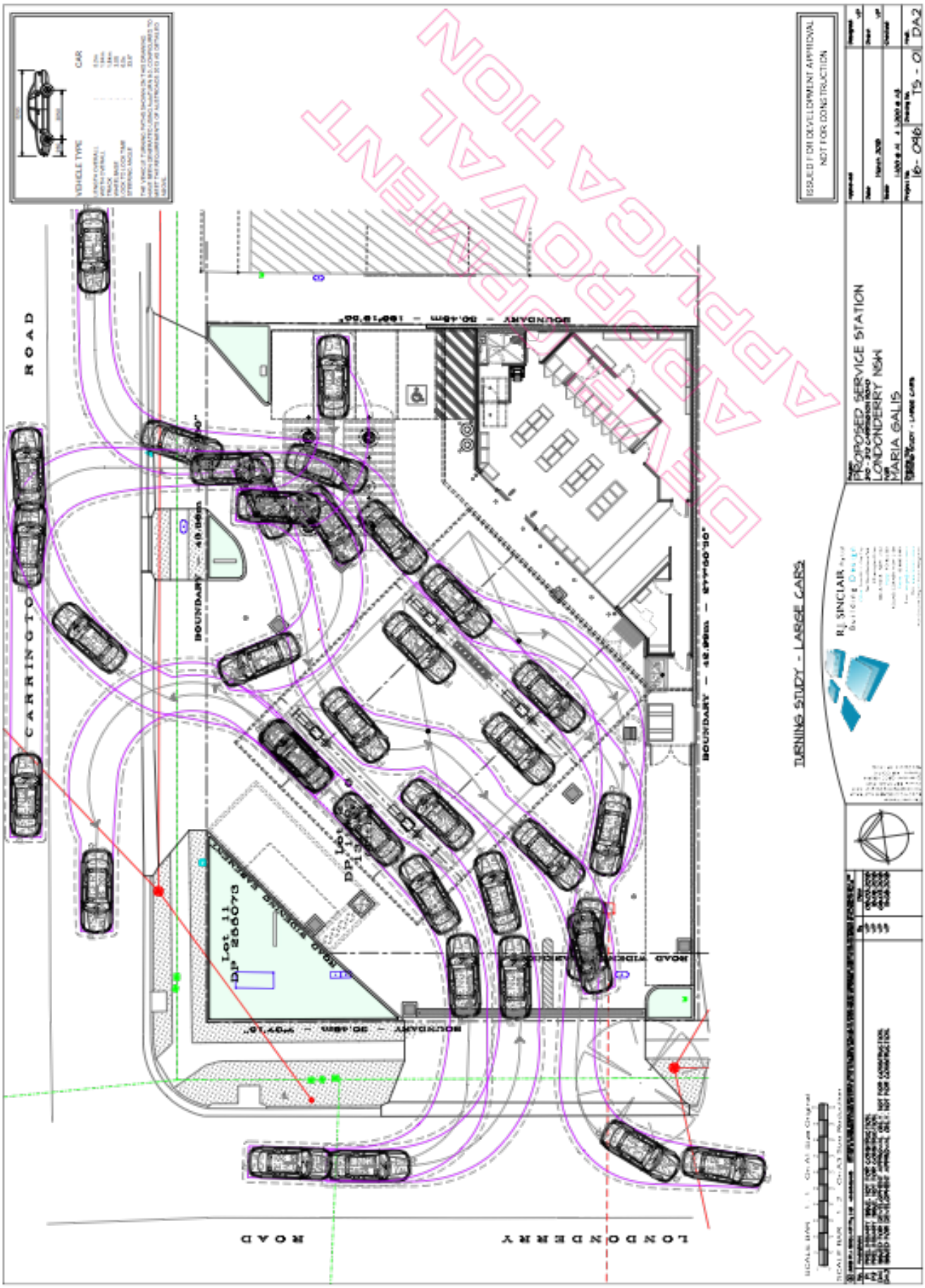
Drawing Title: ELEVATIONS AND SECTIONS

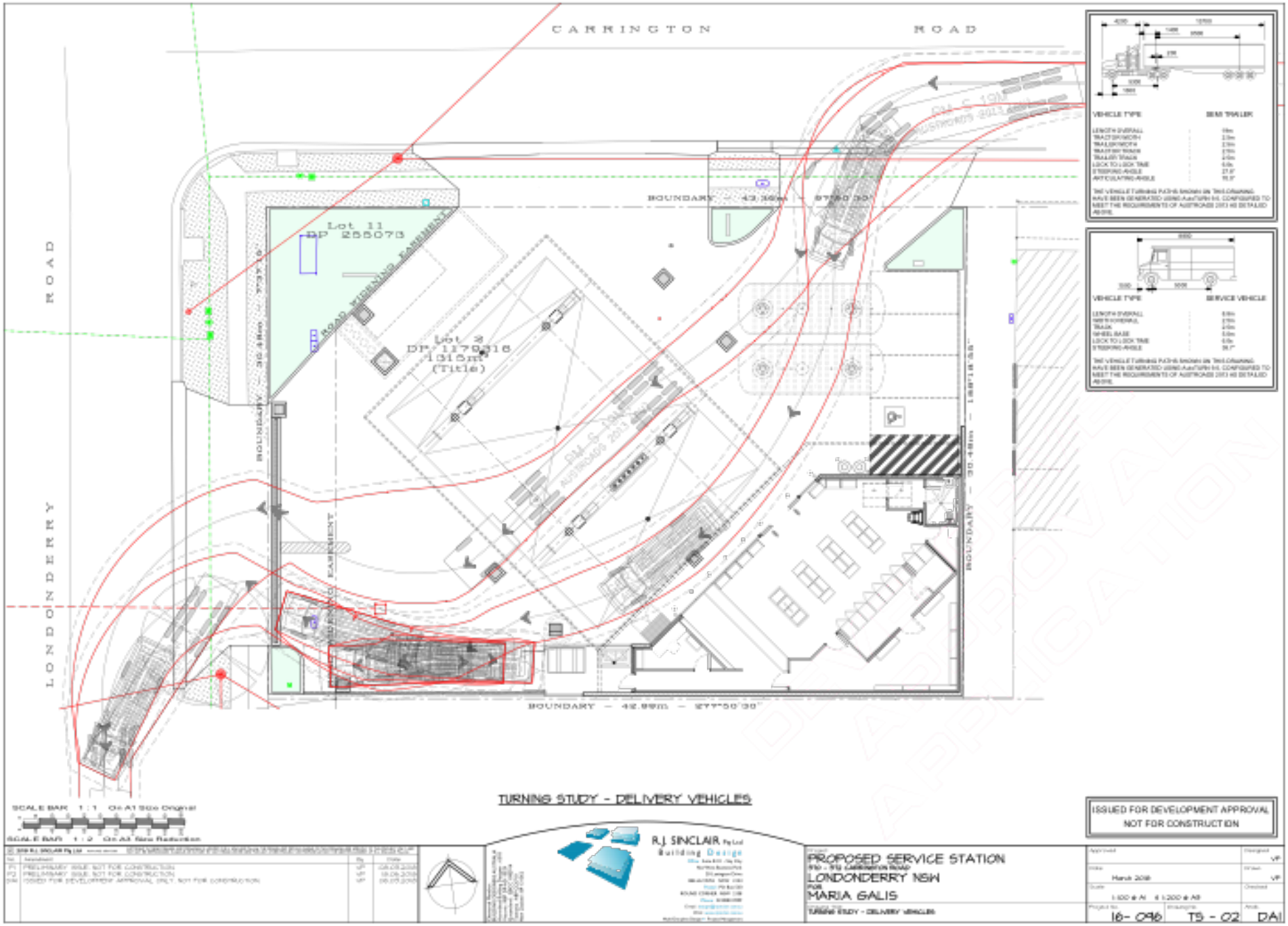
Date: March 2019
Scale: 1:100 @ A1 & 1:200 @ A3

Project No. 18-096
Drawing No. A-05
Issue: DAI

APPENDIX 3

VEHCILE SWEPT PATH ANALYSIS





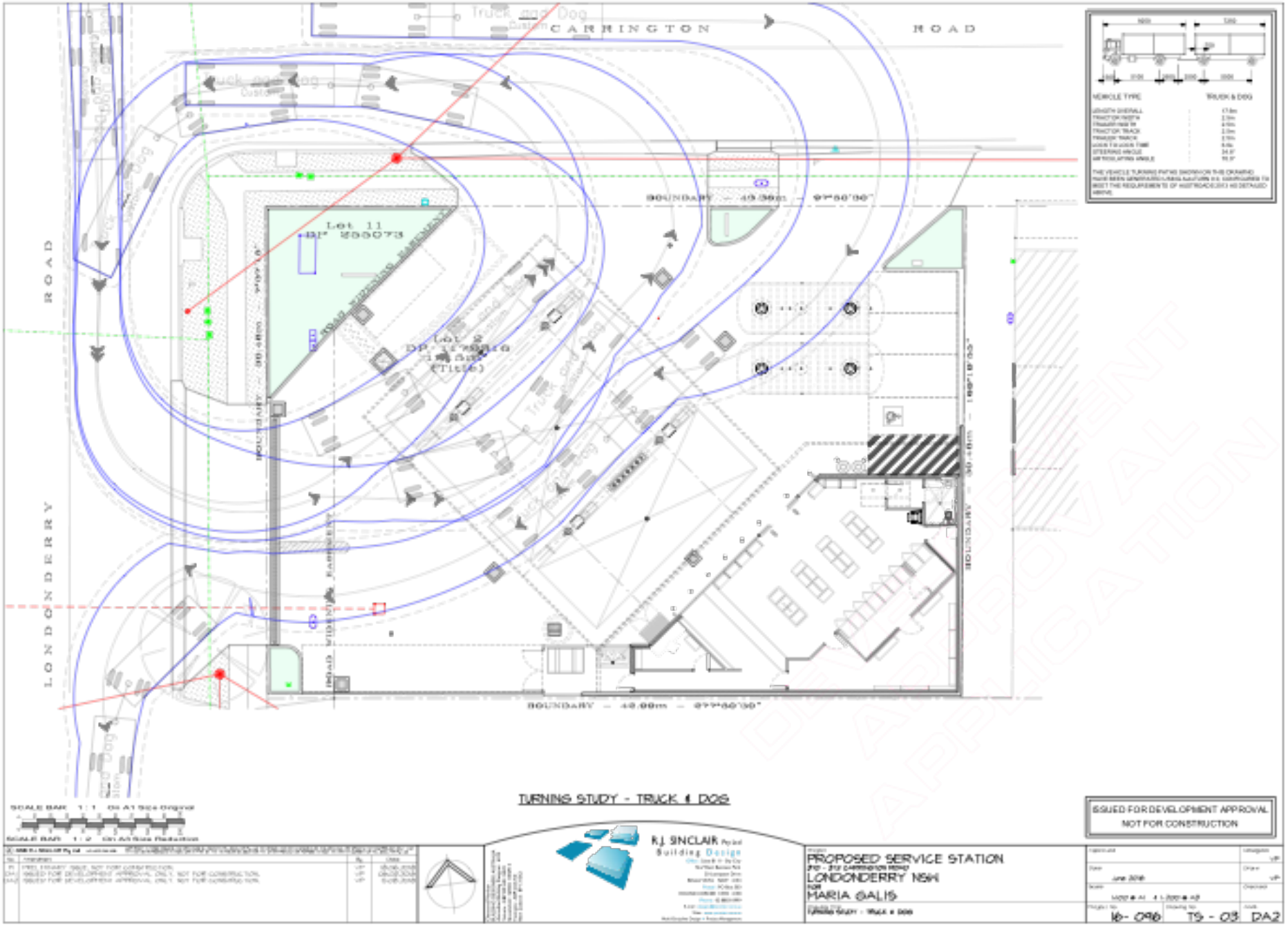
TURNING STUDY - DELIVERY VEHICLES

ISSUED FOR DEVELOPMENT APPROVAL
NOT FOR CONSTRUCTION

R.J. SINCLAIR Pty Ltd
Building Design

PROPOSED SERVICE STATION
910 - 912 CARRINGTON ROAD
LONDONDERRY NSW
FOR
MARIA GALIS
TURNING STUDY - DELIVERY VEHICLES

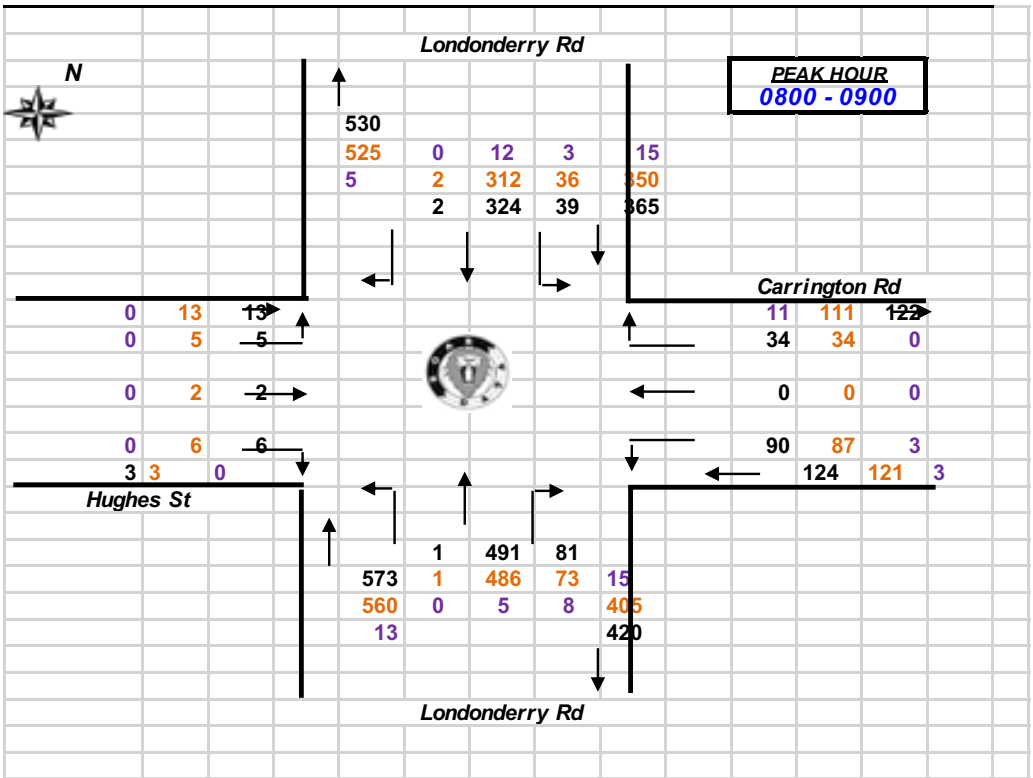
March 2019
1:100 @ A1 & 1:200 @ A3
16-096 TS - 02 DAI



APPENDIX 4

TRAFFIC SURVEY DATA

TRAFFIC VOLUME DATA AM and PM (Wednesday 4 April 2018)
LONDONDERRY ROAD – CARRINGTON ROAD
Full Count Data Available via WTS



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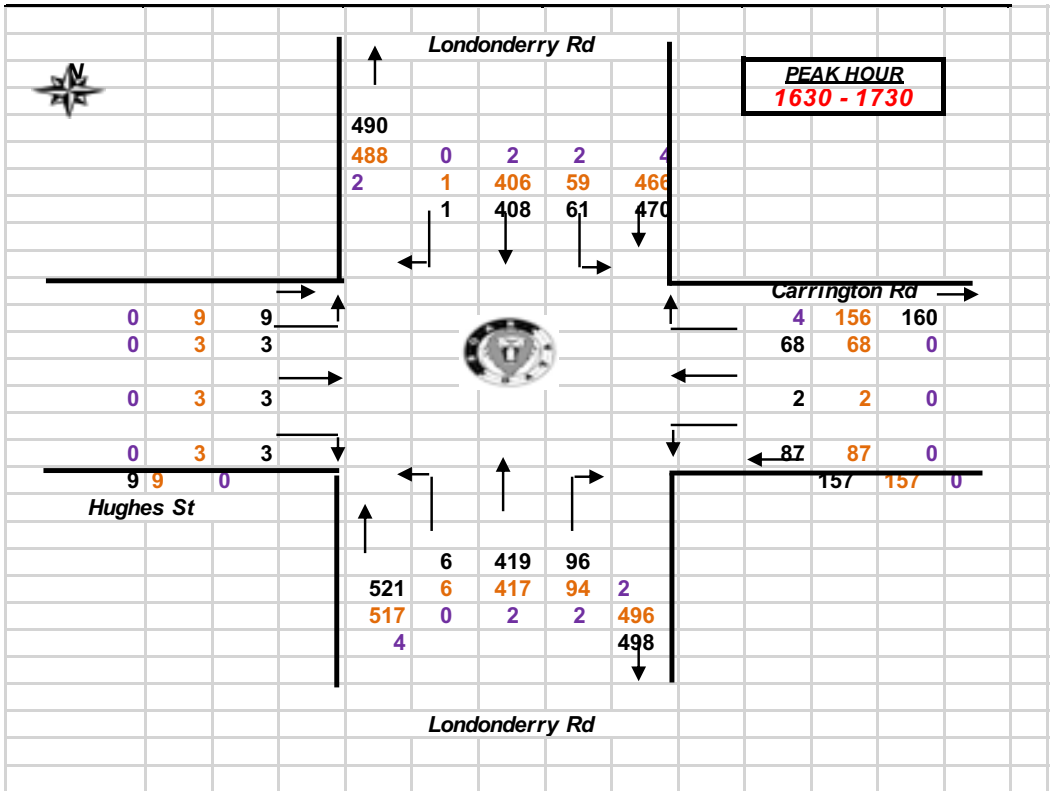
Job No/Name	: LONDONDERRY Carrington Rd
Day/Date	: Wednesday 4th April 2018



R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client	: Winning Traffic Solutions
Job No/Name	: LONDONDERRY Carrington Rd
Day/Date	: Wednesday 4th April 2018

Intersection Layout

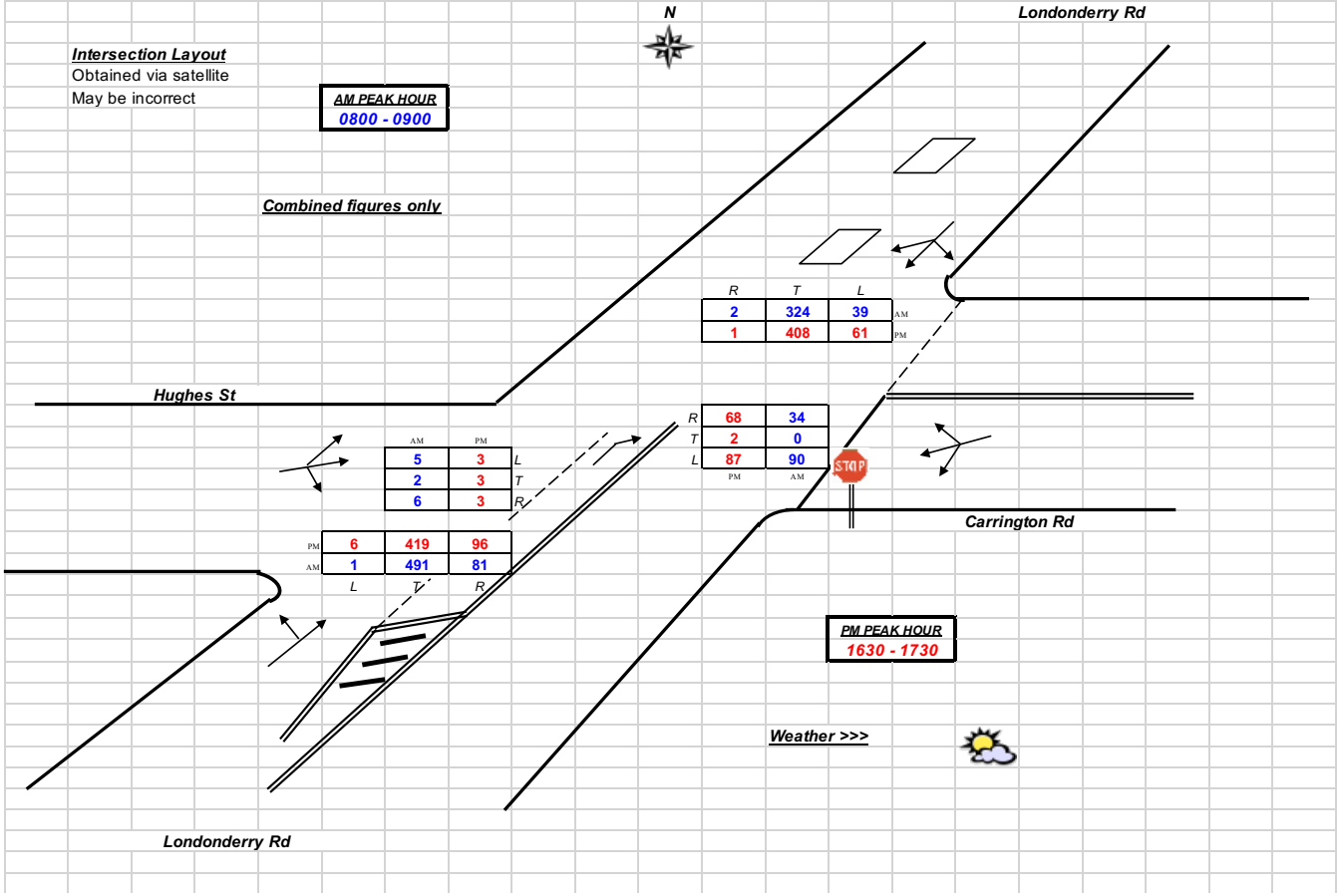
Obtained via satellite

May be incorrect

AM PEAK HOUR

0800 - 0900

Combined figures only

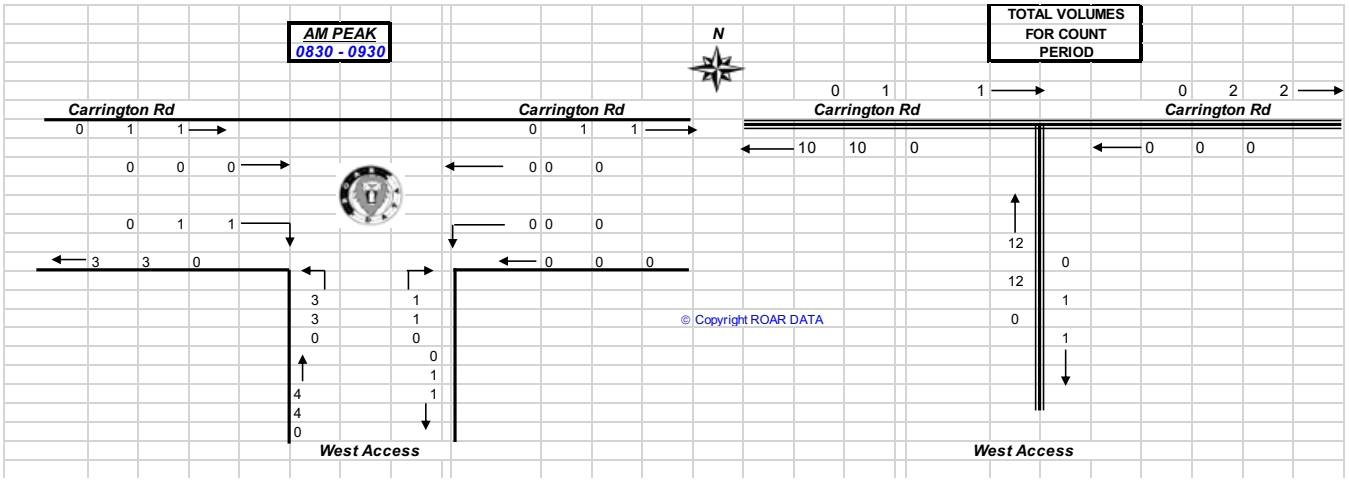


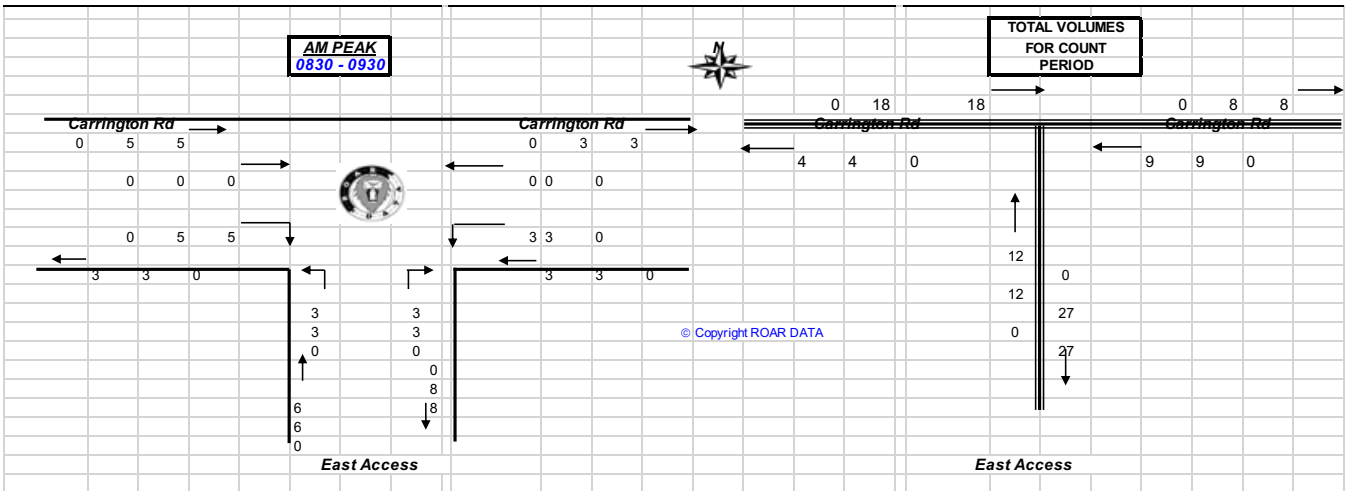
PM PEAK HOUR

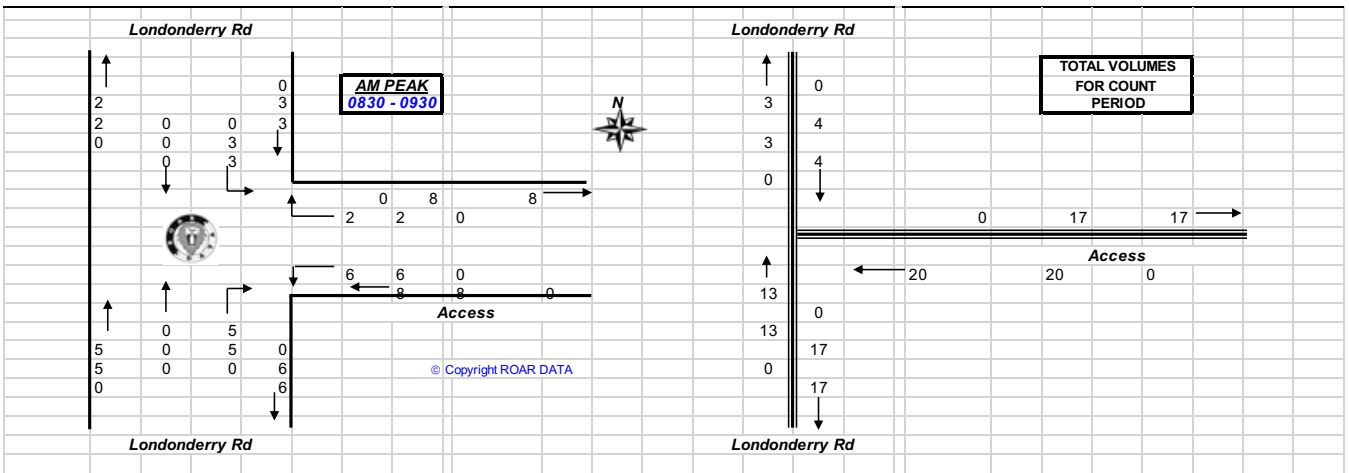
1630 - 1730

Weather >>>

SERVICE STATION TRAFFIC VOLUMES
AM COMMUTER PEAK







SERVICE STATION TRAFFIC VOLUMES
AM COMMUTER PEAK

COMBINED

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019

Client	: Winning Traffic Solutions
Job No/Name	: LONDONDERRY Carrington Rd
Day/Date	: Wednesday 4th April 2018

Combined Figures Only

	LONDONDERRY *Service Station*		
Time Per	IN	OUT	TOTAL
0600 - 0615	3	4	**7**
0615 - 0630	1	1	**2**
0630 - 0645	1	2	**3**
0645 - 0700	4	4	**8**
0700 - 0715	2	2	**4**
0715 - 0730	2	0	**2**
0730 - 0745	3	3	**6**
0745 - 0800	1	1	**2**
0800 - 0815	3	4	**7**
0815 - 0830	2	1	**3**
0830 - 0845	6	6	**12**
0845 - 0900	3	4	**7**
0900 - 0915	2	2	**4**
0915 - 0930	4	3	**7**
0930 - 0945	3	4	**7**
0945 - 1000	5	3	**8**
Period End	**45**	**44**	**89**

TOTAL VOLUMES FOR PERIOS COUNTED

Service Station

45 ↑ 44 ↓

Streets

	LONDONDERRY *Service Station*		
Peak Per	IN	OUT	TOTAL
0600 - 0700	9	11	**20**
0615 - 0715	8	9	**17**
0630 - 0730	9	8	**17**
0645 - 0745	11	9	**20**
0700 - 0800	8	6	**14**
0715 - 0815	9	8	**17**
0730 - 0830	9	9	**18**
0745 - 0845	12	12	**24**
0800 - 0900	14	15	**29**
0815 - 0915	13	13	**26**
0830 - 0930	15	15	**30**
0845 - 0945	12	13	**25**
0900 - 1000	14	12	**26**
PEAK HR	**15**	**15**	**30**

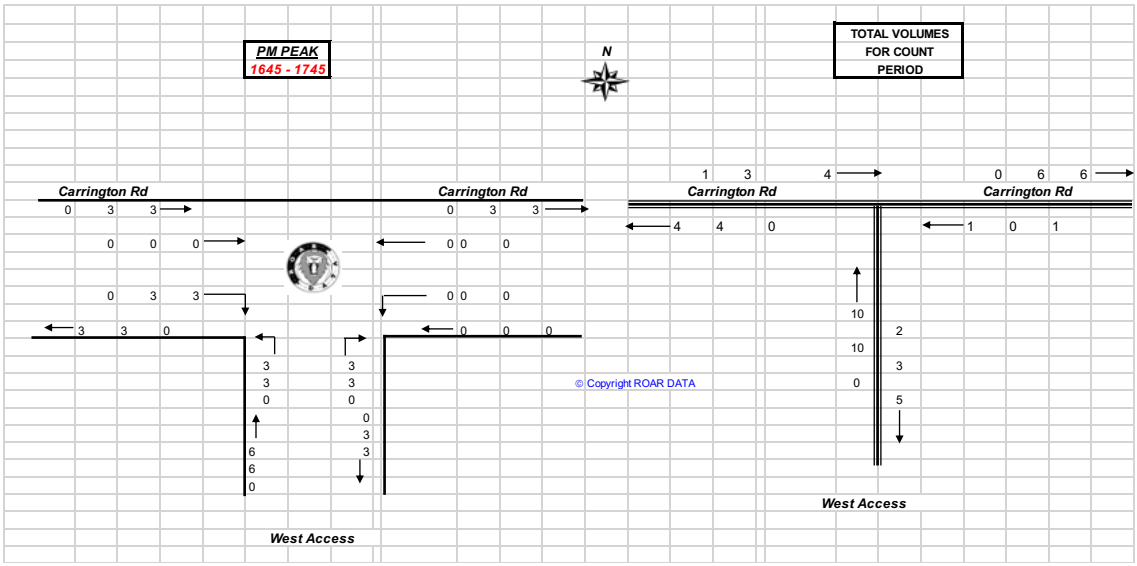
PEAK HOUR
0845 - 0945

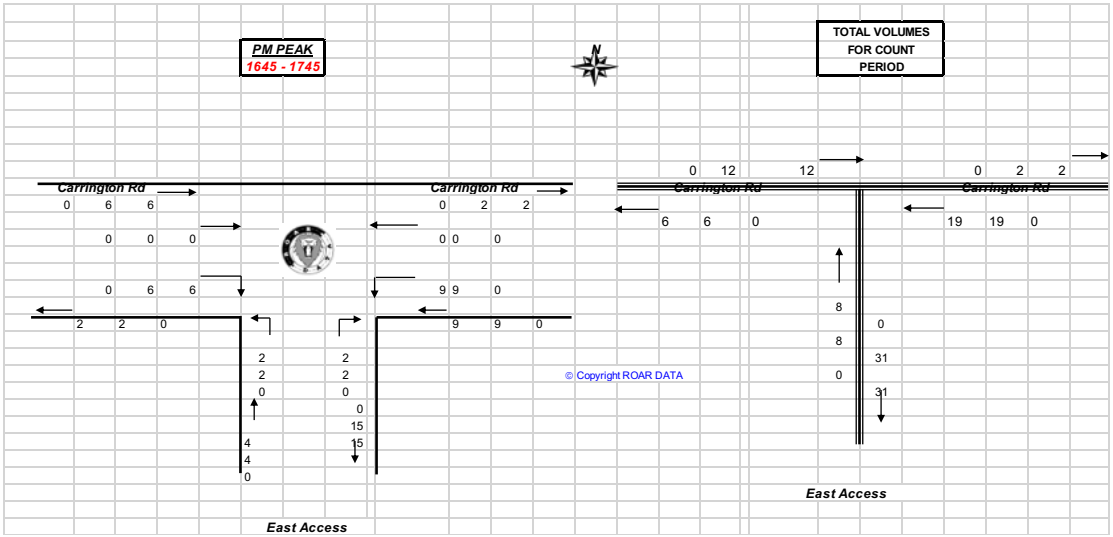
Service Station

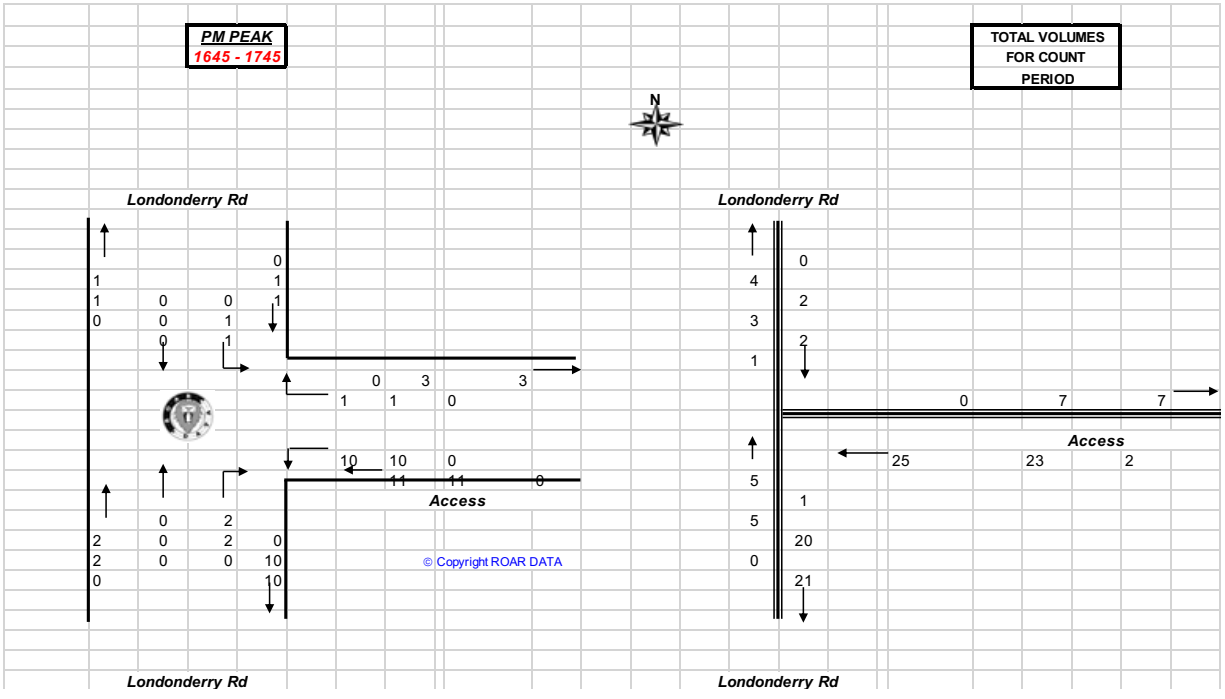
15 ↑ 15 ↓

Streets

SERVICE STATION TRAFFIC VOLUMES
PM COMMUTER PEAK







SERVICE STATION TRAFFIC VOLUMES
PM COMMUTER PEAK

COMBINED

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019

Client	: Winning Traffic Solutions
Job No/Name	: LONDONDERRY Carrington Rd
Day/Date	: Wednesday 4th April 2018

Combined Figures Only

	LONDONDERRY *Service Station*		
Time Per	IN	OUT	TOTAL
1600 - 1615	6	6	**12**
1615 - 1630	3	3	**6**
1630 - 1645	2	2	**4**
1645 - 1700	6	3	**9**
1700 - 1715	8	10	**18**
1715 - 1730	2	3	**5**
1730 - 1745	5	5	**10**
1745 - 1800	2	2	**4**
1800 - 1815	4	2	**6**
1815 - 1830	3	4	**7**
1830 - 1845	1	1	**2**
1845 - 1900	1	2	**3**
Period End	**43**	**43**	**86**

TOTAL VOLUMES FOR PERIOS COUNTED

Service Station

43 ↓

↑ 43

Streets

	LONDONDERRY *Service Station*		
Peak Per	IN	OUT	TOTAL
1600 - 1700	17	14	**31**
1615 - 1715	19	18	**37**
1630 - 1730	18	18	**36**
1645 - 1745	21	21	**42**
1700 - 1800	17	20	**37**
1715 - 1815	13	12	**25**
1730 - 1830	14	13	**27**
1745 - 1845	10	9	**19**
1800 - 1900	9	9	**18**
PEAK HR	**21**	**21**	**42**

PEAK HOUR
1645 - 1745

Service Station

21 ↓

↑ 21

Streets

APPENDIX 5

RMS PRE-DA ADVICE

RMS E=-mail – Najari ALAMOUTI – Zhaleh
27 March 2018 9 (Attached to e-mail from Vaughn 4/7/18

Hi Terry,

Reference is made to your email below, regarding the abovementioned proposal which was referred to Roads and Maritime Services (Roads and Maritime) for advice prior to lodging a formal application with Council.

Roads and Maritime has reviewed the proposal and provides the following comments for your consideration when preparing supporting documents to Council:

1. Roads and Maritime does not support the right turn movement to/from the site on Londonderry Road for road safety and network efficiency reasons. There is a right turn bay on Londonderry Road opposite the driveway, there would be potential conflict with the right vehicles on this bay. Therefore, the driveway should be physically restricted to left in/left out assess arrangement by way of a raised median island at the driveway (within the property).
2. The driveway on Londonderry Road should cater for tow-way simultaneous entry/exit of vehicles. Vehicles must enter and remain wholly within the site without being required to stop on Londonderry Road impeding through traffic. The submitted swept path plans show vehicles on Londonderry Road would be restricted to enter the site while other vehicles exiting the driveway. The driveway should be modified to meet this requirement.
3. Additional swept path plan should be provided for longest vehicles turn left into the site from Londonderry Road.
4. The location of underground fuel tanks and fuel discharging point is not clear from the submitted plans. Inlets to fuel tanks must be situated so that when tankers are discharging fuel, they will not obstruct the safe and convenient entry to the site by other vehicles, and vehicles do not queue back to the road. A plan should be submitted showing the tankers do not obstruct vehicles entering the site while discharging fuel.
5. The proposed bowsers are located close to the entrance on Londonderry Road. Concern is raised there in not enough storage between the refuelling area and the entrance which would potentially result in vehicles queue back to Londonderry Road obstructing through traffic. As shown in the plans, vehicles will be obstructed to enter the site when the heavy vehicles standing at the bowsers which is a safety and road efficiency issue.
6. Additional swept path plan should be provided for vehicles using the proposed loading bay, and how vehicles maneuverer and enter/exit the site in a forward direction.
7. Roads and Maritime does not support the right turn movement from the service station onto Carrington Road, as shown in the swept path diagrams. It is required the access arrangement on Carrington Road to be restricted to left in/left out only.

It is emphasised that the comments provided above are informal and of a Pre-DA nature. They are not to be interpreted as binding upon Roads and Maritime and may change following formal assessment of a submitted development application from the appropriate consent authority.

Roads and Maritime does not support the proposal in the current form for the above reasons. Any application with Council for this proposal should show how the above issues are addressed.

Regards
Zhaleh

Zhaleh Alamouti
Land Use Planner
Network Sydney | North West Precinct
T 02 8849 23

www.rms.nsw.gov.au
Every journey matters

Roads and Maritime Services
Level 5, 27 Argyle Street Parramatta NSW 2150

From: Terry Winning [mailto:terry@winningtraffic.com.au]
Sent: Friday, 8 December 2017 4:08 PM
To: Development Sydney
Cc: Vaughn Pelias; Dick Sinclair
Subject: Proposed develop Londonderry Service Station 370-372 Carrington Road, Londonderry

Suppiah,
I am seeking RMS Pre-DA advice on a proposed development at the subject address.
There has been a Pre-DA meeting with Council (see minutes attached) and the advice from Council among other things is to seek “written" advice from RMS relative to traffic prior to submitting DA.
The purpose of this submission is to follow up on Council requirements for the above.
The development proposes to refurbish the existing site to better accommodate heavy vehicles and attached is a preliminary plan indicating proposed access.
Could you please call to discuss so that I may advise client on RMS requirements for the DA submission.

Regards

Terry Winning
Director
Ph (02) 9807 9962
Mob. 0411 484 014
NOTE: The office of WTS will close from Friday 22 December 2017 and will reopen Monday 29 January 2018. Should you have URGENT enquiry please text mobile