

Logan Greyhound Facility

TRAFFIC IMPACT ASSESSMENT

- 15 March 2010

RTI DL RELEASE - EHP



Logan Greyhound Facility

TRAFFIC IMPACT ASSESSMENT

■ 15 March 2010

Sinclair Knight Merz
ABN 37 001 024 095
Level 3 32 Cordelia Street, Brisbane 4101
PO Box 3848 South Brisbane Q 4101
Spring Hill QLD 4004 Australia
Tel: +61 7 3244 7100
Fax: +61 7 3244 7304
Web: www.skmconsulting.com

COPYRIGHT: The concepts and information contained in this document are the property of Sinclair Knight Merz Pty Ltd. Use or copying of this document in whole or in part without the written permission of Sinclair Knight Merz constitutes an infringement of copyright.

LIMITATION: This report has been prepared on behalf of and for the exclusive use of Sinclair Knight Merz Pty Ltd's Client, and is subject to and issued in connection with the provisions of the agreement between Sinclair Knight Merz and its Client. Sinclair Knight Merz accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report by any third party.

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

Contents

1	Introduction	5
1.1	Objective of assessment	5
1.2	Scope of assessment	5
1.3	Assumptions and limitations	5
1.4	The content and layout of this document	6
2	Proposed development	7
2.1	Uses and operation	7
2.2	Location	7
2.3	Site access	10
2.3.1	Access operation	10
2.3.2	Access geometry	11
2.3.3	Access sight distance	11
2.4	Car parking and circulation provisions	15
2.5	Pedestrian provisions	18
2.6	Bicycle provisions	20
2.7	Service vehicle provisions	20
2.7.1	Internal queuing provisions	20
2.8	LCC code compliance	20
3	Existing traffic and transport conditions	21
3.1	Subject site	21
3.1.1	Kingston Road	21
3.1.2	Compton Road	22
3.2	Surrounding land uses	23
3.3	Traffic environment	23
3.4	Public transport	27
4	Traffic impacts	28
4.1	Development traffic generation	28
4.2	Development traffic distribution	29
4.3	Intersection performance	31
5	Conclusions	34
	Appendix A Pre-lodgement records	35
	Appendix B Proposed development plan	36
	Appendix C Service vehicle swept path diagrams	37
	Appendix D Traffic survey data	38
	Appendix E aaSIDRA analysis results	39



Appendix F Responses to LCC constraint codes

40

RTI DL RELEASE - EHP

Document history and status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
Final	15 March 2010	C. Jelley	C. Jelley	19 February 2010	Final

Distribution of copies

Revision	Copy no	Quantity	Issued to
Final	1	8	ML Design

Printed:	16 March 2010
Last saved:	16 March 2010 08:48 AM
File name:	I:\QBIF\Projects\QB10035\Deliverables\Reports\Traffic\TIA report rev 3\QB10035.300 R002 Traffic impact assessment 02.docx
Author:	Perci Barnes
Project manager:	Marcus Holford
Name of organisation:	Greyhounds Queensland
Name of project:	Logan Greyhound Facility
Name of document:	Traffic Impact Assessment
Document version:	Final
Project number:	QB10035.300

1 Introduction

This Traffic Impact Assessment (TIA) has been prepared for Greyhounds Queensland, in support of a material change of use (MCU) development application (DA) for the Logan Greyhound Facility, a proposed Outdoor Sports and Recreation development in Logan City. The development details are as follows:

- Lot 658 on SL12298.
- Cnr Kingston Road and Compton Road.

1.1 Objective of assessment

The objective of this assessment is to determine the traffic and transport related impacts of the proposed development and to recommend mitigation measures (if any). The objective of this assessment is to also demonstrate that the traffic and transport aspects of the DA comply with state and local Council requirements.

1.2 Scope of assessment

Pre-lodgement discussions with representatives of both the Department of Transport and Main Roads (DTMR) and Logan City Council (LCC) officers have determined that the assessment of the development's operational traffic impacts is to focus on issues related to on site access and impacts on the state controlled road network (refer to DTMR and LCC pre lodgement records in Appendix A). These issues have been addressed in detail in Chapter 4. The demonstration of LCC code compliance is also documented as part of this assessment in Section 2.8.

1.3 Assumptions and limitations

The following assumptions and limitations apply to this assessment:

- Traffic information has been obtained from DTMR Census data, which include data that has been collected over 12 or 24 hour periods on specific days, and may therefore be affected by weekly or seasonal variations.
- Assumptions on traffic generation and distribution have been made in consultation with Greyhounds Queensland from information from the existing Brisbane Racing Club, a similarly sized facility located in Albion, Brisbane. The basis of such assumptions are discussed in detail in this report and where a range of values has been determined, the worst case scenario has been adopted in the assessment.

- This assessment provides an overview of the potential traffic and transport related impacts associated with the proposed development. If required, detailed Road Use Management Plans (RUMPs) and/or Traffic Management Plans (TMPs) will be developed and submitted for approval subsequent to detailed project design.

1.4 The content and layout of this document

This traffic impact assessment consists of the following parts:

- Part 1 contains an overview of the report and its scope.
- Part 2 contains a description of the proposed development and its design compliance with LCC and Australian Standards requirements.
- Part 3 contains a description of the existing traffic and transport conditions.
- Part 4 contains a summary of the traffic impact assessment.
- Part 5 contains a summary of conclusions drawn from this assessment.
- The Appendices contains supplemental Technical Notes and drawings and diagrams that are not available in a published form.

2 Proposed development

2.1 Uses and operation

The development proposal comprises the redevelopment of Cronulla Park, a 10.24 hectare site, located in the corner of Kingston Road and Compton Road in Slacks Creek (Figure 2-1). The subject site is currently designated as public open space. The subject site was previously used as waste transfer station and is now decommissioned. The proposed development plan is attached as Appendix B, and (as shown) it includes a greyhound racetrack with a grassed tiered viewing area for patrons, parking for patrons and greyhound trailers, and ancillary uses within a proposed facility building. These ancillary uses include:

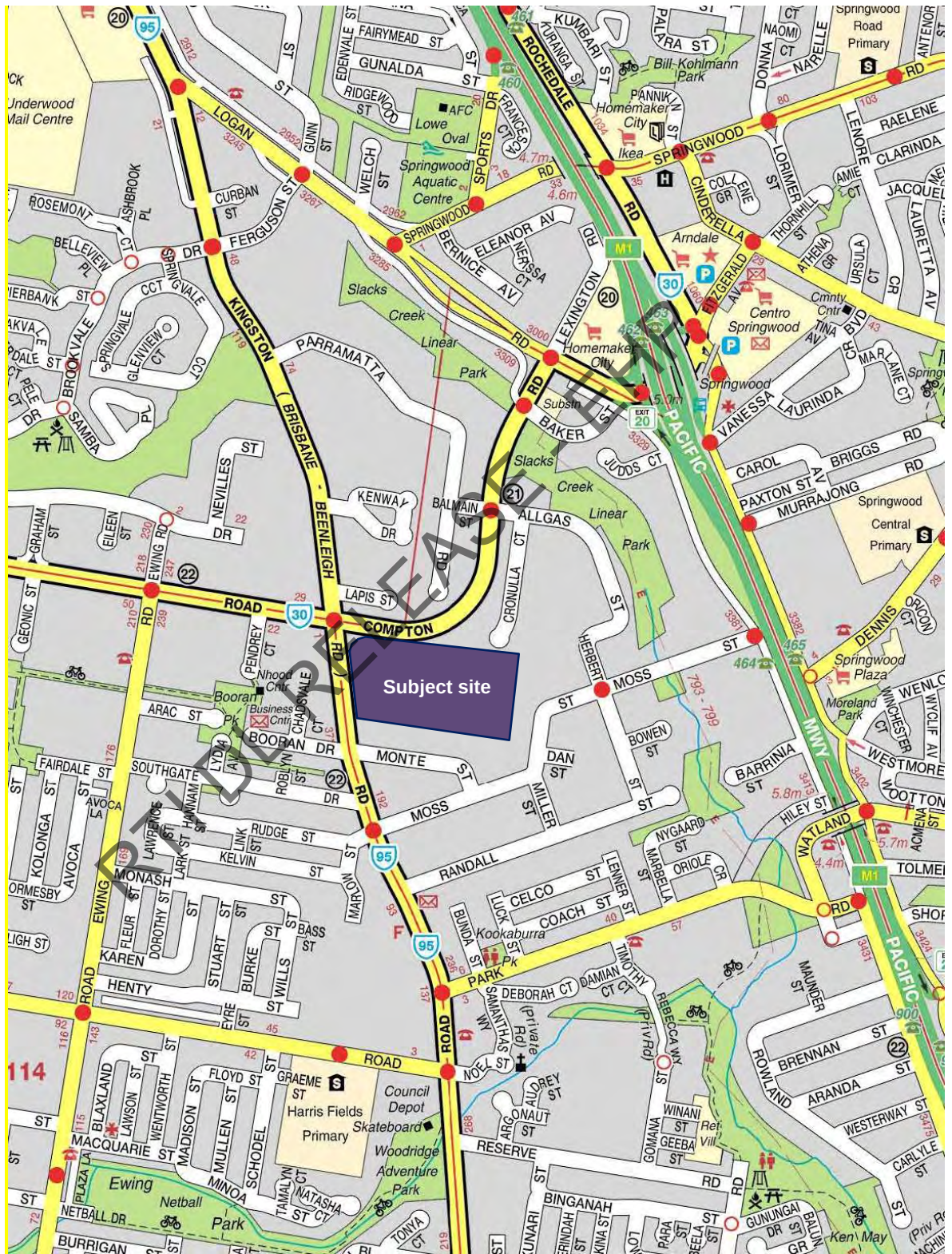
- Offices, including meeting and viewing rooms.
- Restaurant, concours area and kitchen.
- Kennels and associated greyhound facilities, and
- Amenities and plant/storage rooms.

The proposed development will cater for four race meets per week, two of these events starting at approximately 6:30 pm with racing finished at 9:30pm, and Friday twilight, and the other two events starting at approximately 4:00pm and finishing at 7:00pm. The restaurant component (when open) open 30 minutes before and after the races. Operation of the facility will be similar to that of the existing facility at Albion, Brisbane, with expected attendance as follows:

- Normal race meet, approximately 100-150 patrons.
- Race meet with restaurant operational, up to an additional 100 patrons.

2.2 Location

The subject site (refer to Figure 2-1) is located approximately one kilometre southwest of the Pacific Motorway interchange with Logan Road, and is at the intersection of Kingston Road and Compton Road, which front its western and northern boundaries respectively. Its northern boundary is also bounded by a light industrial estate and the terminus of Cronulla Court, a local industrial road. The subject site's eastern and southern boundaries are entirely bounded by adjoining industrial lots. Images of the subject site and surrounding road infrastructure are shown in Figure 2-2.



■ **Figure 2-1 Subject site locality (image courtesy of UBD™)**



Existing Kingston Rd site access, viewing north



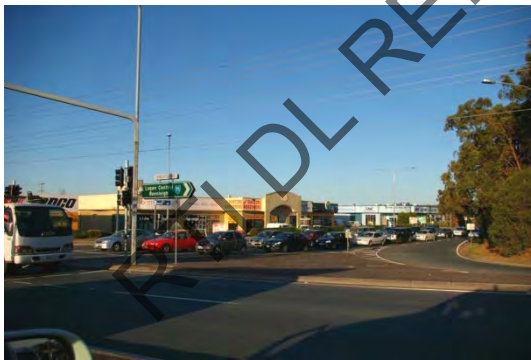
Existing Kingston Rd site access, viewing south



Kingston Rd median break, viewing north



Kingston Rd median break, viewing south



Kingston Rd/Compton Rd intersection, viewing east



Compton Rd access location, viewing east



Compton rd access location, viewing west



Cronulla Ct terminus, viewing south

■ **Figure 2-2 Images of surrounding road infrastructure**

2.3 Site access

2.3.1 Access operation

Two access points to the development are proposed; the first, an entry/egress in Kingston Road, in the vicinity of the existing site access and the second, an egress only on Compton Road, approximately 120 metres east of Kingston Road. The proposed Kingston Road access is intended to cater for all movements with exception of right turn egress. This development access arrangement has been agreed with LCC and DTMR officers in pre-lodgement discussions.

The egress-only access point in Compton Road is proposed as a left turn exit only, with a culvert proposed to be constructed over the existing swale to allow the crossover.

Overall, the proposed access arrangements allow ingress development movements from all possible directions. Egress is possible to all directions, with the movements to the east along Compton Road utilizing the existing U turn facility at Moss Street (if exiting via Kingston Road) or U turns further downstream in Compton Road (if exiting via Compton Road).

This overall arrangement is acknowledged as inefficient for the eastbound egress development movements in Compton Road and alternative provisions to allow direct eastbound egress were explored. An option to allow right-turn egress in Compton Road was considered but was determined as inappropriate due to issues associated with sight distance and the potential queuing in the Compton Road approach to the Kingston Road signals.

Retaining the current all-movement arrangement in Kingston Road was considered, however, this option was rejected because it would introduce additional conflict to bus movements, and has potential safety issues with respect to development traffic merging with the northbound queues.

The proposed development plan therefore includes the restriction of right-turn egress from the Kingston Road access, as agreed with DTMR. This arrangement would therefore eliminate development traffic conflict with the northbound queues. The implementation of signage provisions and way-finding measures would mitigate any issues associated with egress retrace movements on the immediate road network.

An existing regular TransLink bus stop is located 25 metres to the north of the proposed access point. Potential conflicts between bus and development traffic movements at the Kingston Road access will be minimised as follows:

- Locating the access point a further five metres south of the bus merge taper, further increasing the separation distance for weaving between development ingress and bus movements.
- Ensuring that the proposed access has unobstructed sight lines to the bus stop (and complies with sight distance requirements).
- Restricting right turn egress movements, as discussed previously.

In addition, the frequency of conflicting movements during race meets will be very low because as development demand is low (with in- and out-flow of patron traffic will be spread through the race meets), and the service frequency for the bus stop is currently one bus every 30 minutes. The last service currently occurring at 7:40pm (refer to Section 3.4) which is prior to the end of the night race meets.

2.3.2 Access geometry

The proposed crossovers have been designed in accordance with LCC requirements, with the crossover in Kingston Road as a Type D driveway. The crossover in Compton Road, proposed as restricted to left turn movements only, has been designed as a modified Type D driveway, with dimensions as per its exit lane requirements. Assessment of design vehicle movements through the proposed crossover provisions is discussed in detail in Section 2.4.

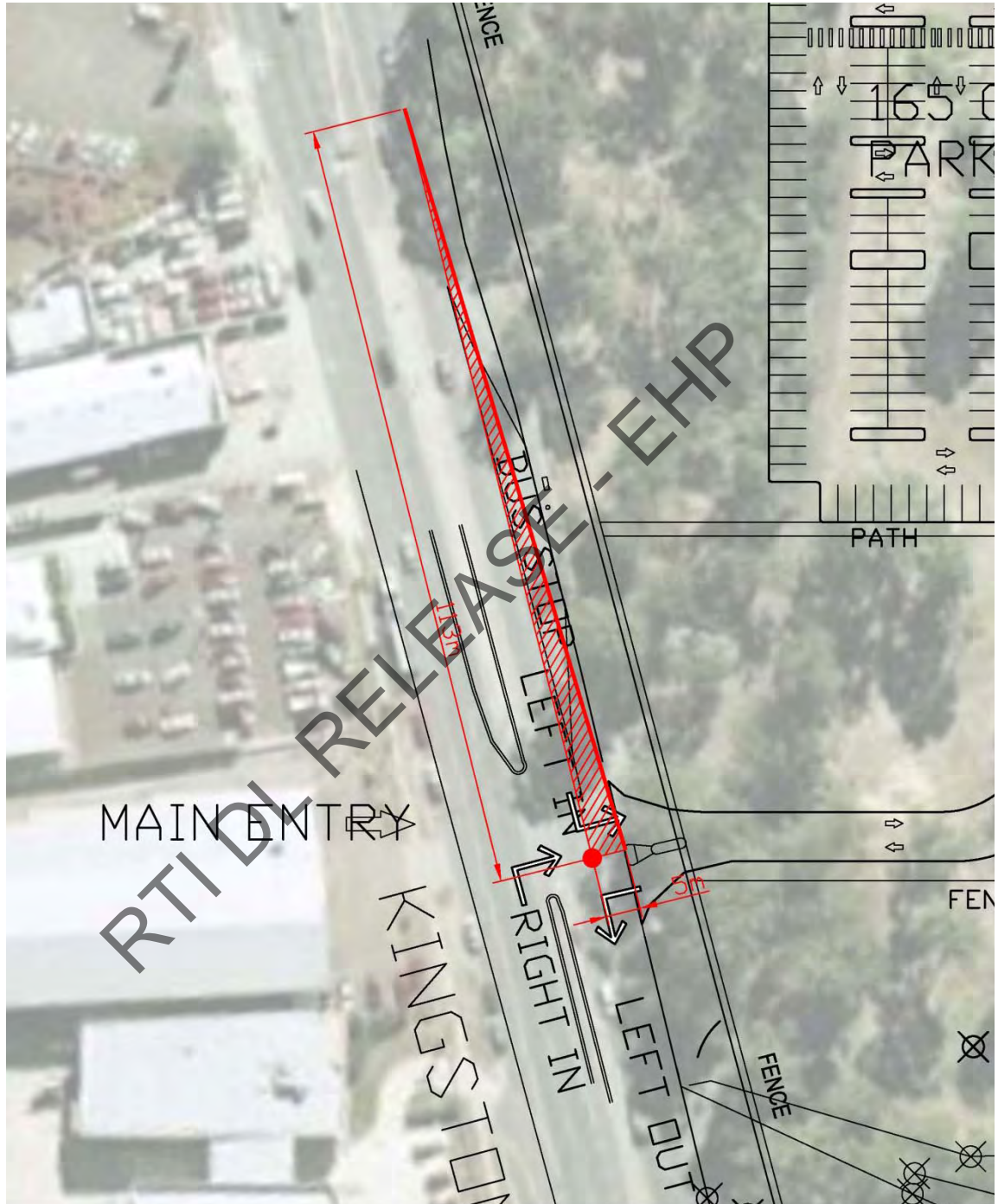
2.3.3 Access sight distance

A sight distance assessment at both intersections was performed in accordance with the *Austroads Guide to Traffic Engineering Practice (GTEP) Part 5* (Section 6.2). Parameters used included the following:

- Sight distance measured 1.05 metres eye height and 5 metres from the carriageway edge.
- For a speed environment (posted speed limit) of 70 km/hr in Compton Road, safe intersection sight distances of no less than 140 metres.
- For a speed environment (posted speed limit) of 60 km/hr in Kingston Road, safe intersection sight distances of no less than 113 metres.
- Maximum observation angles of 110 degrees right and 120 degrees left of vehicle centreline.

The measured safe intersection sight distances are depicted in Figure 2-3 and Figure 2-4. As shown, the proposed access locations comply with sight distance requirements at the proposed Kingston Road access. However on-site measurements determined that additional growth that would overhang the pavement at the southern edge of the centre median in Compton Road may obstruct the required sight line to the east. It is recommended that the necessary trees and foliage be trimmed back from the pavement edge initially (prior to development construction) then periodically as required, to comply with sight distance requirements.

RTI DL RELEASE - EHP



■ **Figure 2-3 Safe intersection sight distance measurement at proposed Kingston Rd access**

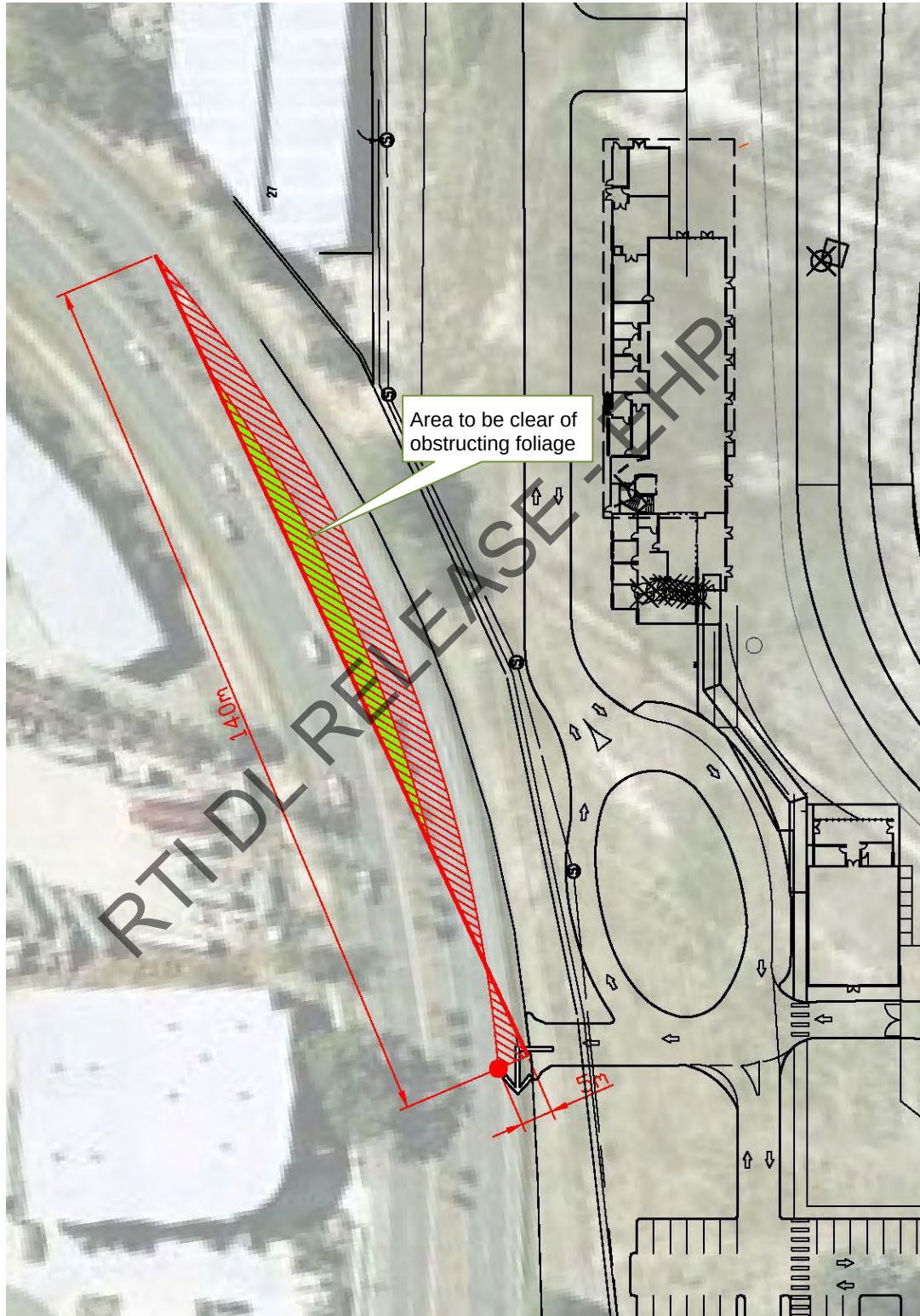


Figure 2-4 Safe intersection sight distance measurement at proposed Compton Rd access

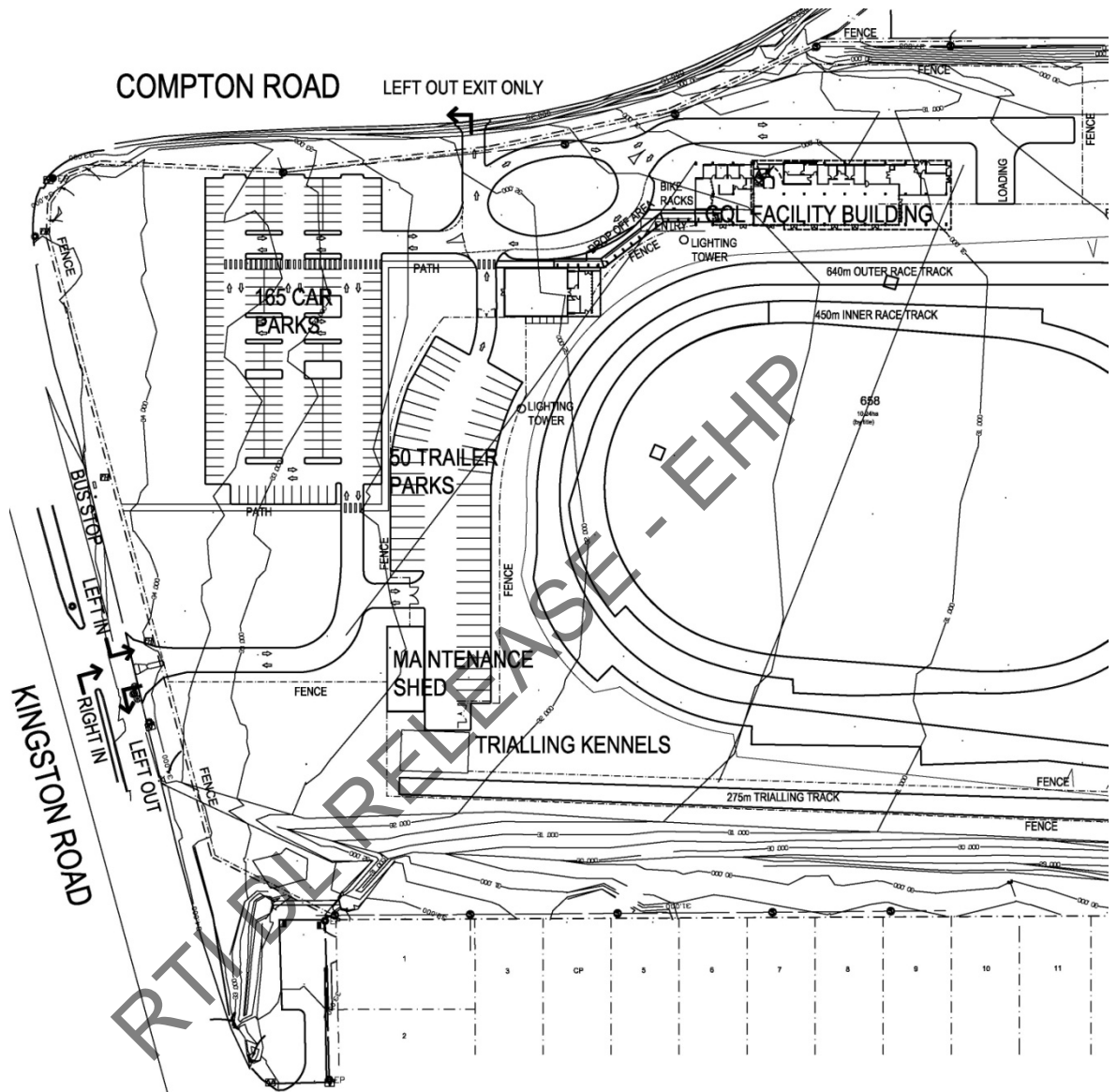
2.4 Car parking and circulation provisions

The proposed car parking provisions have been determined through Greyhounds Queensland and are similar in composition to the similarly sized facility in Albion. As depicted in Figure 2-5, they comprise the following:

- A single car park with 165 bays for patrons and staff, with three spaces dedicated for persons with disabilities (PWDs).
- A separate greyhound trailer park with 50 bays; and
- A drop off and pick up area with a seven car capacity.

Parking activity of trailer vehicles will be separated from patrons/staff and service vehicles via gates and fencing. A proposed internal roundabout will allow recirculation of vehicles to the patron car park and to the Kingston Road access. This proposed roundabout will also facilitate drop off and pick up activity and movements to the Compton Road exit, as well as access to/from the facility back of house or service area.

The car park layouts for the trailers and patron/staff vehicles are arranged in perpendicular parking bays. The trailer parking is in a single module and the patron/staff car park in two modules (with short terminal aisles at the northern end). The layout and dimensions of the proposed car park and circulation provisions comply with AS/NZS2890.1:2004 as summarised in Table 2-1.



■ Figure 2-5 Proposed parking and circulation provisions

■ **Table 2-1 Car park and circulation provisions – AS/NZS2890.1:2004 compliance**

Element	Proposed	AS/NZS requirement	Comments/reference
Patron bay	5.4m (L) x 2.6m (W)	5.4m (L) x 2.5m (W)	Complies, as per a Class 2 facility. Ref. AS/NZS 2890.1:2004 sections 1.4 and 2.4.1.
Patron car park aisle width	6.6m	5.8m	Complies, as per a Class 2 facility. Ref. AS/NZS 2890.1:2004 sections 1.4 and 2.4.1.
Trailer bay	10m (L) x 3.2m (W)	N/A	Complies with specific development requirement, identical to the greyhound facility in Albion.
Trailer park aisle width	9.7m	N/A	Complies with specific development requirement, identical to the greyhound facility in Albion.
Speed control devices	None	Aisles greater than 100m in length require traffic control devices (i.e. speed humps)	Complies. No aisle is more than 100 metres in length. Ref. AS/NZS 2890.1:2004 section 2.3.3.
Blind aisle length	Maximum 16m with 6 bays along each side	6 bays or less	Complies. Ref. AS/NZS 2890.1:2004 section 2.4.2.
Blind aisle extension	1m	1m	Complies.
Parking module gradient	Less than 1:50	Less than 1:20 parallel to parking, less than 1:16 in any other direction	Complies. Proposed minimum is 1:100 for drainage. Ref. AS/NZS 2890.1:2004 sections 2.4.6.
Straight circulation roadway	One-way: 4.8m Two-way: 5.6m	One-way: min. 3.0 m Two-way: min. 5.5m	Complies. Ref. AS/NZS 2890.1:2004 sections 2.5.2.

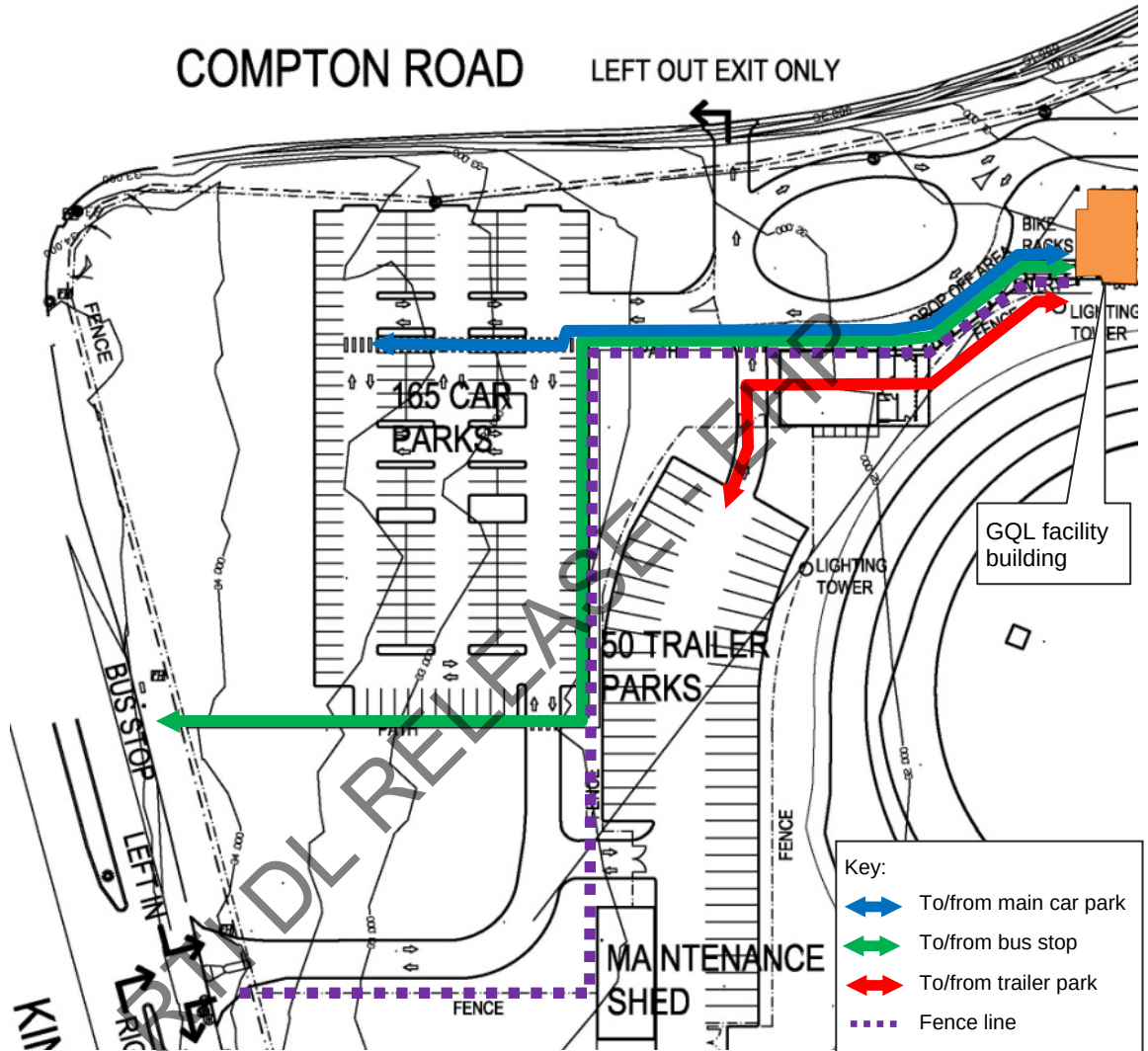
Element	Proposed	AS/NZS requirement	Comments/reference
Curved circulation roadway	One way: 4.8m inside radius, 16 m outside radius, 4.8m width Two-way: 13.5m inside radius, 19.5m outside radius, 6.8m width	One way: 4.0m inside radius, 7.6 m outside radius, width depending on curve radii Two way: 4.0m inside radius, 11.8m outside radius, width depending on curve radii	Complies. Ref. AS/NZS 2890.1:2004 sections 2.5.2.
Circulation roadway grade	Less than 1:50	Longer than 20m - less than 1:6, up to 20m – less than 1:5.	Complies. Ref. AS/NZS 2890.1:2004 sections 2.5.3.
Circulation roadway horizontal vehicle clearances	300mm for circulation roadways and 60mm for crossovers	As per LCC requirements, consistent with AS/NZS: 300mm for circulation roadways and 60mm for crossovers	Complies. Ref. AS/NZS 2890.1:2004 sections 2.5.2.

2.5 Pedestrian provisions

As determined from patron information from the existing greyhound facility in Albion, walk-up demand will be negligible with all patrons anticipated to either drive or take public transport to the development. Pedestrian provisions are therefore proposed to comprise internal footpaths and walkways, with a linkage to the bus stop in Kingston Road.

A two metre wide foot path is proposed to separate patron (pedestrian) movements to vehicle movements between the car park and drop-off /pick-up areas, and the kennel block and facility buildings. The alignment of pedestrian paths to the car park and bus station is the shortest possible route between these areas (refer to Figure 2-6). Within the car park, the foot paths connect to a proposed line marked crossing that connects both modules of the patron car park.

The pedestrian movements between the trailer park and the kennel facilities are proposed to be segregated from the patron trafficked areas by a barrier fence.



■ Figure 2-6 Development pedestrian desire lines

2.6 Bicycle provisions

Patron information from the Albion greyhound facility has identified that cyclist demand will be low. Although estimated demand is low, bicycle provisions comprising a standard outdoor rack, is proposed to be provided in close proximity to the entrance of the proposed GQL facility building, just to the east of the proposed patron drop off area.

2.7 Service vehicle provisions

A dedicated service bay to accommodate two heavy rigid vehicles (HRVs) and vehicle turn around/manoeuvre area is proposed at the eastern side of the facility building. The proposed development plan allows egress to occur via either access point, with service vehicles able to traverse the eastern module of the patron car park. As servicing will be conducted outside meet times, no conflict between service vehicles and patron/trailer movements is anticipated, and therefore the traversal of the patron parking areas is considered acceptable.

The design vehicle was adopted as a heavy rigid vehicle (HRV) as agreed in pre-lodgement meetings with LCC officers. Assessment of the proposed development plan for on-site manoeuvring was performed in accordance with AS/NZS2890.2:2002 (refer to swept path diagrams in Appendix C). As shown, service vehicle provisions comply with AS/NZS2890.2:2002 requirements.

2.7.1 Internal queuing provisions

As discussed in Section 2.3.1, in-flow of development is estimated to be spread through the duration of the race meets. In lieu of specific guidance, queuing area provisions have been calculated in accordance with Section 3.4 of AS/NZS2890.1:2004 as follows:

- For trailer movement prior to and after race meets, and assuming a peak in-flow of more than 75% capacity for a car park of not more than 100 vehicles, a queue length of two cars (with trailers) is required.
- For patron movements just prior to, during and just after race meets, assuming a peak in-flow of up to 75% of capacity for a car park of not more than 100 vehicles, a queue length of three cars is required.

The proposed development plan includes a queuing provision of more than 70 metres (equivalent to 12 car lengths), and therefore complies with Australian Standards.

2.8 LCC code compliance

Compliance of the proposed parking, access and circulation provisions with LCC constraint codes is documented in Appendix F.

3 Existing traffic and transport conditions

3.1 Subject site

The subject site is a decommissioned waste transfer station. Vehicular access is currently gained via a gated driveway in Kingston Road, located approximately 150 metres south of Compton Road. The majority of the site is relatively flat with slight landfall from west to east. Open channel drains parallel to the site's northern, eastern and southern boundaries provide drainage to the site. No off street foot paths are currently provided in either road frontages, while footpaths exist at the opposite side of the road in both Kingston Road and Compton Road.

3.1.1 Kingston Road

Kingston Road (Brisbane-Beenleigh Road) is an arterial road controlled by the DTMR; it provides an arterial route largely parallel to the Pacific Motorway between Brisbane and Beenleigh. It intersects Compton Road, a LCC controlled road, via a four-way signalised intersection, which has left turn slip lanes in all approaches except for the southern Kingston Road approach, and right turn auxiliary lanes in all approaches. Pedestrian crossings are also provided in all approaches.

At the southern approach, turning provisions comprise a shared left turn and through auxiliary lane with 50 metres storage, a continuous shared through and right turn lane (adjacent to a continuous through lane) and a right turn auxiliary lane with 30 metres storage. The shared left turn and through lane also provides access to a one-way crossover to service station and its ancillary uses at the southwest corner of the intersection. A regular TransLink bus stop is also located in this lane.

Adjacent to the site, Kingston Road has a 60 km/hr posted speed limit and has four through lanes, two in each direction, split by a raised central median. In the southern direction it has a four metre wide shoulder, while in the northern direction it has a parking lane. Adjacent to the subject site, Kingston Road has straight horizontal alignment, and a vertical alignment that has a gentle (less than 2% grade) downward slope from north to south.

A break in the central median currently allows all movements to occur to/from the existing driveway, located 150 metres south of Compton Road. A 30 metre right turn auxiliary lane allows storage of five cars. To the north, and immediately adjacent to the existing driveway, a regular TransLink bus stop is linemarked within the auxiliary (shoulder) lane, with the southern extremity of its egress taper roughly aligned with the northern edge of the central median break.

Adjacent to the southwest corner of the subject site, Monte Street, a LCC controlled industrial access road, intersects Kingston Road via a left in/left out T-intersection with a raised splitter island. Approximately 150 metres further south, Kingston Road intersects Moss Street, an LCC industrial road via a four-way signalised intersection. U turns to/from the north are allowed at this intersection, with a 30 metre long auxiliary lane allowing storage for U turn and right turn movements.

Property crossovers exist at the northbound side of Kingston Road, which are limited to left turn ingress and/or egress.

3.1.2 Compton Road

Compton Road is an LCC controlled arterial road which connects Beaudesert Road (a State controlled road) and the Gateway Motorway to the west and the Pacific Motorway to the east via Logan Road. At the subject site's northern boundary, Compton Road has a posted speed limit of 70 km/hr with four through lanes (two lanes in either direction) with a central raised median. No crossovers to properties exist in its segment to the east of Kingston Road. In the eastern approach to its intersection with Kingston Road, a single 60 metre long right turn auxiliary lane is provided, however U turns are prohibited (due to the absence of R215 U Turns Permitted' signage).

Approximately 600 metres to the northeast of its intersection with Kingston Road, Compton Road intersects Allgas Street and Balmain Street, two LCC controlled industrial access roads, via a four-way signalised intersection. A further 300 metres and 450 metres northeast respectively, Compton Road intersects Baker Street and Logan Road/Lexington Road (all LCC controlled roads).

Discussions with LCC officers indicate that a high standard off-road bicycle route is planned between Nyanza Street to the west of the subject site and the Springwood bus station to the east. This would allow a continuous off road link between the bus station to Gould Adams park in Kingston. LCC is not planning a similar facility at the subject site frontage currently due to the cost, constructability and safety issues associated with the existing swale drain in the road verge.

3.2 Surrounding land uses

The subject site is largely surrounded by commercial/light industrial land uses, with bulky goods centres located diagonally opposite at the corner of Kingston Road and Compton Road and at the corner of Lexington Road and Logan Road. Further afield, the Springwood Centro shopping complex and surrounding retail developments are located just to the east of the Pacific Motorway interchange with Logan Road.

At the periphery of the surrounding light industrial/commercial precinct, low density residential areas extend to the suburbs of Underwood to the north, Woodridge to the southeast, and Springwood to the east.

3.3 Traffic environment

A permanent count site is located in Kingston Road just north of Compton Road, which provides 24 hour two-way traffic data as part of the DTMR Census program. A summary of average weekday and weekly average traffic for each calendar year between 2003 and 2008 from this site is summarised in Table 3-1 and further detailed in Appendix D.

Table 3-1 Kingston Road surveyed daily traffic (DTMR permanent count site north of Compton Road)

Year	Two-way total volumes	
	Average week day [vpd]	Average day (including weekends) [vpd]
2003	26,600	24,200
2004	26,500	24,000
2005	22,400	20,300
2006	26,500	24,200
2007	26,700	24,400
2008	25,600	23,300

Traffic data from the permanent site (Table 3-1) indicates that average week day and average day through volumes in Kingston Road have been constant, with a decline recorded in 2005. A downward trend is possible based on comparative 2007 and 2008 averages.

For the purposes of the assessment, and due to the fluctuating historical trends, a 1.2% annual compound growth was derived from Brisbane City Council's Brisbane Strategic Transport Model (BSTM) and applied for background demand calculations for the assessment of traffic impacts. This growth rate is conservative, given the trend of the latest historical data.

Intersection counts were conducted by DTMR as part of their Census program at the Kingston Road/Compton Road intersection during Monday 20 May 2002 and again in Tuesday 26 September 2006, and at the Kingston Road/Rudge Street/Moss Street intersection in 2002. The Census intersection data is summarised in Figure 3-1 and further detailed in Appendix D. A comparison of the data yields the following:

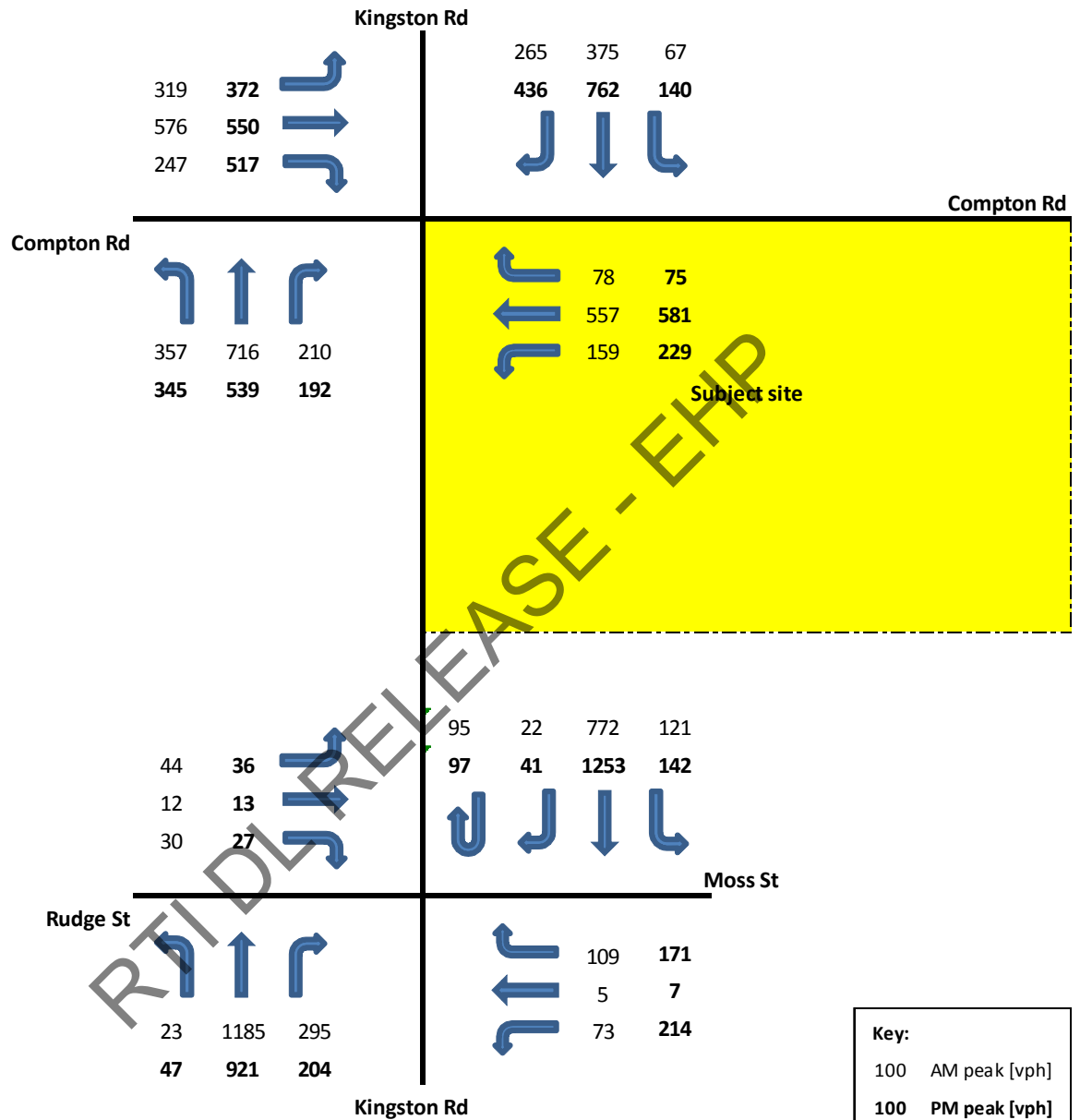
- 12-hour survey period intersection totals decreased from the 2002 from 45,000 vehicles in 2002 to 43,000 vehicles in 2006;
- The morning peak period total (all movements) decreased from 4,800 vehicles per hour (vph) in 2002 to 4,500 vph in 2006.
- Similarly, the afternoon peak hour total decreased from 6,100 vph (2002) to 4,700 vph (2006).

While the above does not take into account possible seasonal variation, the latest (2008) DTMR permanent count data (refer to Appendix D) for the permanent count site north of Compton Road indicate that weekday demand in Kingston Road is lowest on a Monday and peaks on a Fridays.

On-site observations in October 2009 during a weekday (Tuesday) morning and afternoon peak periods confirms that, in terms of total volume, the dominant movements are the northbound (in the morning peak) and southbound (in the afternoon peak) movements in Kingston Road. The critical movement, however, was the opposing right turn from Compton Road (east); during the peak 15 minutes of the afternoon peak period, right turn queues were observed, to sporadically block the stop bar for through traffic due to high utilization of the right turn lane.

Other key observations were as follows:

- Few pedestrian movements in any approach of the Kingston Road/Compton Road signals (in the order of five pedestrians were observed traversing the crossings during each peak period).
- No U turn movements occurred (or are permitted) at the Kingston Road/Compton Road signals, with exception of the northern Kingston Road approach.
- The signal timing and split phasing in all approaches of the Kingston Road/Compton Road signals appear to be designed to accommodate coordinated (platooned) arrivals at each approach, favouring the north and southbound movements in Kingston Road. Both Kingston Road intersections with Compton Road and Moss Street appeared to be at, or close to saturation limits, with vehicles observed to progress the signals after two cycles (in particular at the Compton Road approaches to Kingston Road).
- Queuing in the southern Kingston Road approach to Compton Road was longest in the morning peak period. However queue extended to just beyond the existing median break opposite the existing site access.
- Queuing in the eastern Compton Road approach to Kingston Road was longest during the afternoon peak period, and extended to approximately 500 metres to the east, at the apex of its curve east of the signals.
- Queuing in the northern approach to Moss Street was longest in the morning peak period and extended past the northern driveway of an existing service station south of Monte Street, but well away from the existing site access.
- No vehicles used the existing median break in Kingston Road to access the site or to make a U turn.
- Low utilisation of the existing bus stops in Kingston Road (in the order of two patrons were observed in either peak period).



■ **Figure 3-1 Summary of 2006 intersection count data (derived from the DTMR Census) – Kingston Road/Compton Road**

3.4 Public transport

As discussed in Section 3.1.1, a regular bus stop is located in Kingston Road 25 metres to the north of the existing site access. The bus stop serves a single scheduled bus route, TransLink Route 545, which has a service frequency of every 30 minutes between 6:45am and 7:40pm on weekdays and hourly on weekends between 8:40am and 5:40pm on weekends and public holidays. This route connects the Garden City bus interchange and park and ride facility and the Grand Plaza in Browns Plains, via Browns Plains Road, Kingston Road and Logan Road. This route also services the Woodridge railway station via Wembley Road and Smith Road off Kingston Road.

RTI DL RELEASE - EHP

4 Traffic impacts

4.1 Development traffic generation

The proposed development will cater for two race meets per week, on Monday night around 6:40 pm, and Friday twilight, around 4:00 pm. Anticipated operation of the facility will be 50 patrons per meet initially. To be conservative, the development traffic is estimated to increase to levels comparable to the existing facility at Albion, Brisbane as summarised in Table 4-1.

Table 4-1 Anticipated facility operation and estimated vehicular demand

	Monday night race meeting	Friday twilight race meeting
Start of first race/start of last race	6:40pm/9:45pm	4:00pm/6:30pm
Arrival of trainers	4:45pm to 5:45pm	1:45pm to 2:45pm
Arrival of patrons	From 6:30pm (throughout the meeting)	From 3:45pm (throughout the meeting)
Estimated trainer demand [vehicles]	50 (max.)	50 (max.)
Estimated number of patrons [persons]	200	250
Estimated patron demand (static parking) [vehicles]	100	125
Estimated staff demand (static parking) [vehicles]	40	40
Estimated patron demand (set down/pick up) [vehicles]	48	56

Adopting the Albion operational characteristics would result in peak development traffic demand occurring during the Friday twilight race, with the commencement of patron arrivals to occur 15 minutes prior to the start of the afternoon peak period. Staff and trainer vehicles would begin arriving between half an hour and an hour prior to patron arrivals.

During a Friday race meet, inbound movements, plus some outbound movements by patrons would coincide with the PM peak period. To be conservative, and for the purposes of the capacity assessment, all patron ingress movements to the car park, plus all patron set down ingress and egress movements are assumed to occur during this period, with no linked set down and static parking activity. The total peak hour development demand would therefore total 180 ingress and 56 egress movements.

Outside the race meets, traffic would comprise those associated with the ancillary uses and servicing or maintenance, with the majority comprising trips to/from the office facilities. Average vehicular demand for this traffic is estimated to be low, in the order of 20 trips per day.

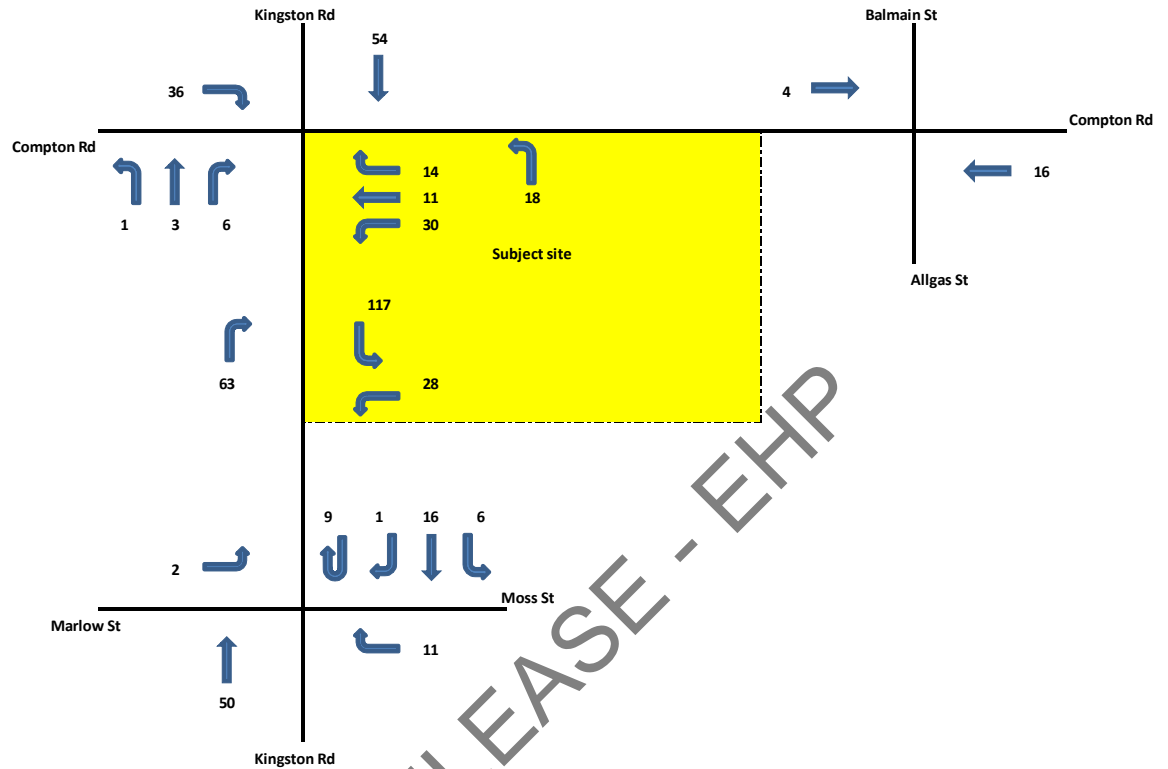
Total daily demand during a race meet day is therefore estimated as 200 and 290 trips per day on Monday and Friday respectively, and 20 trips per day during all other days.

4.2 Development traffic distribution

In lieu of unavailable market data for the proposed development, development traffic distribution has been estimated as 30% to/from the north, 20% to/from the east, 30% to/from the south, and 20% to/from the west, corresponding to background traffic distribution at the Kingston Road/Compton Road intersection. Application of this traffic distribution to estimated demand during the race meets results in development traffic movements as depicted in Figure 4-1.

As shown in the figure, left and right turn movements are estimated not to occur at the Compton Road/Balmain Street/Allgas Street signals. The proportion of estimated development demand to east-west through movements at this intersection is very low (in the order of 1%). Development impacts on this intersection would therefore be negligible.

Estimated development demands at the Kingston Road intersections of Compton Road and Moss Street indicate that development movements would be equivalent of just over 5% of estimated opening year background for the left turn movements (east to south) in Kingston Road/Compton Road, and U turn movements in Kingston Road/Moss Street. As required by DTMR, the detailed assessment of these intersections is warranted. The assessment of these two intersections (in addition to the Kingston Road/Site access intersection) is detailed in Section 4.3.



■ Figure 4-1 Estimated development traffic movements, PM peak hour

4.3 Intersection performance

Intersection performance for the Kingston Road intersections with Compton Road, the site access and Moss Street was determined using the aaSIDRA3.2 intersection analysis suite, for the following critical PM peak period. An opening year of 2011 and is discussed in Section 3.3, a background growth of 1.2% compound per annum were assumed for the assessment.

Signal cycle times and phasing were derived from DTMR (refer to Appendix D). Results of the analysis are summarised in Table 4-2 to Table 4-4, also further detailed in Appendix E. The intersection analysis results indicate the following:

- Confirmation that both Kingston Road intersections with Moss Street and Compton Road will respectively operate at and just beyond saturation levels.
- The additional development traffic demand is low and only represents additional estimated movements just greater than 5% of background movements for left turns (east to south) in the Compton Road approach and U turns in the northern Kingston Road approach at Moss Street. The additional development demands will not impact significantly on the operation of the signalised intersections.
- Current and future intersection capacity issues are due to inefficiencies in signal timing and phasing, and allowed movements, both at the signals and midblock in Kingston Road (in addition to of background demand). While the assessment of mitigation measures for these issues are outside the scope of this report, from first inspection, the provision of additional turn lanes in Kingston Road/Compton Road and rearranging of phasing may improve the intersection capacity. The provision of a midblock right turn lane at Monte Street would alleviate retrace routing via U turns at the Moss Street signals. Such measures would need to be assessed at the network wide level.
- Assessed as a priority intersection, the Kingston Road/site access intersection is estimated to operate acceptably. Since this intersection is mid block to a set of coordinated signals, estimates of intersection performance (and progression of development traffic) would see an improvement if arrival flow is more accurately analysed as platoons, i.e. the intersection under signal control.
- The assessment of the 2021 time horizon is not warranted due to capacity issues associated with background traffic, and as estimated development traffic movements would fall below the 5% threshold at 2021 volumes.
- Internal queuing capacity, as previously estimated in Section 2.7.1, are adequate.

■ **Table 4-2 SIDRA intersection analysis results, Kingston Road/Compton Road 2011 PM peak period**

Scenario	Direction / overall	Flow [vehicles]	Degree of saturation [X] ¹	Average delay [s]	95th percentile queue [m]
2011 without development	South	1,141	0.96	50.7	147
	East	939	0.99	116.6	326
	North	1,418	1.00	41.6	258
	West	1,513	0.97	73.2	249
	Overall	5,011	1.00	67.3	326
2011 with development	South	1,152	0.97	50.9	159
	East	994	1.00	63.4	267
	North	1,472	1.00	46.4	258
	West	1,549	1.01	62.8	259
	Overall	5,167	1.01	55.6	267

(1) The degree of saturation (or X value) tabulated is the ratio of demand to available capacity for the most critical movement at the intersection. An X of 0.90 represents a desirable maximum for acceptable operation of signalised intersections and roundabouts. For priority intersections an X above 0.80 indicates more formal control is warranted.

■ **Table 4-3 SIDRA intersection analysis results, Kingston Road/Site access 2011 PM peak period**

Scenario	Direction / overall	Flow [vehicles]	Degree of saturation [X] ¹	Average delay [s]	95th percentile queue [m]
2011 with development	South	1,341	0.80	5.9	30
	East	31	0.33	55.4	10
	North	2,029	0.54	0.5	0
	Overall	3401	0.80	3.1	30

(1) The degree of saturation (or X value) tabulated is the ratio of demand to available capacity for the most critical movement at the intersection. An X of 0.90 represents a desirable maximum for acceptable operation of signalised intersections and roundabouts. For priority intersections an X above 0.80 indicates more formal control is warranted.

■ **Table 4-4 SIDRA intersection analysis results, Kingston Road/Moss Street/Rudge Street 2011 PM peak period**

Scenario	Direction / overall	Flow [vehicles]	Degree of saturation [X] ¹	Average delay [s]	95th percentile queue [m]
2011 without development	South	1,369	0.79	10.2	70
	East	459	0.85	46.3	83
	North	1,791	0.90	12.6	138
	West	90	0.16	15.6	15
	Overall	3,709	0.90	15.9	15
2011 with development	South	1,424	0.86	9.5	73
	East	467	0.90	51.7	89
	North	1,829	0.89	11.3	125
	West	89	0.17	15.4	15
	Overall	3,809	0.90	15.7	125

(1) The degree of saturation (or X value) tabulated is the ratio of demand to available capacity for the most critical movement at the intersection. An X of 0.90 represents a desirable maximum for acceptable operation of signalised intersections and roundabouts. For priority intersections an X above 0.80 indicates more formal control is warranted.

5 Conclusions

The traffic impact assessment (TIA) has determined that traffic associated with the proposed development will have no significant impact on the capacity and operation of the surrounding road network. Development traffic movements will coincide with the commuter peak periods during the PM peak, and detailed intersection analysis confirmed that development traffic will not significantly impact on the current levels of service of the key intersections of Kingston Road with Compton Road and Moss Street during the opening year and 10-year (post opening) design horizons.

The TIA also demonstrates that the traffic and transport aspects of the DA comply with the requirements of Australian Standards, the Department of Transport and Main Roads and the Logan City Council, including those for access, car parking, servicing and pedestrian provisions. Mitigation measures for minimising impacts on the surrounding road network associated with development traffic include the implementation of signage provisions and way-finding measures, ensuring that sight lines are maintained at the access points, particularly at the proposed Compton Road access (via tree management), and the implementation of traffic control plans during construction of the development.

Appendix A Pre-lodgement records

RTI DL RELEASE - EHP

13 October 2009

Greyhound Racing Authority
C/- ML Design
GPO Box 714
BRISBANE QLD 4001

Attention: Andrew Gaffney

Dear Sir/Madam

PRE-LODGEMENT ADVICE

Logan City Council: Brisbane-Beenleigh Road
Proposed Material Change of Use: Outdoor Sport and Recreation (Greyhound Track)
Lot 658 on SL12298
Situated at Kingston Road, Kingston

Thank you for your request for pre-lodgement advice received by this department on 25 September 2009 regarding the above proposal.

It is expected that the Department of Transport and Main Roads would be a Concurrence Agency for the proposal should a development application be formally lodged with the assessment manager under Section 3.2.1 of the *Integrated Planning Act 1997*. The department has undertaken an initial assessment of the proposal and assessed its impact on the State transport network.

Please refer to the attached 'Pre-lodgement Record' which list the department's areas of interest and possible requirements for the proposal.

The aim of this pre-lodgement advice is to provide initial advice on likely major issues relevant to a development proposal to assist in the timely processing of a future application. It cannot replace the in-depth investigation normally associated with the formal assessment of an application and consideration of any public submissions. While the advice is given in good faith, it in no way binds a decision by the Department of Transport and Main Roads.

Yours sincerely, 

49-Sch4 - Signature

for Paul Noonan
District Director (Logan)

Enc – Pre-lodgement Record

Roads Business Group/Regions
South Coast Region/Logan District Office
3912 Pacific Motorway, Loganholme
PO Box 7262, Loganholme Qld 4129
ABN 57 836 727 711

Our ref 240/204/658SL122998 djn-djn.155 10429

Your ref Grey0001

Enquiries Darren Nightingale

Telephone +61 7 5596 9135

Facsimile +61 7 5596 9511

Website www.transportandmainroads.qld.gov.au

Page 37 of 84

PRE-LODGEEMENT RECORD

APPLICANT		FILE REFERENCE - 240/204/658SL12298 10429	
Phone	3221 6188	Date	25 September 2009
Fax	3229 6863	Time	2:00pm
Email	<u>Andrew.gaffney@mldesign.com.au</u>	Location	Logan City Council Chambers
Company:	Greyhound Racing Authority C/- ML Design		
SITE			
Address	Corner Kingston and Compton Road, Kingston		
RPD	Lot 658 on SL12298		

Proposal:

Development of the site is proposed to replace the now defunct Greyhound Racing facility at the Gold Coast Parklands. The initial proposal is to establish the facility, described as Outdoor Sport and Recreation, with future development on the site to further intensify the uses on the site, namely establishment of restaurant etc.

Initially the facility will cater for two (2) race meets a week. Monday night, commencing around 6.40pm and Friday twilight, commencing around 4pm. Operation of this facility will operate similar to the existing facility at Albion, with expected attendance number of approximately 100 – 150 people per race meet.

Area Classification:

Public Open Space as per the Logan City Council Planning Scheme

Issues Identified by the Applicant for discussion:

- Access
- Traffic Impacts

Signed

49-Sch4 - Signature

Date

13 / 10 / 09

Disclaimer:

The aim of a pre-lodgement meeting is to provide initial advice on likely major issues relevant to a development proposal to assist in the timely processing of applications. It cannot replace the in-depth investigation normally associated with the formal assessment of an application. While the advice is given in good faith, it in no way binds a decision by the Department of Transport and Main Roads.

Please note that as this is a Department of Transport and Main Roads document it will be subject to the provisions of the Right to Information Act.

Supporting information provided by applicant (eg. plan/reports)

Greyhound Racing Authority Masterplan, prepared by ML Design – A-SK-01-01-A

Relevant Site History

The subject site was previously used as a Waste Transfer Facility. This facility has been disused for a number of years, and has undergone remediation treatments.

Issues Discussed

Access

Access to the proposed racing track is proposed to be from Kingston Road. Plans of the proposal identified that access to the facility was to be via a left-in/left-out access onto Kingston Road, with the potential for future accesses. It was also noted that plans of the proposal identified future entry and exit points onto Compton Road. However these access points are constrained by an existing swale drain within the Compton Road reserve and also the design and speed of this Road. Council noted that the Planning Scheme for the area identified a potential road through the east of the site connecting Cronulla Court and Monte Street. However this road is constrained due to the sites historical use as a waste transfer site, and also need for excavation of this waste material.

A right-in access from Kingston Road was also mooted. This principle is not objected to for the proposed use of the site solely for the greyhound track. However, it would need to be demonstrated that this type of access would not impact on the safety and efficiency of the road (eg - sufficient length of the existing turn pocket; how right turn manoeuvres out of the site be restricted, etc.). Additionally, this right turn would be reviewed upon receipt of any development application seeking to further intensify the use of the site.

It is also noted that an existing bus stop is located within close proximity of the proposed access location. An ingress/egress located in close proximity to a bus stop can cause significant safety concerns. The development should investigate how to minimize this impact.

A Traffic Impact Assessment assessing the above would be required in support of any development application. This assessment should determine any impact/s on the safety and efficiency of the state controlled road network, and how these impacts (if any) will be mitigated.

Traffic impacts

The departments key traffic concerns relate to the volumes of traffic associated with the development. While the facility is proposed to be utilized for two (2) meetings a week, this could expand dependant on the continuation of Authority's other venues. A Traffic Impact Assessment would be required to support any development application assessing the volume of traffic to utilize the facility, particularly during peak periods. This assessment should determine any impact/s on the safety and efficiency of the state controlled road network, and how these impacts (if any) will be mitigated.

Stormwater/Drainage

The proposed stormwater arrangements for the development will see stormwater treated on site, before being conveyed into the local stormwater catchment prepared by Logan City Council. The department will require the preparation of a stormwater management plan that demonstrates there will be a "no net worsening" to the state controlled road network.

Outcome Summary:

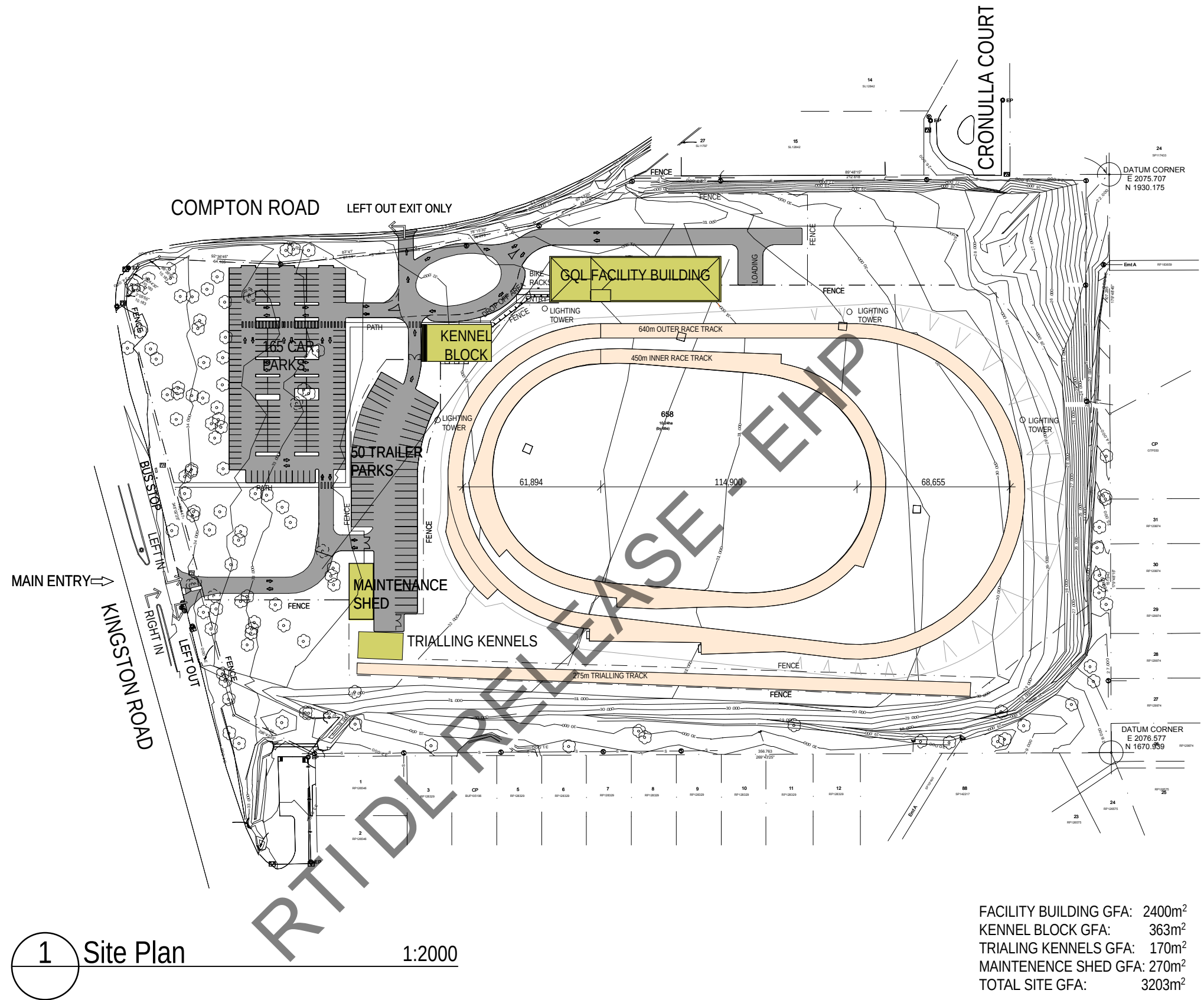
Proposal as discussed is supported in principal subject to detailed assessment. Any development application should be supported by a Traffic Impact Assessment demonstrating traffic volumes and access arrangements and a Stormwater Management Plan.

RTI DL RELEASE - EHP



Appendix B Proposed development plan

RTI DL RELEASE - EHP



1 Site Plan 1:2000

FACILITY BUILDING GFA: 2400m²
 KENNEL BLOCK GFA: 363m²
 TRIALLING KENNELS GFA: 170m²
 MAINTENANCE SHED GFA: 270m²
 TOTAL SITE GFA: 3203m²

PRELIMINARY
NOT FOR CONSTRUCTION

■ SITE PLAN -

LOGAN GREYHOUND FACILITY
GREYHOUNDS QUEENSLAND



1 GROUND FLOOR PLAN 1:200

PRELIMINARY
NOT FOR CONSTRUCTION

FLOOR PLANS - GQL FACILITY BUILDING

LOGAN GREYHOUND FACILITY
GREYHOUNDS QUEENSLAND



1 GROUND FLOOR PLAN 1:200

Zone Perimeter	Floor (Story)	Room Name	Perimeter	Measured Area
Ground			9.00	4.86
			9.22	5.32
			21.00	15.36
			25.82	35.49
		ADMINISTRATION	77.71	250.28
		AMENITIES	44.60	60.80
		BACK OF HOUSE	35.39	65.14
		CASH	13.21	10.65
		CONCOURSE	110.23	503.78
		DECK	45.80	124.60
		KIDS CORNER	19.67	20.71
		KITCHEN	25.39	39.57
		PLANT	27.13	45.65
		STAFF WC	15.60	15.20
		SWITCH ROOM	16.33	13.49
		TOTE	20.61	19.51
		TOTE ADMIN	18.40	19.72
Level 01			13.10	6.82
			123.41	192.50
		RESTAURANT / FUNCTION	113.48	418.81
		AMENITIES	44.60	60.80
		BACK OF HOUSE	29.60	53.86
		BAR	20.87	28.14
		DECK	39.95	89.85
		KITCHEN	36.50	82.68
		LOUNGE	24.60	37.70
Level 02			16.40	14.25
Level 03		STAIR	23.11	24.82
			21.20	19.09
			22.60	22.06
			1,064.53 m	2,301.51 m ²

LOGAN GREYHOUND FACILITY
GREYHOUNDS QUEENSLAND

PRELIMINARY
NOT FOR CONSTRUCTION

FLOOR PLANS - GQL FACILITY BUILDING

Appendix C Service vehicle swept path diagrams

RTI DL RELEASE - EHP



Appendix D Traffic survey data

RTI DL RELEASE - EHP

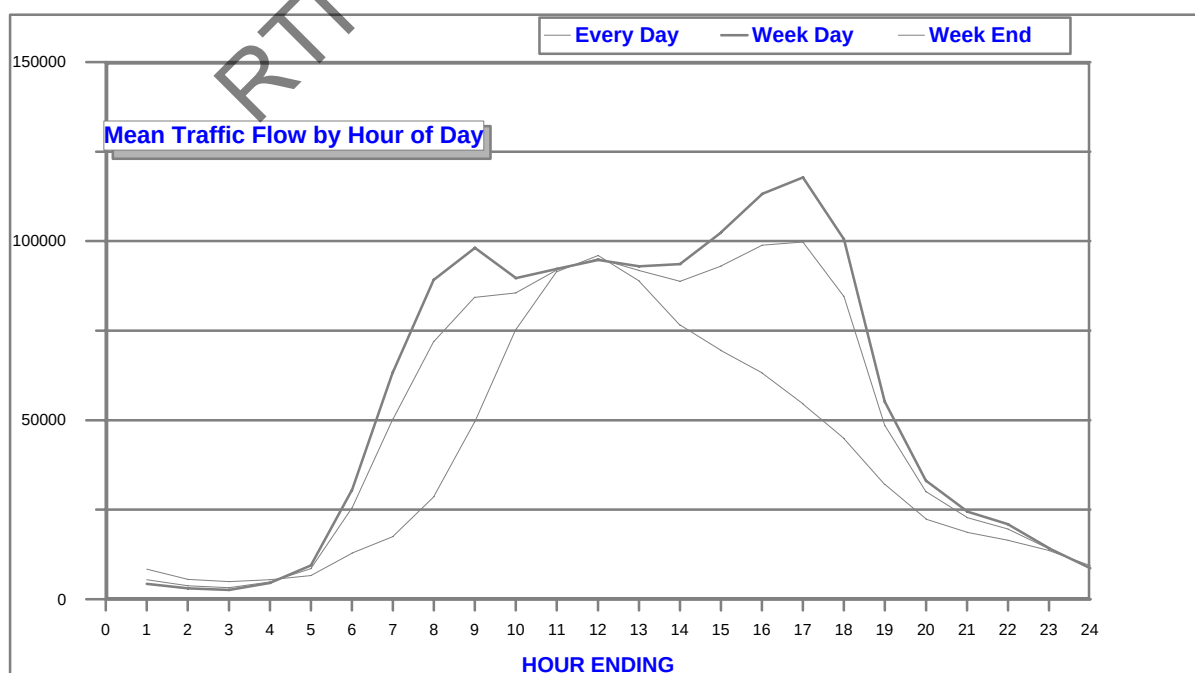
District	13 METROPOLITAN DISTRICT		Mean Counts for
Road Section	204 BRISBANE - BEENLEIGH ROAD		01-JAN-2003
Site	140055 North of Compton Road , Underwood		30-DEC-2003
Type	Permanent	TDist	3.06
Site Stream	All Site Streams		This data is affected by a Calendar Event.
Traffic Class	00 All Vehicles		
Data Class	0 Volume	Range	

Hour	Wednesday %	Thursday %	Friday %	Saturday %	Sunday %	Monday %	Tuesday %	Average Week Day %	Average Week End %	Average Day %
00-01	90 .3	90 .3	108 .4	163 .8	168 1.1	62 .3	75 .3	85 .3	166 .9	108 .4
01-02	64 .2	64 .2	73 .3	109 .5	110 .7	46 .2	50 .2	59 .2	110 .6	74 .3
02-03	50 .2	56 .2	63 .2	104 .5	91 .6	42 .2	45 .2	51 .2	98 .5	64 .3
03-04	91 .3	93 .3	99 .4	124 .6	92 .6	81 .3	88 .3	90 .3	108 .6	95 .4
04-05	187 .7	186 .7	191 .7	146 .7	116 .8	173 .7	187 .7	185 .7	131 .7	169 .7
05-06	615 2.3	609 2.2	588 2.1	317 1.5	193 1.3	545 2.2	611 2.3	594 2.2	255 1.4	497 2.1
06-07	1282 4.8	1270 4.6	1178 4.3	431 2.0	266 1.8	1170 4.7	1292 4.9	1238 4.7	349 1.9	984 4.1
07-08	1780 6.7	1774 6.4	1671 6.1	721 3.4	420 2.8	1675 6.8	1818 6.9	1744 6.6	571 3.2	1408 5.8
08-09	1953 7.4	1970 7.1	1858 6.7	1213 5.7	754 5.1	1840 7.4	1969 7.5	1918 7.2	984 5.4	1651 6.8
09-10	1757 6.6	1817 6.6	1775 6.4	1814 8.5	1175 7.9	1675 6.8	1732 6.6	1751 6.6	1495 8.3	1678 7.0
10-11	1795 6.8	1851 6.7	1862 6.8	2211 10.4	1417 9.5	1732 7.0	1769 6.7	1802 6.8	1814 10.0	1805 7.5
11-12	1836 6.9	1866 6.7	1952 7.1	2303 10.8	1506 10.1	1778 7.2	1824 6.9	1851 7.0	1905 10.5	1866 7.7
12-13	1789 6.7	1819 6.6	1965 7.1	2071 9.7	1453 9.7	1733 7.0	1778 6.8	1817 6.8	1762 9.7	1801 7.5
13-14	1778 6.7	1838 6.6	2039 7.4	1786 8.4	1255 8.4	1720 6.9	1772 6.7	1829 6.9	1521 8.4	1741 7.2
14-15	1964 7.4	2022 7.3	2205 8.0	1602 7.5	1152 7.7	1874 7.6	1946 7.4	2002 7.5	1377 7.6	1824 7.6
15-16	2203 8.3	2250 8.1	2334 8.5	1433 6.7	1076 7.2	2090 8.4	2177 8.3	2211 8.3	1255 6.9	1938 8.0
16-17	2328 8.8	2401 8.7	2265 8.2	1209 5.7	954 6.4	2196 8.9	2317 8.8	2301 8.7	1082 6.0	1953 8.1
17-18	1998 7.5	2089 7.5	1908 6.9	967 4.5	811 5.4	1840 7.4	1994 7.6	1966 7.4	889 4.9	1658 6.9
18-19	1066 4.0	1219 4.4	1170 4.2	714 3.4	559 3.7	916 3.7	1019 3.9	1078 4.1	637 3.5	952 3.9
19-20	619 2.3	820 3.0	700 2.5	489 2.3	397 2.7	520 2.1	575 2.2	647 2.4	443 2.4	589 2.4
20-21	456 1.7	615 2.2	485 1.8	377 1.8	364 2.4	386 1.6	450 1.7	478 1.8	371 2.0	448 1.9
21-22	407 1.5	499 1.8	428 1.6	366 1.7	285 1.9	329 1.3	381 1.5	409 1.5	326 1.8	385 1.6
22-23	270 1.0	285 1.0	383 1.4	348 1.6	193 1.3	212 .9	243 .9	279 1.0	271 1.5	276 1.1
23-24	155 .6	174 .6	262 1.0	256 1.2	116 .8	120 .5	142 .5	171 .6	186 1.0	175 .7

Peaks	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value
AM	8:45	2003	8:45	2013	12:45	1972	11:45	2315	12:15	1515	8:45	1889	8:45	2029	8:45	1969
PM	16:45	2367	16:45	2427	16:15	2362	13:00	2072	13:00	1452	16:45	2236	16:45	2347	16:45	2341

12 Hour	22,247	83.8	22,916	82.8	23,004	83.5	18,044	84.8	12,532	84.0	21,069	85.1	22,115	84.2	22,270	83.9
16 Hour	25,011	94.3	26,120	94.4	25,795	93.6	19,707	92.6	13,844	92.8	23,474	94.8	24,813	94.5	25,043	94.3
18 Hour	25,436	95.9	26,579	96.0	26,440	95.9	20,311	95.5	14,153	94.8	23,806	96.2	25,198	96.0	25,492	96.0
24 Hour	26,533	100.0	27,677	100.0	27,562	100.0	21,274	100.0	14,923	100.0	24,755	100.0	26,254	100.0	26,556	100.0

AVG Week Day	99.9%	104.2%	103.8%			93.2%	98.9%	100.0%	68.2%	90.9%
AVG Week End				117.5%	82.5%			146.7%	100.0%	133.4%
AVG Day	109.9%	114.7%	114.2%	88.1%	61.8%	102.5%	108.8%	110.0%	75.0%	100.0%



District 13 METROPOLITAN DISTRICT
Road Section 204 BRISBANE - BEENLEIGH ROAD
Site 140055 North of Compton Road , Underwood
Type PERMANENT TDist 3.06
Site Stream All Site Streams
Traffic Class 00 All Vehicles
Data Class 0 Volume Range 0

Mean Counts for
01-JAN-2004
29-DEC-2004

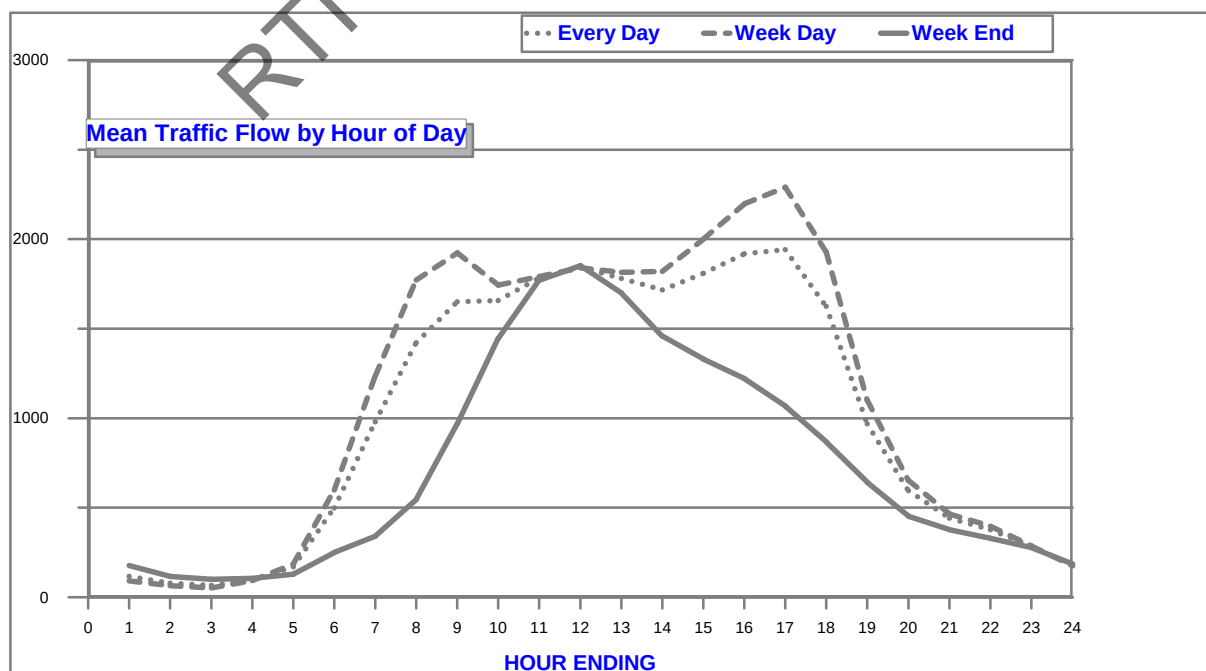
This data is affected by a Calendar Event.

Hour	Thursday %	Friday %	Saturday %	Sunday %	Monday %	Tuesday %	Wednesday %	Average Week Day %	Average Week End %	Average Day %
00-01	106 .4	116 .4	180 .9	174 1.2	65 .3	83 .3	90 .3	92 .3	177 1.0	116 .5
01-02	75 .3	75 .3	119 .6	113 .8	52 .2	58 .2	64 .2	65 .2	116 .7	79 .3
02-03	58 .2	61 .2	106 .5	95 .7	43 .2	46 .2	52 .2	52 .2	101 .6	66 .3
03-04	97 .4	103 .4	116 .6	95 .7	81 .3	90 .3	93 .4	93 .3	106 .6	96 .4
04-05	189 .7	199 .7	145 .7	114 .8	172 .7	187 .7	188 .7	187 .7	130 .7	171 .7
05-06	619 2.2	607 2.2	317 1.5	185 1.3	536 2.2	606 2.3	627 2.4	599 2.3	251 1.4	500 2.1
06-07	1284 4.6	1195 4.3	425 2.0	259 1.8	1127 4.6	1282 4.9	1286 4.9	1235 4.7	342 1.9	980 4.1
07-08	1814 6.6	1718 6.1	695 3.3	400 2.8	1641 6.7	1839 7.1	1844 7.0	1771 6.7	548 3.1	1422 5.9
08-09	1989 7.2	1924 6.9	1209 5.8	724 5.0	1802 7.4	1949 7.5	1958 7.4	1924 7.3	967 5.5	1651 6.9
09-10	1794 6.5	1795 6.4	1779 8.5	1111 7.7	1657 6.8	1728 6.6	1745 6.6	1744 6.6	1445 8.2	1658 6.9
10-11	1823 6.6	1897 6.8	2175 10.4	1364 9.4	1714 7.0	1740 6.7	1780 6.7	1791 6.8	1770 10.0	1785 7.4
11-12	1856 6.7	1972 7.0	2231 10.7	1475 10.2	1766 7.3	1792 6.9	1810 6.8	1889 6.9	1853 10.5	1843 7.7
12-13	1832 6.6	1993 7.1	2010 9.6	1388 9.6	1713 7.0	1746 6.7	1785 6.7	1814 6.8	1699 9.6	1781 7.4
13-14	1836 6.6	2072 7.4	1721 8.2	1197 8.3	1686 6.9	1739 6.7	1770 6.7	1821 6.9	1459 8.2	1717 7.2
14-15	2023 7.3	2230 7.9	1555 7.4	1107 7.6	1854 7.6	1923 7.4	1970 7.4	2000 7.5	1331 7.5	1809 7.5
15-16	2234 8.1	2365 8.4	1394 6.7	1049 7.2	2024 8.3	2154 8.3	2206 8.3	2197 8.3	1222 6.9	1918 8.0
16-17	2387 8.6	2285 8.1	1193 5.7	940 6.5	2139 8.8	2327 9.0	2317 8.7	2291 8.6	1067 6.0	1941 8.1
17-18	2051 7.4	1935 6.9	951 4.5	782 5.4	1767 7.3	1937 7.5	1958 7.4	1930 7.3	867 4.9	1626 6.8
18-19	1256 4.5	1233 4.4	720 3.4	566 3.9	924 3.8	1027 4.0	1066 4.0	1101 4.2	643 3.6	970 4.0
19-20	822 3.0	713 2.5	506 2.4	397 2.7	528 2.2	578 2.2	626 2.4	653 2.5	452 2.5	596 2.5
20-21	590 2.1	499 1.8	398 1.9	356 2.5	385 1.6	421 1.6	437 1.6	466 1.8	377 2.1	441 1.8
21-22	477 1.7	428 1.5	371 1.8	289 2.0	322 1.3	360 1.4	397 1.5	397 1.5	330 1.9	378 1.6
22-23	288 1.0	402 1.4	356 1.7	197 1.4	221 .9	243 .9	282 1.1	287 1.1	277 1.6	284 1.2
23-24	178 .6	267 1.0	255 1.2	116 .8	128 .5	144 .6	162 .6	176 .7	186 1.0	179 .7

Peaks	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value
AM	8:45	2039	12:45	2006	11:45	2244	12:15	1476	8:45	1841	8:45	2019	8:45	2013	8:45	1975
PM	16:45	2400	16:15	2375	13:00	2010	13:00	1392	16:45	2159	16:45	2337	16:45	2335	16:45	2311

12 Hour	22,895	82.7	23,419	83.4	17,633	84.3	12,103	83.5	20,887	85.0	21,901	84.2	22,209	83.8	22,222	83.8
16 Hour	26,068	94.2	26,254	93.5	19,333	92.4	13,404	92.5	23,049	94.7	24,542	94.4	24,955	94.1	24,974	94.2
18 Hour	26,534	95.9	26,923	95.9	19,944	95.3	13,717	94.6	23,398	96.1	24,929	95.9	25,399	95.8	25,437	95.9
24 Hour	27,678	100.0	28,084	100.0	20,927	100.0	14,493	100.0	24,347	100.0	25,999	100.0	26,513	100.0	26,524	100.0

AVG Week Day	104.3%	105.9%					91.8%	98.0%	100.0%	100.0%	66.8%	90.5%
AVG Week End			118.2%	81.8%						149.8%	100.0%	135.5%
AVG Day	115.3%	117.0%	87.2%	60.4%	101.4%	108.3%	110.4%	110.5%	73.8%			100.0%



District **13 METROPOLITAN DISTRICT** Mean Counts for

Road Section **204 BRISBANE - BEENLEIGH ROAD** **01-JAN-2005**

Site **140055 North of Compton Road , Underwood** **30-DEC-2005**

Type **PERMANENT** TDist **3.06**

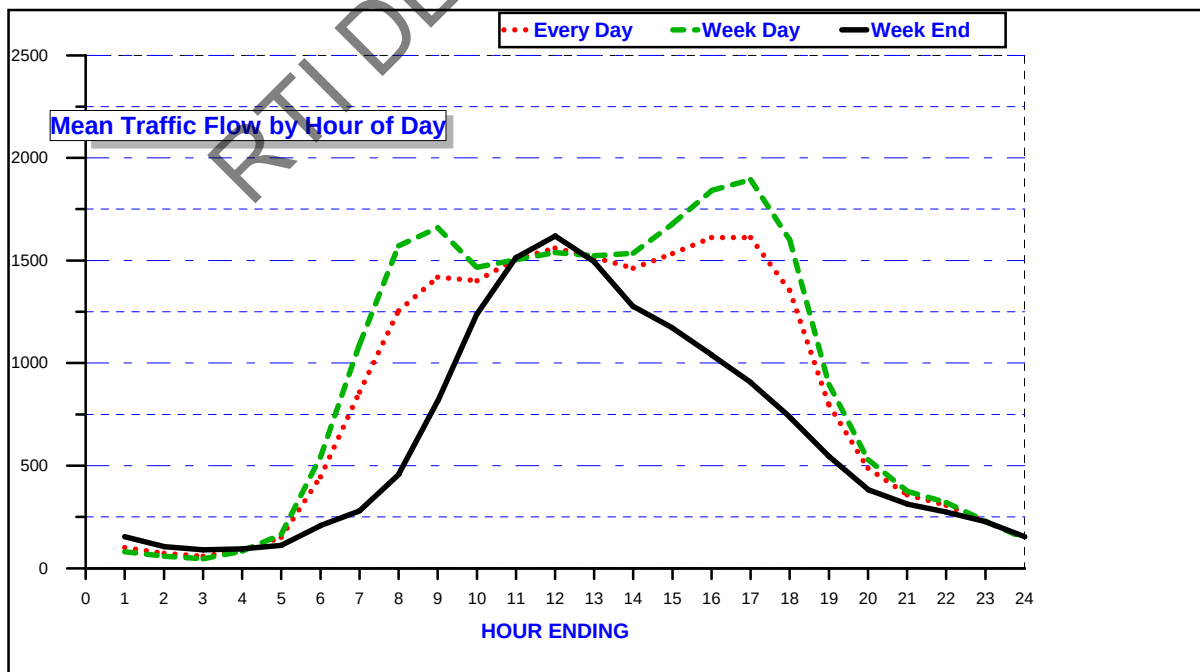
Site Stream **All Site Streams**

Traffic Class **00 All Vehicles**

Data Class **0 Volume** Range **0**

This data is affected by a Calendar Event.

Hour	Saturday	%	Sunday	%	Monday	%	Tuesday	%	Wednesday	%	Thursday	%	Friday	%	Average Week Day	%	Average Week End	%	Average Day	%
00-01	155	.9	152	1.2	61	.3	70	.3	78	.3	90	.4	101	.4	80	.4	154	1.0	101	.5
01-02	108	.6	102	.8	45	.2	53	.2	60	.3	64	.3	72	.3	59	.3	105	.7	72	.4
02-03	91	.5	86	.7	39	.2	40	.2	43	.2	52	.2	55	.2	46	.2	89	.6	58	.3
03-04	99	.6	88	.7	74	.4	82	.4	84	.4	90	.4	91	.4	84	.4	94	.6	87	.4
04-05	126	.7	96	.8	152	.8	164	.7	166	.7	171	.7	173	.7	165	.7	111	.7	150	.7
05-06	268	1.5	147	1.2	489	2.4	560	2.5	549	2.5	559	2.3	551	2.3	542	2.4	208	1.4	446	2.2
06-07	353	2.0	207	1.7	970	4.8	1148	5.2	1125	5.0	1151	4.8	1059	4.5	1091	4.9	280	1.8	859	4.2
07-08	581	3.2	335	2.7	1421	7.1	1649	7.5	1618	7.2	1638	6.9	1535	6.5	1572	7.0	458	3.0	1254	6.2
08-09	1002	5.6	625	5.0	1505	7.5	1719	7.8	1686	7.5	1732	7.2	1656	7.0	1660	7.4	814	5.4	1418	7.0
09-10	1507	8.4	972	7.8	1342	6.7	1455	6.6	1477	6.6	1554	6.5	1507	6.4	1467	6.6	1240	8.2	1402	6.9
10-11	1854	10.3	1174	9.4	1417	7.1	1469	6.6	1487	6.7	1570	6.6	1582	6.7	1505	6.7	1514	10.0	1508	7.4
11-12	1949	10.9	1290	10.3	1435	7.2	1496	6.8	1511	6.8	1602	6.7	1646	7.0	1538	6.9	1620	10.7	1561	7.7
12-13	1771	9.9	1216	9.7	1397	7.0	1474	6.7	1501	6.7	1585	6.6	1658	7.1	1523	6.8	1494	9.8	1515	7.5
13-14	1504	8.4	1050	8.4	1399	7.0	1490	6.7	1507	6.7	1584	6.6	1697	7.2	1535	6.9	1277	8.4	1462	7.2
14-15	1362	7.6	979	7.8	1514	7.6	1633	7.4	1660	7.4	1747	7.3	1841	7.8	1679	7.5	1171	7.7	1534	7.5
15-16	1190	6.6	888	7.1	1660	8.3	1830	8.3	1846	8.3	1901	8.0	1970	8.4	1841	8.2	1039	6.8	1612	7.9
16-17	1011	5.6	798	6.4	1714	8.6	1915	8.7	1912	8.6	2037	8.5	1897	8.1	1895	8.5	905	6.0	1612	7.9
17-18	812	4.5	662	5.3	1404	7.0	1620	7.3	1627	7.3	1780	7.4	1580	6.7	1602	7.2	737	4.8	1355	6.7
18-19	610	3.4	482	3.9	719	3.6	826	3.7	878	3.9	1067	4.5	990	4.2	896	4.0	546	3.6	796	3.9
19-20	427	2.4	339	2.7	417	2.1	468	2.1	522	2.3	674	2.8	670	2.4	530	2.4	383	2.5	488	2.4
20-21	330	1.8	296	2.4	299	1.5	349	1.6	355	1.6	481	2.0	393	1.7	375	1.7	313	2.1	358	1.8
21-22	305	1.7	242	1.9	256	1.3	296	1.3	309	1.4	392	1.6	345	1.5	320	1.4	274	1.8	306	1.5
22-23	293	1.6	161	1.3	175	.9	199	.9	219	1.0	293	1.0	316	1.3	228	1.0	227	1.5	228	1.1
23-24	210	1.2	95	.8	106	.5	120	.5	135	.6	144	.6	213	.9	144	.6	153	1.0	146	.7
Peaks	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value
AM	11:45	1938	12:00	1290	8:30	1585	8:30	1764	8:30	1722	8:45	1770	8:45	1710	8:45	1704	12:00	1610	12:15	1560
PM	13:00	1755	13:00	1216	16:45	1753	16:45	1907	16:45	1922	17:15	2022	16:15	2009	16:45	1910	13:00	1485	16:30	1632
12 Hour	15,153	84.6	10,471	83.9	16,927	84.6	18,576	84.0	18,710	83.7	19,797	82.8	19,559	83.2	18,714	83.6	12,812	84.3	17,028	83.8
16 Hour	16,568	92.5	11,555	92.6	18,869	94.3	20,837	94.2	21,021	94.0	22,495	94.1	21,926	93.3	21,030	94.0	14,062	92.5	19,039	93.7
18 Hour	17,071	95.3	11,811	94.6	19,150	95.7	21,156	95.6	21,375	95.6	22,872	95.7	22,455	95.6	21,402	95.6	14,441	95.0	19,413	95.5
24 Hour	17,918	100.0	12,482	100.0	20,010	100.0	22,125	100.0	22,355	100.0	23,898	100.0	23,498	100.0	22,377	100.0	15,200	100.0	20,327	100.0
AVG Week Day						89.4%		98.9%		99.9%		106.8%		105.0%		100.0%		67.9%		90.8%
AVG Week End	117.9%			82.1%												147.2%		100.0%		133.7%
AVG Day	88.2%			61.4%		98.4%		108.8%		110.0%		117.6%		115.6%		110.1%		74.8%		100.0%

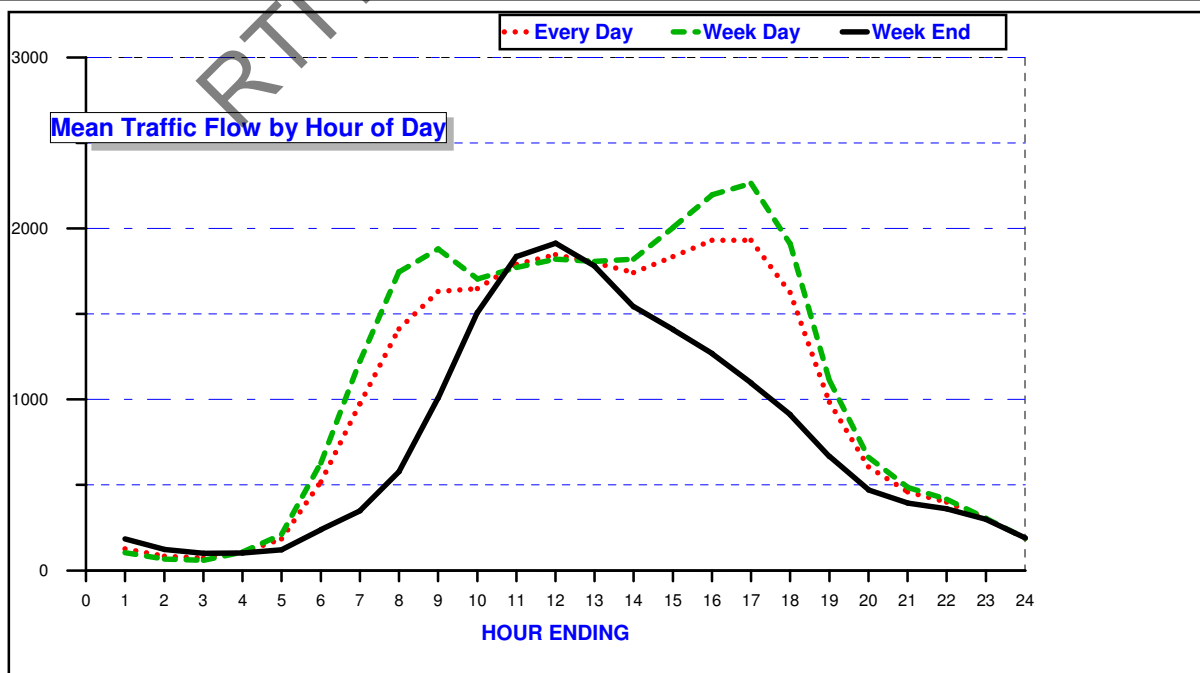


Traffic Analysis and Reporting System WEEKLY SUMMARY REPORT

District **13 METROPOLITAN DISTRICT** Mean Counts for
Road Section **204 BRISBANE - BEENLEIGH ROAD** **01-JAN-2006**
Site **140055 North of Compton Road , Underwood** **30-DEC-2006**
Type **PERMANENT** TDist **3.06**
Site Stream **All Site Streams**
Traffic Class **00 All Vehicles**
Data Class **0 Volume** Range **0**

This data is affected by a
Calendar Event.

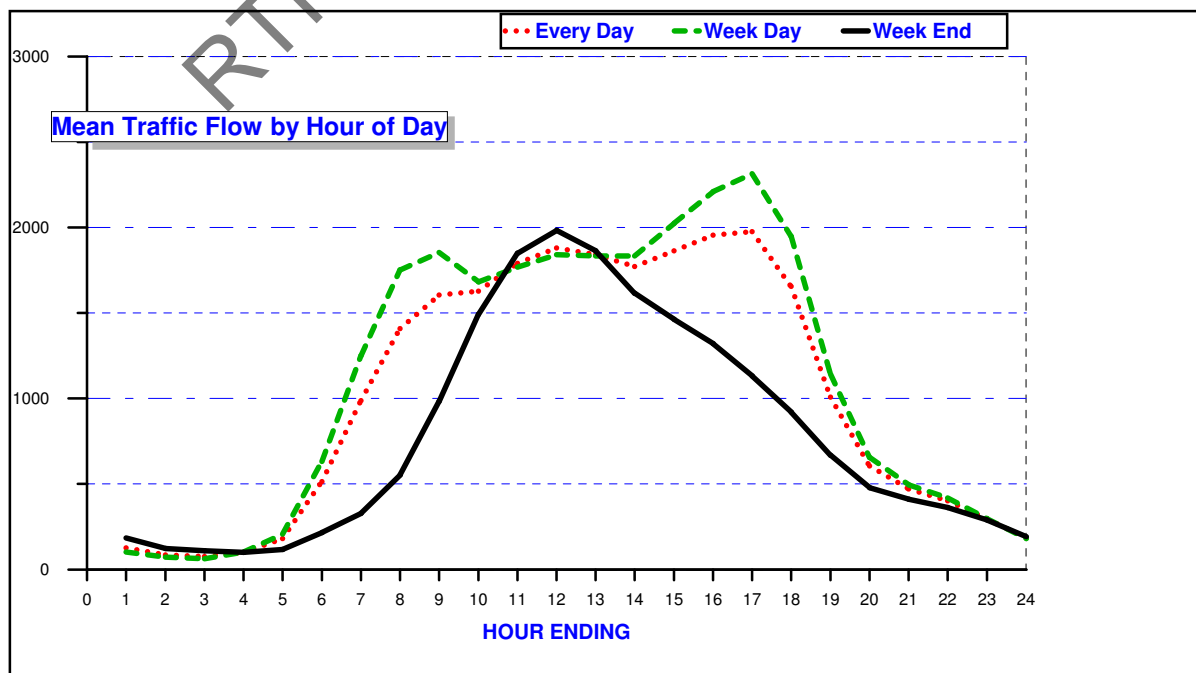
Hour	Sunday	%	Monday	%	Tuesday	%	Wednesday	%	Thursday	%	Friday	%	Saturday	%	Average Week Day	%	Average Week End	%	Average Day	%		
00-01	172	1.1	66	.3	98	.4	109	.4	109	.4	136	.5	198	.9	104	.4	185	1.0	127	.5		
01-02	118	.8	54	.2	62	.2	68	.3	68	.2	80	.3	128	.6	66	.3	123	.7	83	.3		
02-03	97	.6	46	.2	59	.2	61	.2	64	.2	72	.3	104	.5	60	.2	101	.5	72	.3		
03-04	92	.6	92	.4	100	.4	111	.4	111	.4	122	.4	114	.5	107	.4	103	.6	106	.4		
04-05	109	.7	202	.8	206	.8	207	.8	216	.8	219	.8	132	.6	210	.8	121	.7	184	.8		
05-06	177	1.2	590	2.4	624	2.4	639	2.4	655	2.4	635	2.2	299	1.4	629	2.4	238	1.3	517	2.1		
06-07	270	1.8	1167	4.7	1251	4.9	1243	4.8	1270	4.6	1190	4.2	427	2.0	1224	4.6	349	1.9	974	4.0		
07-08	436	2.8	1719	7.0	1764	6.9	1742	6.7	1788	6.4	1717	6.1	717	3.3	1746	6.6	577	3.1	1412	5.8		
08-09	775	5.1	1828	7.4	1892	7.4	1863	7.1	1933	6.9	1889	6.7	1238	5.7	1881	7.1	1007	5.5	1631	6.7		
09-10	1192	7.8	1624	6.6	1644	6.4	1708	6.5	1772	6.4	1778	6.3	1821	8.4	1705	6.4	1507	8.2	1648	6.8		
10-11	1450	9.5	1694	6.9	1707	6.7	1755	6.7	1815	6.5	1889	6.7	2220	10.3	1772	6.7	1835	10.0	1790	7.4		
11-12	1552	10.1	1709	6.9	1750	6.8	1783	6.8	1870	6.7	1989	7.0	2276	10.6	1820	6.9	1914	10.4	1847	7.6		
12-13	1478	9.6	1682	6.8	1705	6.7	1783	6.8	1850	6.6	2022	7.2	2079	9.6	1808	6.8	1779	9.6	1800	7.4		
13-14	1278	8.3	1702	6.9	1698	6.6	1772	6.8	1845	6.6	2083	7.4	1810	8.4	1820	6.9	1544	8.4	1741	7.2		
14-15	1192	7.8	1885	7.6	1896	7.4	1959	7.5	2028	7.3	2256	8.0	1826	7.5	2005	7.6	1409	7.6	1835	7.6		
15-16	1102	7.2	2110	8.5	2133	8.3	2157	8.3	2236	8.0	2344	8.3	1435	6.7	2196	8.3	1269	6.9	1931	8.0		
16-17	954	6.2	2162	8.8	2248	8.8	2253	8.6	2368	8.5	2287	8.1	1238	5.7	2264	8.5	1096	5.9	1930	8.0		
17-18	820	5.4	1803	7.3	1861	7.3	1910	7.3	2087	7.5	1893	6.7	1000	4.6	1911	7.2	910	4.9	1625	6.7		
18-19	599	3.9	928	3.8	1033	4.0	1074	4.1	1296	4.7	1219	4.3	736	3.4	1110	4.2	668	3.6	984	4.1		
19-20	422	2.8	534	2.2	594	2.3	620	2.4	838	3.0	718	2.8	517	2.4	661	2.5	470	2.5	606	2.5		
20-21	376	2.5	387	1.6	451	1.8	450	1.7	622	2.2	519	1.8	412	1.9	486	1.8	394	2.1	460	1.9		
21-22	314	2.1	326	1.3	375	1.5	405	1.5	506	1.8	466	1.7	405	1.9	416	1.6	360	1.9	400	1.7		
22-23	220	1.4	239	1.0	257	1.0	288	1.1	311	1.1	430	1.5	377	1.7	305	1.2	299	1.6	303	1.3		
23-24	122	.8	135	.5	155	.6	172	.7	192	.7	288	1.0	258	1.2	188	.7	190	1.0	189	.8		
Peaks	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value		
AM	12:15	1557	8:45	1869	8:45	1937	8:45	1911	8:45	1962	12:45	2028	11:30	2301	8:45	1920	11:45	1916	12:15	1850		
PM	13:00	1478	16:45	2184	16:45	2253	17:15	2259	17:15	2373	16:15	2384	13:00	2079	16:45	2282	13:00	1779	16:15	1958		
12 Hour	12,828	83.8	20,846	84.5	21,331	83.4	21,759	83.3	22,888	82.2	23,366	82.7	18,196	84.4	22,038	83.2	15,512	84.1	20,173	83.4		
16 Hour	14,210	92.8	23,260	94.2	24,002	93.9	24,477	93.7	26,124	93.8	26,259	93.0	19,957	92.5	24,824	93.7	17,084	92.6	22,613	93.5		
18 Hour	14,552	95.0	23,634	95.7	24,414	95.5	24,937	95.4	26,627	95.6	26,977	95.5	20,592	95.5	25,318	95.6	17,572	95.3	23,105	95.5		
24 Hour	15,317	100.0	24,684	100.0	25,563	100.0	26,132	100.0	27,850	100.0	28,241	100.0	21,567	100.0	26,494	100.0	18,442	100.0	24,193	100.0		
AVG Week Day				93.2%				96.5%		98.6%		105.1%		106.6%				100.0%		69.6%		91.3%
AVG Week End		83.1%												116.9%		143.7%		100.0%		131.2%		
AVG Day		63.3%		102.0%				105.7%		108.0%		115.1%		116.7%		89.1%		109.5%		76.2%		100.0%



Traffic Analysis and Reporting System WEEKLY SUMMARY REPORT

District	13 METROPOLITAN DISTRICT		Mean Counts for	01-JAN-2007
Road Section	204 BRISBANE - BEENLEIGH ROAD			30-DEC-2007
Site	140055 North of Compton Road , Underwood			
Type	PERMANENT	TDist	3.06	
Site Stream	All Site Streams		This data is affected by a Calendar Event.	
Traffic Class	00 All Vehicles			
Data Class	0 Volume	Range		

Hour	Monday	%	Tuesday	%	Wednesday	%	Thursday	%	Friday	%	Saturday	%	Sunday	%	Average Week Day	%	Average Week End	%	Average Day	%
00-01	69	.3	95	.4	106	.4	110	.4	136	.5	192	.9	177	1.1	103	.4	185	1.0	126	.5
01-02	58	.2	65	.2	73	.3	75	.3	87	.3	124	.6	122	.8	72	.3	123	.7	86	.4
02-03	49	.2	59	.2	62	.2	67	.2	71	.3	107	.5	113	.7	62	.2	110	.6	75	.3
03-04	89	.4	102	.4	99	.4	109	.4	112	.4	106	.5	93	.6	102	.4	100	.5	101	.4
04-05	202	.8	206	.8	201	.8	210	.7	210	.7	125	.6	108	.7	206	.8	117	.6	180	.7
05-06	584	2.4	643	2.5	637	2.4	663	2.3	628	2.2	268	1.2	165	1.1	631	2.4	217	1.2	513	2.1
06-07	1174	4.7	1286	4.9	1275	4.9	1318	4.7	1197	4.3	401	1.8	255	1.6	1250	4.7	328	1.7	987	4.0
07-08	1667	6.7	1807	6.9	1772	6.8	1807	6.4	1704	6.1	684	3.1	424	2.7	1751	6.6	554	3.0	1409	5.8
08-09	1768	7.1	1882	7.2	1852	7.1	1929	6.8	1840	6.5	1218	5.5	743	4.8	1854	7.0	981	5.2	1605	6.6
09-10	1606	6.5	1654	6.3	1654	6.3	1755	6.2	1740	6.2	1789	8.1	1192	7.7	1682	6.3	1491	8.0	1627	6.7
10-11	1707	6.9	1717	6.6	1723	6.6	1828	6.5	1862	6.6	2254	10.2	1444	9.3	1767	6.6	1849	9.9	1791	7.3
11-12	1772	7.2	1771	6.8	1797	6.9	1897	6.7	1963	7.0	2383	10.8	1585	10.2	1840	6.9	1984	10.6	1881	7.7
12-13	1742	7.0	1743	6.7	1780	6.8	1888	6.7	2010	7.2	2189	9.9	1538	9.9	1833	6.9	1864	9.9	1841	7.5
13-14	1737	7.0	1747	6.7	1751	6.7	1875	6.6	2061	7.3	1893	8.6	1338	8.6	1834	6.9	1616	8.6	1772	7.3
14-15	1904	7.7	1957	7.5	1967	7.5	2054	7.3	2238	8.0	1696	7.7	1227	7.9	2024	7.6	1462	7.8	1863	7.6
15-16	2094	8.5	2140	8.2	2169	8.3	2276	8.1	2367	8.4	1516	6.9	1125	7.3	2209	8.3	1321	7.0	1955	8.0
16-17	2195	8.9	2313	8.9	2304	8.8	2440	8.6	2318	8.2	1274	5.8	987	6.4	2314	8.7	1131	6.0	1976	8.1
17-18	1805	7.3	1950	7.5	1945	7.4	2108	7.5	1942	6.9	1021	4.6	819	5.3	1950	7.3	920	4.9	1656	6.8
18-19	949	3.8	1091	4.2	1111	4.2	1327	4.7	1238	4.4	744	3.4	593	3.8	1143	4.3	669	3.6	1008	4.1
19-20	524	2.1	580	2.2	612	2.3	861	3.0	701	2.5	539	2.4	419	2.7	656	2.5	479	2.6	605	2.5
20-21	396	1.6	461	1.8	459	1.8	646	2.3	515	1.8	481	2.0	388	2.5	495	1.9	410	2.2	471	1.9
21-22	333	1.3	384	1.5	391	1.5	518	1.8	466	1.7	415	1.9	310	2.0	418	1.6	363	1.9	402	1.6
22-23	227	.9	248	1.0	283	1.1	304	1.1	425	1.6	374	1.7	204	1.3	297	1.1	289	1.5	295	1.2
23-24	130	.5	148	.6	166	.6	183	.6	278	1.0	267	1.2	117	.8	181	.7	192	1.0	184	.8
Peaks	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value	Time	Value
AM	8:45	1806	8:45	1938	8:45	1900	8:45	1966	12:45	2010	11:45	2388	12:15	1603	8:45	1896	12:00	1988	12:15	1888
PM	16:45	2216	17:00	2318	17:00	2303	17:00	2440	16:15	2386	13:00	2190	13:00	1538	16:45	2318	13:00	1867	16:30	1998
12 Hour	20,946	84.5	21,772	83.6	21,825	83.3	23,184	82.1	23,283	82.8	18,661	84.8	13,015	84.0	22,202	83.2	15,838	84.5	20,384	83.5
16 Hour	23,373	94.3	24,483	94.0	24,562	93.8	26,527	93.9	26,162	93.1	20,447	92.9	14,387	92.9	25,021	93.8	17,417	92.9	22,849	93.6
18 Hour	23,730	95.8	24,879	95.5	25,011	95.5	27,014	95.6	26,863	95.6	21,088	95.8	14,708	95.0	25,499	95.6	17,898	95.5	23,328	95.6
24 Hour	24,781	100.0	26,049	100.0	26,189	100.0	28,248	100.0	28,107	100.0	22,010	100.0	15,486	100.0	26,675	100.0	18,748	100.0	24,410	100.0
AVG Week Day	92.9%		97.7%		98.2%		105.9%		105.4%						100.0%		70.3%		91.5%	
AVG Week End											117.4%		82.6%				142.3%		130.2%	
AVG Day	101.5%		106.7%		107.3%		115.7%		115.1%		90.2%		63.4%		109.3%		76.8%		100.0%	



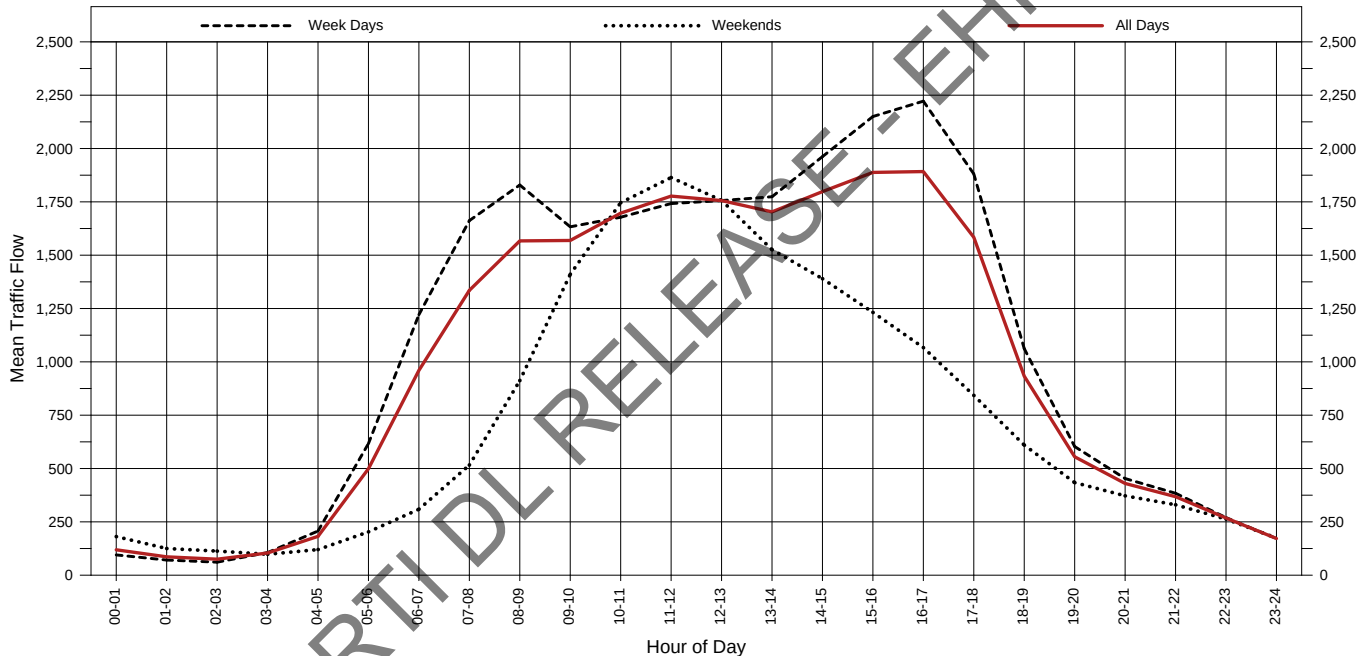
Traffic Analysis and Reporting System
Weekly Volume Report

District 13 - Metropolitan District
Road Section 204 - Brisbane - Beenleigh Road
Site 140055 - North of Compton Road , Underwood
Thru Dist 3.06
Type P - Permanent
Stream TB - Bi-directional traffic flow
Traffic Class 00 - All Vehicles
Date Range Monday 31-Dec-2007 - Sunday 28-Dec-2008

Data Profile

	Mondays	Tuesdays	Wednesdays	Thursdays	Fridays	Saturdays	Sundays
Days in Date Range	52	52	52	52	52	52	52
Days Included	50	52	50	50	52	51	50
Calendar Events	4	1	1	1	3	2	0

Mean Traffic Flow by Hour of Day



Hour	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Average Week Day		Average Weekend Day		Average Day	
00-01	59	0.3%	95	0.4%	100	0.4%	103	0.4%	117	0.4%	178	0.9%	183	1.3%	95	0.4%	181	1.0%	119	0.5%
01-02	51	0.2%	70	0.3%	75	0.3%	77	0.3%	82	0.3%	123	0.6%	127	0.9%	71	0.3%	125	0.7%	86	0.4%
02-03	52	0.2%	60	0.2%	59	0.2%	62	0.2%	70	0.3%	103	0.5%	122	0.8%	61	0.2%	113	0.6%	75	0.3%
03-04	91	0.4%	108	0.4%	108	0.4%	111	0.4%	114	0.4%	96	0.5%	99	0.7%	106	0.4%	98	0.6%	104	0.4%
04-05	200	0.8%	210	0.8%	211	0.8%	208	0.8%	207	0.8%	126	0.6%	113	0.8%	207	0.8%	120	0.7%	182	0.8%
05-06	571	2.4%	636	2.5%	633	2.5%	642	2.4%	602	2.3%	253	1.2%	153	1.0%	617	2.4%	203	1.2%	499	2.1%
06-07	1,135	4.8%	1,281	5.1%	1,275	4.9%	1,270	4.8%	1,145	4.3%	365	1.8%	252	1.7%	1,221	4.8%	309	1.8%	960	4.1%
07-08	1,571	6.7%	1,737	6.9%	1,726	6.7%	1,692	6.3%	1,586	5.9%	644	3.1%	388	2.7%	1,662	6.5%	516	2.9%	1,335	5.7%
08-09	1,718	7.3%	1,897	7.5%	1,894	7.3%	1,849	6.9%	1,788	6.7%	1,125	5.5%	698	4.8%	1,829	7.1%	912	5.2%	1,567	6.7%
09-10	1,538	6.5%	1,630	6.4%	1,650	6.4%	1,671	6.3%	1,676	6.3%	1,701	8.3%	1,119	7.6%	1,633	6.4%	1,410	8.0%	1,569	6.7%
10-11	1,615	6.8%	1,642	6.5%	1,689	6.5%	1,700	6.4%	1,744	6.5%	2,132	10.4%	1,359	9.3%	1,678	6.6%	1,746	9.9%	1,697	7.3%
11-12	1,666	7.1%	1,684	6.7%	1,756	6.8%	1,760	6.6%	1,843	6.9%	2,245	10.9%	1,482	10.1%	1,742	6.8%	1,864	10.6%	1,777	7.6%
12-13	1,674	7.1%	1,689	6.7%	1,751	6.8%	1,765	6.6%	1,903	7.1%	2,051	10.0%	1,462	10.0%	1,756	6.9%	1,757	10.0%	1,756	7.5%
13-14	1,668	7.1%	1,706	6.7%	1,764	6.8%	1,768	6.6%	1,963	7.4%	1,781	8.7%	1,270	8.7%	1,774	6.9%	1,526	8.7%	1,703	7.3%
14-15	1,839	7.8%	1,913	7.6%	1,945	7.5%	1,961	7.3%	2,150	8.1%	1,615	7.9%	1,165	8.0%	1,962	7.7%	1,390	7.9%	1,798	7.7%
15-16	2,012	8.5%	2,098	8.3%	2,155	8.3%	2,180	8.2%	2,304	8.6%	1,402	6.8%	1,062	7.3%	2,150	8.4%	1,232	7.0%	1,888	8.1%
16-17	2,053	8.7%	2,260	8.9%	2,260	8.8%	2,335	8.8%	2,204	8.3%	1,195	5.8%	939	6.4%	2,222	8.7%	1,067	6.1%	1,892	8.1%
17-18	1,732	7.3%	1,876	7.4%	1,923	7.4%	2,009	7.5%	1,865	7.0%	919	4.5%	766	5.2%	1,881	7.3%	843	4.8%	1,584	6.8%
18-19	877	3.7%	991	3.9%	1,053	4.1%	1,230	4.6%	1,158	4.3%	666	3.2%	553	3.8%	1,062	4.1%	610	3.5%	933	4.0%
19-20	477	2.0%	551	2.2%	572	2.2%	783	2.9%	683	2.4%	476	2.3%	392	2.7%	603	2.4%	434	2.5%	555	2.4%
20-21	356	1.5%	425	1.7%	436	1.7%	587	2.2%	460	1.7%	392	1.9%	351	2.4%	453	1.8%	372	2.1%	430	1.8%
21-22	301	1.3%	358	1.4%	368	1.4%	470	1.8%	421	1.6%	372	1.8%	287	2.0%	384	1.5%	330	1.9%	368	1.6%
22-23	201	0.9%	226	0.9%	264	1.0%	276	1.0%	385	1.4%	341	1.7%	184	1.3%	270	1.1%	263	1.5%	268	1.1%
23-24	125	0.5%	143	0.6%	161	0.6%	174	0.7%	255	1.0%	245	1.2%	103	0.7%	172	0.7%	174	1.0%	172	0.7%
Peaks	Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count		Hour End & Count	
AM	08:45	1,750	08:45	1,930	08:45	1,924	08:45	1,881	12:00	1,842	11:45	2,255	12:00	1,483	08:45	1,858	12:00	1,863	12:00	1,775
PM	16:30	2,070	17:00	2,261	17:00	2,260	17:00	2,335	16:15	2,309	13:00	2,050	13:00	1,461	16:45	2,228	13:00	1,755	16:30	1,916
12-Hour	19,963	84.7%	21,123	83.5%	21,566	83.5%	21,920	82.1%	22,184	83.2%	17,476	85.1%	12,263	83.8%	21,351	83.4%	14,873	84.5%	19,499	83.6%
16-Hour	22,232	94.3%	23,738	93.9%	24,217	93.8%	25,030	93.8%	24,843	93.1%	19,081	92.9%	13,545	92.6%	24,012	93.8%	16,318	92.7%	21,812	93.5%
18-Hour	22,558	95.7%	24,107	95.3%	24,642	95.4%	25,480	95.5%	25,483	95.5%	19,667	95.7%	13,832	94.6%	24,454	95.5%	16,755	95.2%	22,252	95.4%
24-Hour	23,582	100.0%	25,286	100.0%	25,828	100.0%	26,683	100.0%	26,675	100.0%	20,546	100.0%	14,629	100.0%	25,611	100.0%	17,595	100.0%	23,317	100.0%
Avg Week Day	92.1%		98.7%		100.8%		104.2%		104.2%						100.0%		68.7%		91.0%	
Avg Weekend Day											116.8%		83.1%		145.6%		100.0%		132.5%	
Avg Day	101.1%		108.4%		110.8%		114.4%		114.4%		88.1%		62.7%		109.8%		75.5%		100.0%	

Time Periods

12-hour time periods extend from 07:00 to 19:00.
16-hour time periods extend from 06:00 to 22:00.
18-hour time periods extend from 06:00 to 24:00.
24-hour time periods extend from 00:00 to 24:00.

Days Included and Days Excluded

Days for which traffic counters did not operate for the entire day are excluded from the calculations. This is the only cause of differences between "Days in Date Range" and "Days Included". Days classified as Calendar Events are included in the calculations.

Calendar Events

Calendar Events include public holidays, local show holidays etc. Averages derived for such Calendar Event days will generally be different from the usual averages.

RTI DL RELEASE - EHP

Volume Classified Count sheet

LOCATION: KINGSTON.RD S/B / COMPTON.RD E/B
 DATE: Tuesday 26/09/06
 WEATHER: 204 FINE

4
 1+3
 2

COUNTER	KINGSTON.RD S/B					COMPTON.RD E/B					KINGSTON.RD N/B					COMPTON.RD W/B					Total Traffic
ROAD 1/4 hr ENDING	FROM 1-4	1-3	1-2	U-Turn	PEDS	FROM 2-1	2-4	2-3	U-Turn	PEDS	FROM 3-2	3-1	3-4	U-Turn	PEDS	FROM 4-3	4-2	4-1	U-Turn	PEDS	1/4 hr
6.45am	8	52	34	1	0	75	77	37	0	1	87	138	51	0	0	26	93	15	0	1	694
7.00am	10	53	37	1	5	62	88	41	2	0	65	165	70	1	0	24	122	15	0	2	756
7.15am	8	54	34	2	0	83	101	52	0	0	67	183	52	0	0	16	139	10	0	1	801
7.30am	17	75	53	2	1	105	143	50	0	1	79	181	52	0	0	37	100	8	0	1	902
7.45am	12	81	46	2	0	89	108	53	0	0	101	225	50	0	1	37	136	15	0	0	955
8.00am	15	107	75	2	1	74	186	74	1	0	82	181	55	0	0	41	144	15	0	1	1052
8.15am	14	67	66	1	2	95	122	58	0	2	101	166	61	0	0	36	168	27	0	1	982
8.30am	26	120	78	5	0	61	160	62	0	0	73	144	44	0	0	45	109	21	0	2	948
8.45am	31	90	53	3	0	90	131	69	0	0	86	161	55	0	0	34	123	18	0	2	944
9.00am	15	119	69	2	0	100	173	75	0	0	76	114	44	0	0	35	101	19	0	2	942
9.15am	24	89	56	3	0	67	113	65	0	0	52	121	41	0	0	36	115	16	0	0	789
9.30am	26	134	84	6	0	61	162	66	0	0	68	102	41	0	0	39	99	14	0	2	902
9.45am	33	102	76	5	0	73	129	59	0	3	69	128	45	1	0	44	102	18	0	1	884
10.00am	45	109	78	6	0	83	136	52	0	0	68	158	35	0	0	52	102	20	0	0	944
10.15am	34	96	65	5	0	89	145	47	0	0	60	129	44	0	0	42	104	27	0	0	889
10.30am	28	121	61	4	2	62	134	61	0	2	67	108	48	0	0	33	102	10	0	0	837
10.45am	30	128	72	3	2	69	121	55	0	2	64	112	45	1	0	32	107	13	0	0	852
11.00am	31	135	83	2	1	76	107	48	0	3	61	116	44	1	0	33	112	16	0	0	865
11.15am	33	142	94	1	1	83	94	42	0	3	58	120	41	2	0	32	117	19	0	0	878
11.30am	43	131	68	3	1	59	126	55	0	0	55	105	42	1	0	36	110	23	0	0	857
11.45am	36	138	70	2	2	73	91	62	2	2	94	105	33	1	0	46	125	22	0	0	890
12.00pm	24	143	71	3	0	59	129	64	0	0	60	134	38	0	0	31	113	21	0	0	890
12.15pm	35	181	99	1	0	55	120	62	2	3	73	98	45	0	0	20	58	15	0	0	864
12.30pm	36	131	60	2	0	77	118	68	1	0	61	99	49	2	0	30	134	18	0	0	886
12.45pm	25	109	85	1	0	63	98	80	0	2	82	110	44	1	0	41	109	20	1	1	869
1.00pm	34	113	76	4	1	78	97	83	0	0	76	94	41	0	3	47	101	17	0	0	861
1.15pm	24	128	75	1	0	76	120	75	0	2	84	109	42	2	0	34	104	15	0	0	889
1.30pm	25	136	82	3	0	89	110	71	0	4	80	113	37	1	0	36	102	11	0	0	896
1.45pm	30	103	84	1	0	90	94	82	1	1	70	99	39	1	0	38	112	18	0	0	862
2.00pm	22	113	71	4	1	76	127	80	0	1	76	114	41	0	1	32	78	20	0	0	854
2.15pm	35	111	96	4	1	85	97	70	0	0	61	114	40	1	2	47	108	21	0	2	887
2.30pm	22	110	78	5	0	84	126	94	0	3	61	107	35	0	0	46	115	15	1	0	899
2.45pm	27	167	84	2	0	79	127	108	0	0	69	123	35	0	0	56	133	18	0	3	1028
3.00pm	36	141	101	2	0	82	103	84	0	1	85	122	37	0	1	50	130	25	0	0	1007
3.15pm	36	138	83	2	2	77	149	110	0	1	81	105	49	0	1	54	114	19	0	1	1017
3.30pm	28	168	105	4	2	89	124	89	1	6	73	143	60	0	1	46	153	18	0	1	1101
3.45pm	33	166	106	6	0	96	130	116	1	0	93	98	59	1	2	66	139	10	0	1	1120
4.00pm	32	180	112	5	0	90	136	121	0	2	92	126	50	0	2	61	138	16	0	2	1159
4.15pm	32	195	118	4	1	86	142	125	0	3	90	155	41	0	3	55	137	21	0	2	1201
4.30pm	39	202	93	1	0	90	128	119	0	1	76	133	59	2	1	51	153	17	0	2	1163
4.45pm	37	185	113	1	1	106	144	152	0	1	87	125	42	1	0	62	153	21	0	2	1229
5.00pm	16	204	107	5	0	102	122	118	0	0	69	112	49	0	3	40	148	17	0	3	1089
5.15pm	29	180	118	3	0	85	131	99	0	1	97	100	39	0	1	81	145	10	0	1	1126
5.30pm	21	196	115	1	0	90	138	109	0	1	65	115	46	0	0	57	171	11	0	1	1135
5.45pm	13	136	73	1	0	71	145	112	0	0	52	87	34	0	0	45	135	8	0	0	922
6.00pm	5	104	60	3	0	62	117	81	0	0	49	78	31	0	2	35	128	6	0	0	759
TOTALS	1215	5874	3617	130	27	3666	5719	3555	11	52	3305	5794	2055	20	24	1923	5541	769	2	38	
%CV	7.1	5.7	6.4	3.3		6.2	9.1	7.9	9.1		9.1	5.0	7.1	0.0		7.2	9.3	6.6	0.0		

COMMENTS:

Sidra Input

Grid Input																				
AM PEAK:	67	375	265	10	3	319	576	247	1	2	357	716	210	0	1	159	557	78	0	4
PM PEAK:	140	762	436	11	2	372	550	517	0	7	345	539	192	3	6	229	581	75	0	8

Volume Classified Count sheet

LOCATION: Compton Rd / Bris-Beenleigh Rd
DATE: Monday 20/05/02
WEATHER: Fine

4
1-+-3
2

COUNTER	Kingston Rd					Compton Rd					Bris-Beenleigh Rd					Compton Rd					Total Traffic
ROAD 1/4 hr ENDING	FROM 1-4	1-3	1 1-2	U-Turn	PEDS	FROM 2-1	2-4	2 2-3	U-Turn	PEDS	FROM 3-2	3-1	3 3-4	U-Turn	PEDS	FROM 4-3	4-2	4 4-1	U-Turn	PEDS	1/4 hr
6.45am	4	26	23	0	0	86	79	21	0	0	53	104	27	0	0	15	84	2	0	0	524
7.00am	6	39	39	0	0	99	92	34	0	1	50	128	35	0	0	23	121	10	0	1	676
7.15am	12	48	30	0	0	106	86	28	0	0	55	172	45	0	0	32	113	3	0	1	730
7.30am	2	75	41	2	1	102	105	40	1	0	66	209	30	0	0	27	125	2	0	1	824
7.45am	10	95	58	0	0	101	104	66	0	0	91	210	41	0	0	40	147	9	0	1	972
8.00am	8	100	56	0	0	103	170	74	2	0	83	245	42	0	1	41	127	7	0	2	1056
8.15am	13	117	67	0	0	129	145	84	0	1	85	209	42	0	0	50	149	7	0	0	1097
8.30am	15	103	68	0	1	116	168	70	0	2	73	202	43	0	0	43	143	10	0	2	1054
8.45am	16	100	62	1	0	106	119	46	0	1	85	219	21	1	0	50	121	15	1	0	960
9.00am	15	102	64	0	0	90	163	53	2	0	61	198	36	0	0	34	100	15	0	2	931
9.15am	25	124	67	1	0	92	100	69	0	1	74	135	23	0	0	38	105	11	0	0	863
9.30am	24	102	60	1	0	79	93	44	0	0	55	147	27	0	0	43	102	7	0	0	783
9.45am	10	123	59	2	0	70	115	62	0	0	69	147	18	0	0	40	98	7	0	0	818
10.00am	31	118	57	0	1	105	104	38	0	1	69	159	42	0	1	36	96	5	0	0	860
10.15am	28	141	60	2	0	82	94	42	1	0	60	115	29	0	0	44	94	10	0	0	799
10.30am	24	127	62	1	0	89	118	62	1	0	61	166	26	0	0	52	115	17	0	0	919
10.45am	27	119	63	1	0	83	115	52	0	0	55	159	25	0	0	45	108	15	0	0	866
11.00am	30	110	63	1	0	76	113	41	0	0	50	153	25	0	0	57	102	14	0	0	814
11.15am	33	102	64	1	0	70	110	31	0	0	44	146	24	0	0	30	95	12	0	0	761
11.30am	26	119	62	2	0	73	111	64	0	0	63	145	24	0	0	55	91	8	0	1	841
11.45am	27	123	62	0	0	86	117	60	2	1	60	123	39	0	0	49	104	9	0	0	859
12.00pm	21	118	73	2	0	77	106	50	0	2	72	163	29	0	0	49	98	10	0	0	866
12.15pm	39	128	69	0	1	87	105	44	0	1	76	131	24	0	0	46	97	21	0	0	867
12.30pm	32	139	70	2	1	95	125	54	0	0	66	148	42	0	0	48	121	13	0	1	953
12.45pm	24	154	68	2	2	74	101	65	0	3	63	128	30	0	0	44	114	10	0	1	875
1.00pm	27	110	55	0	1	90	101	54	0	1	70	126	34	0	0	34	111	16	0	1	828
1.15pm	19	109	75	0	0	73	104	44	0	0	59	156	23	0	2	44	98	8	0	3	812
1.30pm	35	129	72	1	2	76	100	50	0	1	75	136	33	0	0	35	78	6	0	1	825
1.45pm	27	117	71	0	0	97	121	66	1	0	86	182	29	0	0	39	96	8	0	0	939
2.00pm	26	118	59	0	0	91	91	51	1	0	63	112	31	1	0	40	85	1	0	0	768
2.15pm	30	142	78	2	0	91	104	78	0	1	55	97	38	0	0	43	80	10	0	0	846
2.30pm	19	126	79	0	0	89	83	64	0	2	86	114	41	1	0	45	106	5	0	0	857
2.45pm	25	144	82	0	1	90	118	66	0	0	72	128	41	1	0	54	110	9	0	0	939
3.00pm	24	118	68	1	1	87	125	79	0	3	68	143	34	0	0	80	120	13	0	0	959
3.15pm	35	144	85	0	1	107	106	84	0	0	87	118	54	0	1	63	117	14	1	0	1014
3.30pm	22	167	85	2	1	97	132	97	0	1	80	112	50	0	1	68	125	10	1	1	1045
3.45pm	31	185	107	0	0	92	132	92	0	0	73	126	58	0	0	78	141	7	0	0	1122
4.00pm	44	208	136	1	0	101	175	132	0	0	83	155	70	0	0	66	146	15	0	0	1331
4.15pm	57	231	165	2	2	110	218	172	0	4	93	183	82	1	1	54	151	22	0	2	1538
4.30pm	43	204	135	2	1	127	187	179	1	0	108	195	55	0	1	55	176	30	0	0	1494
4.45pm	55	234	167	0	0	123	206	172	0	2	104	226	69	0	0	64	172	19	0	0	1611
5.00pm	34	208	174	1	1	122	196	133	0	4	116	190	69	1	1	50	186	17	0	0	1495
5.15pm	35	215	154	0	0	115	162	133	0	0	129	224	89	0	0	77	176	15	0	0	1524
5.30pm	25	187	144	0	3	123	166	128	1	0	86	177	88	0	2	37	205	11	0	0	1377
5.45pm	20	116	110	2	1	81	207	107	0	0	70	134	45	0	0	28	177	4	0	0	1099
6.00pm	14	155	81	0	0	46	148	81	0	0	98	129	33	0	1	26	158	9	0	1	978
TOTALS	1149	6019	3649	35	22	4304	5840	3356	13	33	3400	7224	1855	6	12	2091	5584	498	3	22	45026
%CV	7.4	5.4	6.1	3.1		6.3	9.2	7.5	0.0		9.7	4.7	5.7	0.0		6.4	10.3	5.5	0.0		

COMMENTS:

Sidra Input

AM PEAK:	46	415	249	0	1	449	587	294	2	3	332	866	168	0	1	174	566	33	0	5
PM PEAK:	189	877	641	5	4	482	807	656	1	10	421	794	275	2	3	223	685	88	0	2

ROAD	Kingston Rd					Compton Rd					Bris-Beenleigh Rd					Compton Rd					Total
1/4 hr	FROM					FROM					FROM					FROM					Traffic
ENDING	1-4	1-3	1-2	U-Turn	PEDS	2-1	2-4	2-3	U-Turn	PEDS	3-2	3-1	3-4	U-Turn	PEDS	4-3	4-2	4-1	U-Turn	PEDS	1/4 hr

Volume Classified Count sheet

LOCATION: Rudge St / Bris-Beenleigh Rd
DATE: Friday 22/11/02
WEATHER: Fine

4
1+3
2

COUNTER	Bris-Beenleigh Rd					Rudge St					Bris-Beenleigh Rd					Moss St					Total Traffic
ROAD 1/4 hr ENDING	FROM 1-4	1-3	1 1-2	U-Turn	PEDS	FROM 2-1	2-4	2 2-3	U-Turn	PEDS	FROM 3-2	3-1	3 3-4	U-Turn	PEDS	FROM 4-3	4-2	4 4-1	U-Turn	PEDS	1/4 hr
6.45am	6	68	0	3	0	13	3	4	0	0	4	210	40	4	0	4	1	5	0	1	358
7.00am	9	97	2	7	0	6	2	2	0	0	4	260	72	7	0	11	0	12	0	1	477
7.15am	13	106	3	4	0	8	1	6	0	4	4	227	36	0	0	5	0	19	0	0	422
7.30am	15	119	2	11	0	10	4	6	0	1	7	284	54	7	0	6	0	23	0	0	530
7.45am	28	114	2	14	0	18	9	2	0	5	6	298	81	6	0	17	1	14	0	1	590
8.00am	31	180	5	14	0	12	11	6	0	1	5	336	91	3	0	23	4	20	0	2	724
8.15am	33	181	5	20	0	12	0	6	0	2	7	298	74	9	0	15	1	32	0	4	664
8.30am	32	227	5	19	0	8	1	10	0	3	7	286	70	2	0	15	0	25	0	2	686
8.45am	25	184	7	23	0	12	0	8	0	3	4	265	60	6	0	20	0	32	0	2	617
9.00am	32	181	6	20	0	9	3	6	0	4	7	258	54	4	0	26	0	43	0	0	625
9.15am	23	185	6	13	0	6	2	8	0	1	7	221	55	5	1	39	1	44	0	2	588
9.30am	22	189	6	17	0	12	1	9	0	1	7	190	57	6	0	27	1	43	0	2	564
9.45am	38	183	5	17	0	11	5	7	0	1	11	227	43	8	1	32	3	42	0	2	607
10.00am	29	221	6	19	0	6	2	9	0	1	5	195	66	3	0	46	1	29	0	1	615
10.15am	36	191	8	21	0	8	1	1	0	1	5	191	58	6	0	46	1	52	0	3	598
10.30am	32	239	4	15	0	8	4	9	0	1	7	196	42	8	7	55	2	47	0	7	645
10.45am	35	231	7	16	0	8	4	8	0	1	8	194	38	8	0	50	0	44	0	0	627
11.00am	37	224	11	17	0	7	4	8	0	2	8	192	35	9	0	45	0	42	0	0	613
11.15am	40	216	14	18	0	7	4	7	0	2	9	190	31	9	0	40	0	39	0	0	597
11.30am	38	222	2	21	0	7	0	10	0	0	8	194	45	11	0	32	1	60	0	0	619
11.45am	43	224	6	19	0	6	3	5	0	0	5	197	47	5	0	25	8	56	0	0	625
12.00pm	35	258	6	17	0	6	6	5	0	0	9	195	46	12	0	36	2	61	0	0	685
12.15pm	38	254	3	23	0	5	2	11	0	0	13	197	48	8	2	50	5	48	0	3	674
12.30pm	25	228	3	17	0	5	6	9	0	1	8	188	39	7	0	44	4	44	0	3	603
12.45pm	29	247	16	14	0	2	6	6	0	1	7	187	49	4	0	31	4	41	0	2	625
1.00pm	41	284	8	26	0	9	2	6	0	0	7	197	54	6	0	42	1	41	0	1	692
1.15pm	36	353	19	25	0	2	2	10	0	0	7	203	59	7	0	55	13	41	0	2	798
1.30pm	35	277	4	19	0	5	2	4	0	1	7	207	56	4	0	34	4	50	0	1	685
1.45pm	45	332	8	28	0	4	3	6	0	0	8	227	60	0	0	45	2	45	0	1	783
2.00pm	40	267	3	19	0	5	4	9	0	0	4	213	49	4	5	25	4	43	0	0	666
2.15pm	41	248	5	22	0	4	5	6	0	0	7	204	47	9	0	45	0	57	0	0	665
2.30pm	29	263	7	30	0	8	1	5	0	0	9	217	52	3	0	48	1	49	0	0	689
2.45pm	32	257	5	25	0	6	2	8	0	3	9	188	47	8	0	53	1	54	0	0	662
3.00pm	44	259	16	26	0	13	3	13	0	2	7	235	46	9	0	39	3	52	0	1	730
3.15pm	39	334	5	20	0	7	4	8	0	1	9	206	44	8	0	44	1	48	0	1	749
3.30pm	34	247	12	32	0	9	0	9	0	1	14	200	48	7	0	38	5	48	0	2	664
3.45pm	35	323	6	16	0	11	4	8	0	2	11	254	55	10	0	54	3	49	0	0	813
4.00pm	39	322	10	21	0	10	4	6	0	1	11	241	52	8	0	53	0	44	0	0	792
4.15pm	43	321	14	26	0	9	3	4	0	0	10	228	49	5	0	52	2	39	0	2	774
4.30pm	25	287	11	34	0	6	2	9	0	0	15	198	48	10	0	55	2	39	0	1	697
4.45pm	35	327	12	22	0	7	6	11	0	2	11	214	39	8	1	44	3	45	0	1	749
5.00pm	34	307	9	19	0	10	4	11	0	3	11	185	47	15	0	55	3	54	0	3	733
5.15pm	11	347	7	16	0	7	4	7	0	0	11	203	25	4	0	59	4	57	0	2	762
5.30pm	15	359	9	17	0	9	0	10	0	0	10	178	34	6	0	33	3	41	0	3	691
5.45pm	8	351	8	9	0	9	1	5	0	1	7	180	15	5	0	33	0	26	0	1	623
6.00pm	6	272	8	8	0	4	3	18	0	0	15	175	12	4	2	19	3	16	0	0	551
TOTALS	1391	11106	326	859	0	366	143	341	0	55	302	10029	2251	297	21	1648	98	1855	0	60	31082
%CV	7.6	5.7	3.7	2.0		2.6	0.8	3.5	0.0		2.3	5.9	5.6	0.7		4.9	1.0	8.8	0.0		

COMMENTS:

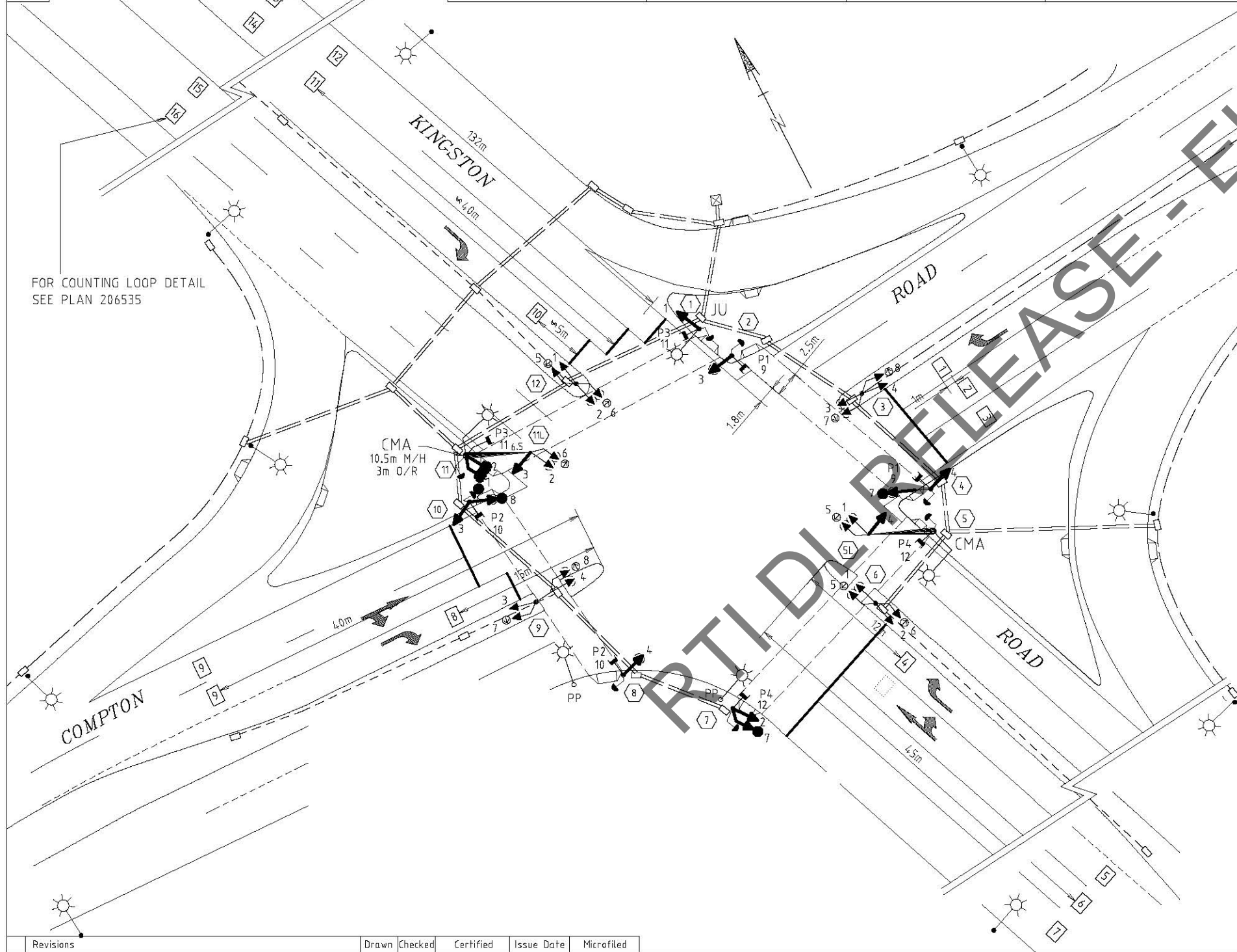
Sidra Input

AM PEAK:	121	772	22	76	0	44	12	30	0	9	23	1185	295	20	0	73	5	109	0	10
PM PEAK:	142	1253	41	97	0	36	13	27	0	3	47	921	204	33	0	214	7	171	0	3



Appendix E aaSIDRA analysis results

RTI DL RELEASE - EHP



H As Construct Rev. G 18/8/99	AG	31/8/99	Auxiliary Plan Nos	For Scheme documentation	Full Size	LOGAN CITY		TRAFFIC SIGNAL INSTALLATION						M2428	
G 70/204/26.1 - Redrawn, Cont/Elv/Audio Upgrade, Separate Loops	BJT	12/5/99				BRISBANE - BEENLEIGH ROAD		PHILIPS PSC TYPE QCB-ID CABLE CONNECTIONS PD200 SERIES DETECTOR CARD				RTCS (SE) TRAFFIC Ph 07 3251 3400 Fax 07 3252 8386 109 Campbell Street BOWEN HILLS 4006		No of Plans	
F Counting site detail added		10/11/92	Print on A3 Paper		A1							Approved		Plan No.	
E Phasing Changes - Installed 22-1-90		25/1/90										/ /85		162659	
D As Constructed 4/7/86								Survey	Boundaries	Design	Drawn	Passed	Job No		
C Phasing and Hardware Mods 25/3/86		5/86						Checked	Checked	E.L. Checked	C.A.B. Checked	Ross Blinco	Page 60 of 84		
B Signals as Constructed 20/12/85		13/2/86				INTERSECTION WITH DL Documents SOMPTON ROAD		1/84		1/84		/2/84	A B C D E F G H		
A Original Issue															

Table S14 from Sidra output tables

Kingston Rd/Compton Rd (PM Peak)
 2006 Base Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 140 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff 1st	Grn 2nd	Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot								
South: Kingston Rd South												
1 LT	345	90		435	5	1970	21	29	0.909	30.2r	108*	60
2 T		260		260	5	1970	21		0.909	57.0	139	500
3 TR		189	68	258	5	1970	21		0.909	59.2	138	500
4 R			124	124	5	1964	21		0.909	63.7	67*	35
	345	539	192	1076	5				0.909	47.5	139	
East: Compton Rd East												
1 LT	229	201		430	5	1950	5	33	0.938	88.9	244	500
2 T		380		380	5	1950	30		0.938	79.3	222	500
3 R			75	75	5	1899	30		0.376	57.5	39	50
	229	581	75	885	5				0.938	82.2	244	
North: Kingston Rd North												
1 L	140			140	5	1970	36	59	0.280	14.1	30	60
2 T		381		381	5	1970	36		0.776	34.5	159	500
3 T		381		381	5	1970	36		0.776	34.5	159	500
4 R			436	436	5	1949	36		0.946	53.0	226*	160
	140	762	436	1338	5				0.946	38.4	226	
West: Compton Rd West												
1 L	372			372	5	1949	29	77	0.293	11.7	59	500
2 T		366		366	5	1970	29		0.926	83.0	209	500
3 TR		184	173	357	5	1970	29		0.926	83.4	204	500
4 R			344	344	5	1960	29		0.926	82.7r	196*	120
	372	550	517	1439	5				0.926	64.6	209	

ALL VEHICLES	Total Flow	% HV	Cycle Time	Max X	Aver. Delay	Max Queue
	4738	5	140	0.946	56.6	244

Peak flow period = 60 minutes.

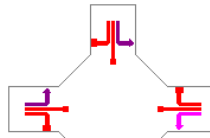
Queue values in this table are 95% back of queue (metres).

Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops.

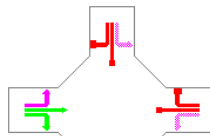
* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

r Delay, stops and queue length for this lane have been cut down to fit in the queuing space. The amount cut may not be accounted for fully in the adjacent lane performance statistics. You may wish to change the short lane to a full lane to investigate the extent of this effect.

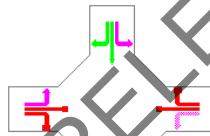
Phasing diagram
Phase A 27 sec



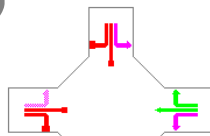
Phase B 42 sec



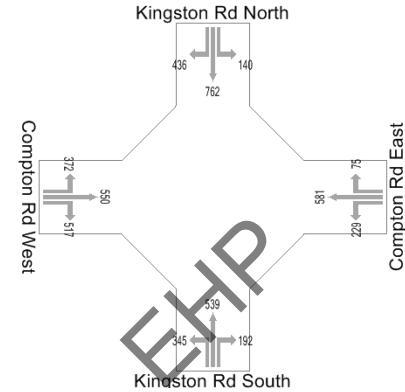
Phase C 35 sec



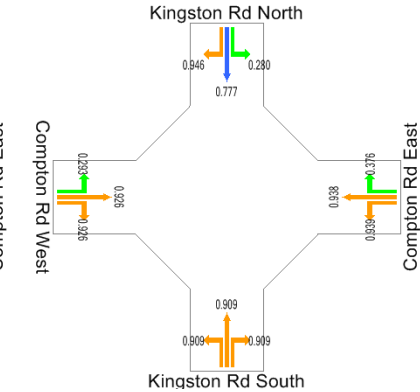
Phase D 36 sec



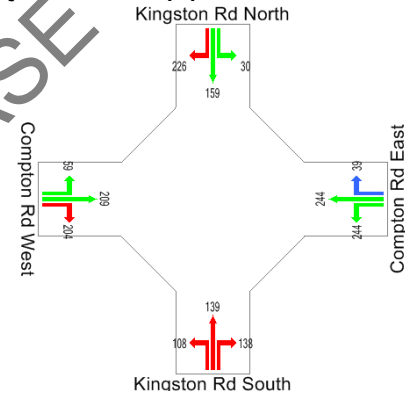
Demand flows



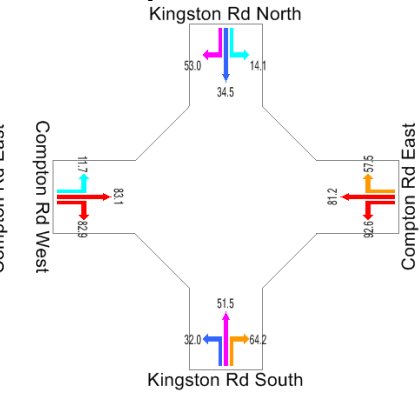
Degree of saturation



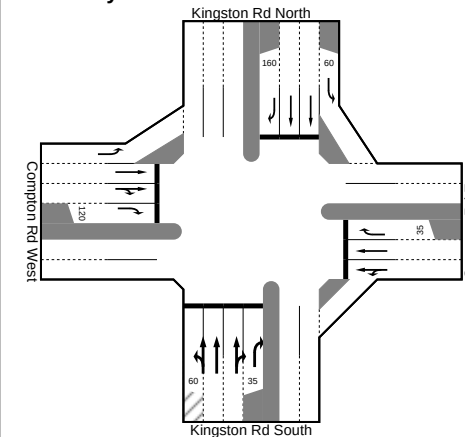
Queue distance (m)



Control delay



Geometry



SKM

Kingston Rd / Compton Rd
 2006 PM Peak analysis
 Existing base case

Table S14 from Sidra output tables

Kingston Rd/Compton Rd (PM Peak)
 2011 Base Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 140 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff Grn (secs)		Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot			1st	2nd				
South: Kingston Rd South												
1 LT	366	95		461	5	1970	21	29	0.964	28.4r	108*	60
2 T		276		276	5	1970	21		0.964	64.9	157	500
3 TR		200	73	273	5	1970	21		0.964	67.1	156	500
4 R			131	131	5	1964	21		0.964	65.0r	69*	35
	366	571	204	1141	5				0.964	50.7	157	
East: Compton Rd East												
1 LT	243	213		456	5	1950	5	33	0.995	129.0	326	500
2 T		403		403	5	1950	30		0.995	114.3	287	500
3 R			80	80	5	1899	30		0.401	57.7	41	50
	243	616	80	939	5				0.995	116.6	326	
North: Kingston Rd North												
1 L	148			148	5	1970	36	57	0.305	14.8	32	60
2 T		404		404	5	1970	36		0.824	35.7	176	500
3 R		404	1	404	5	1970	36		0.824	60.5	258	500
4 R			461	461	5	1949	36		1.000	60.5r	258*	160
	148	808	462	1418	5				1.000	41.6	258	
West: Compton Rd West												
1 L	394			394	5	1949	29	75	0.312	12.4	67	500
2 T		384		384	5	1970	29		0.972	102.5	249	500
3 TR		187	187	374	5	1970	29		0.972	103.0	243	500
4 R			361	361	5	1960	29		0.972	77.6r	196*	120
	394	571	548	1513	5				0.972	73.2	249	
ALL VEHICLES												
				Total Flow	% HV		Cycle Time		Max X	Aver. Delay	Max Queue	
				5011	5		140		1.000	67.3	326	

Peak flow period = 60 minutes.

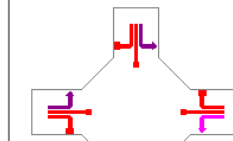
Queue values in this table are 95% back of queue (metres).

Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops.

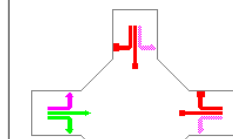
* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

r Delay, stops and queue length for this lane have been cut down to fit in the queuing space. The amount cut may not be accounted for fully in the adjacent lane performance statistics. You may wish to change the short lane to a full lane to investigate the extent of this effect.

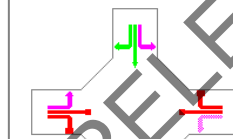
Phasing diagram
Phase A 27 sec



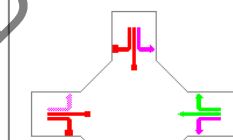
Phase B 42 sec



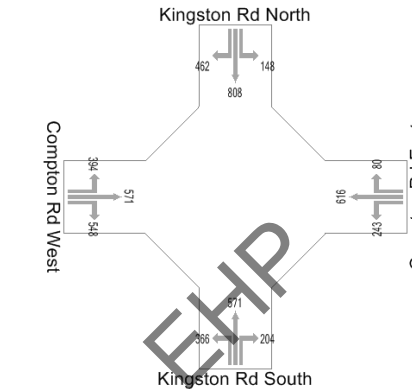
Phase C 35 sec



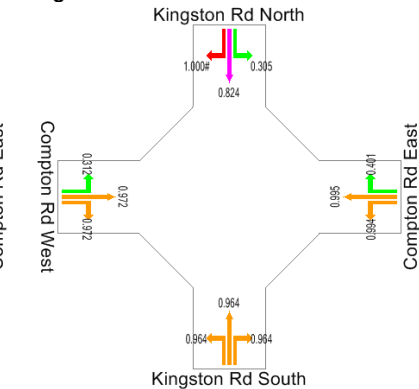
Phase D 36 sec



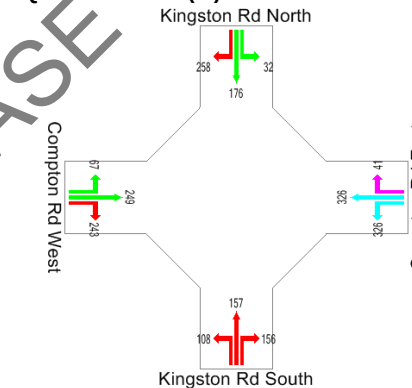
Demand flows



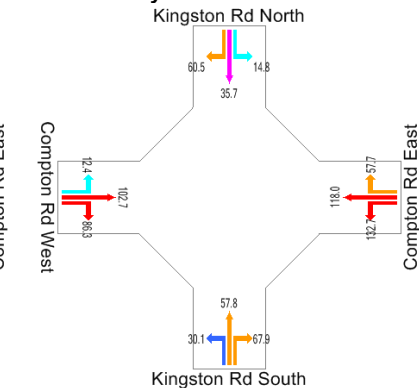
Degree of saturation



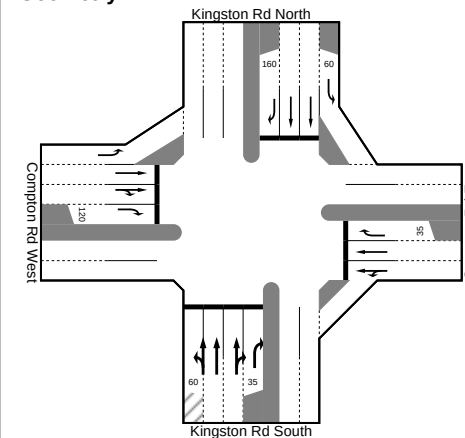
Queue distance (m)



Control delay



Geometry



SKM

Kingston Rd / Compton Rd
 2011 PM Peak analysis
 Existing base case

Table S14 from Sidra output tables

Kingston Rd/Compton Rd (PM Peak)
 2011 Design Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 140 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff. 1st	Grn 2nd	Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot								
South: Kingston Rd South												
1 LT	367	103		470	5	1970	21	29	0.967	28.3r	108*	60
2 T		277		277	5	1970	21		0.967	65.8	159	500
3 TR		194	79	274	5	1970	21		0.967	68.2	157	500
4 R			132	132	5	1964	21		0.967	64.8r	69*	35
	367	574	211	1152	5				0.967	50.9	159	
East: Compton Rd East												
1 LT	273	208		481	5	1950	4	34	1.002	51.0	244	500
2 T		419		419	5	1950	31		1.002	79.1	267	500
3 R			94	94	5	1899	31		0.468	57.2	47	50
	273	627	94	994	5				1.002	63.4	267	
North: Kingston Rd North												
1 L	148			148	5	1970	35	56	0.313	15.5	34	60
2 T		438		438	5	1970	35		0.919	41.9	214	500
3 R		424	14	437	5	1970	35		0.919	65.5	258	500
4 R			448	448	5	1949	35		1.000	65.5r	258*	160
	148	862	462	1472	5				1.000	46.4	258	
West: Compton Rd West												
1 L	394			394	5	1949	29	74	0.316	8.8	17	500
2 T		397		397	5	1970	29		1.006	92.0	259	500
3 TR		174	212	386	5	1970	29		1.006	92.4	252	500
4 R			372	372	5	1960	29		1.000	58.2r	196*	120
	394	571	584	1549	5				1.006	62.8	259	
ALL VEHICLES												
				Total Flow	% HV	Cycle Time			Max X	Aver. Delay	Max Queue	
				5167	5	140			1.006	55.6	267	

Peak flow period = 60 minutes.

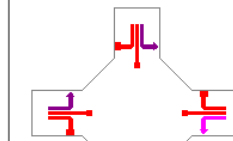
Queue values in this table are 95% back of queue (metres).

Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops

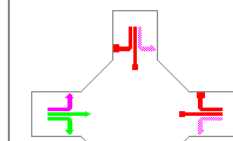
* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

r Delay, stops and queue length for this lane have been cut down to fit in the queuing space. The amount cut may not be accounted for fully in the adjacent lane performance statistics. You may wish to change the short lane to a full lane to investigate the extent of this effect.

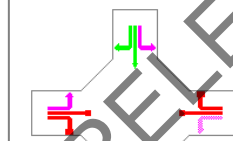
Phasing diagram
Phase A 27 sec



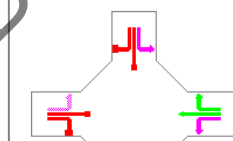
Phase B 42 sec



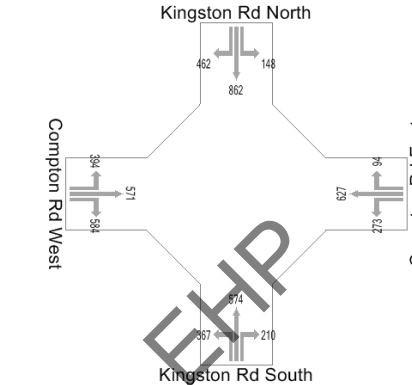
Phase C 35 sec



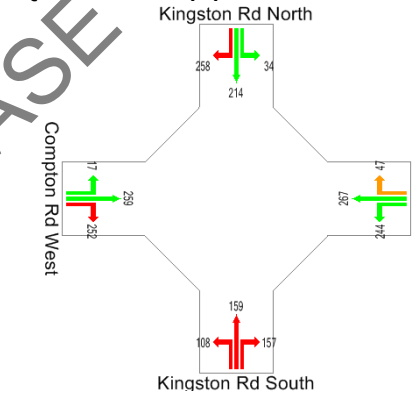
Phase D 36 sec



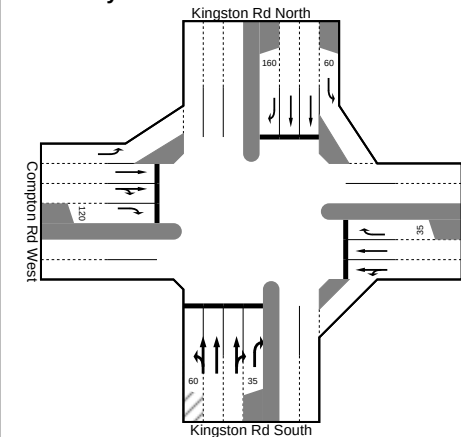
Demand flows



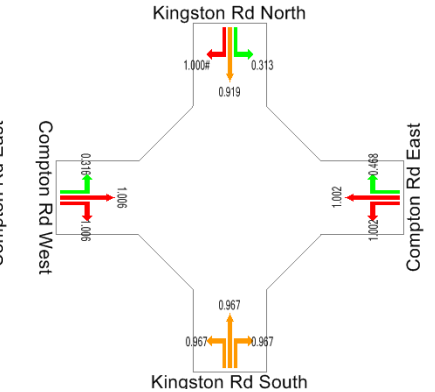
Queue distance (m)



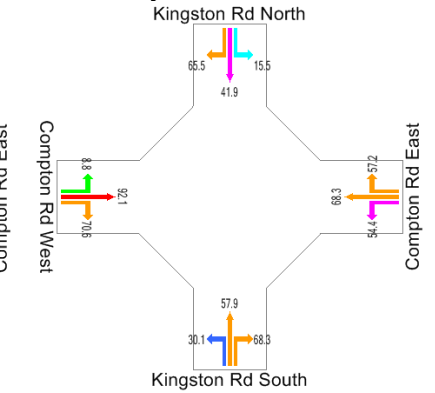
Geometry



Degree of saturation



Control delay



SKM

Kingston Rd / Compton Rd
 2011 PM Peak analysis
 Design case

Table S14 from Sidra output tables

Kingston Rd/Site Access
 2011 Design Case
 Intersection ID: 0
 Give-Way Sign Controlled Intersection

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff Grn (secs)		Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot			1st	2nd				
South: Kingston Rd South												
1 T		636		636	6				0.339	0.0	0	500
2 T		636		636	6				0.339	0.0	0	500
3 R			69	69	4				0.803	114.0	30	30
	0	1272	69	1341	6				0.803	5.9	30	
East: Site Access												
1 L	31			31	6				0.325	55.4	10	70
	31	0	0	31	6				0.325	55.4	10	
North: Kingston Rd North												
1 LT	129	883		1012	6				0.542	1.1	0	200
2 T		1017		1017	6				0.542	0.0	0	500
	129	1900	0	2029	6				0.542	0.5		
=====												
ALL VEHICLES				Total Flow	% HV				Max X	Aver. Delay	Max Queue	
				3401	6				0.802	3.1	30	
=====												

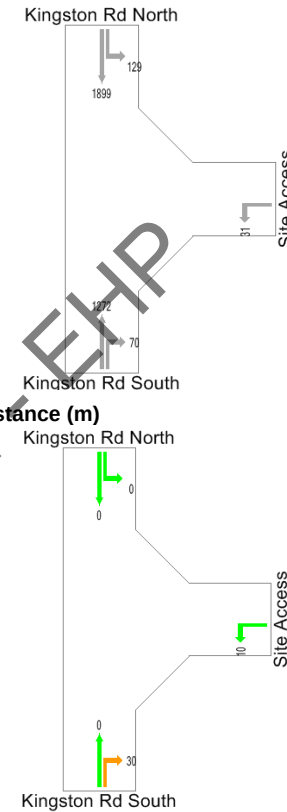
Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (metres).

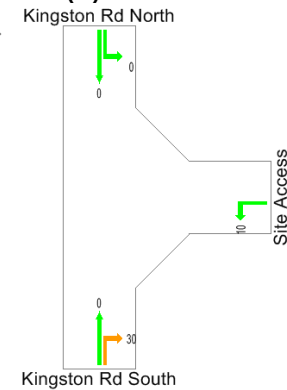
Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Phasing diagram

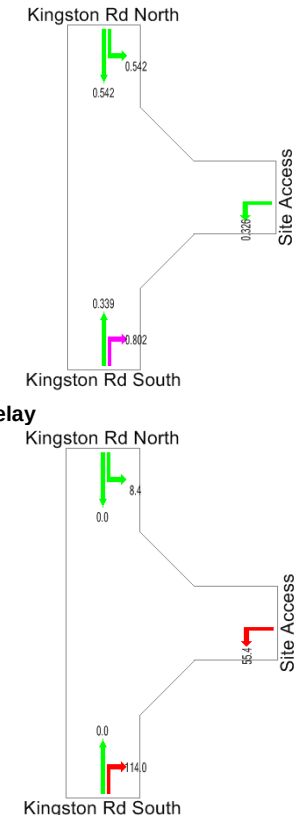
Demand flows



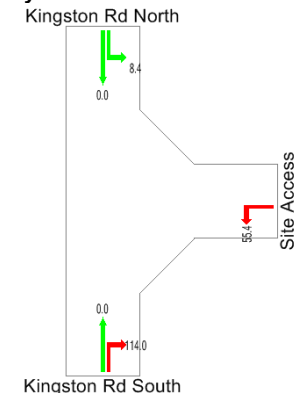
Queue distance (m)



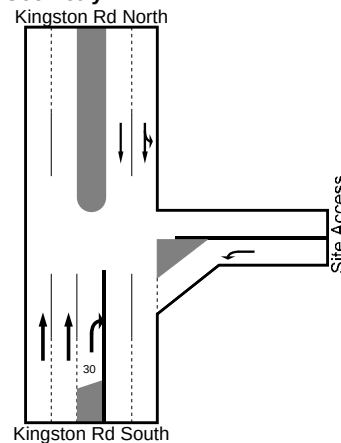
Degree of saturation



Control delay



Geometry



SKM

Kingston Rd / Site Access
 2011 PM Peak analysis
 2011 design case

Table S14 from Sidra output tables

Kingston/Moss/Rudge St (PM Peak)
 2006 Base Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 70 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff Grn (secs)		Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot			1st	2nd				
South: Kingston Rd South												
1 LT	55	510		565	6	1970	30	1	0.694	5.7	60	500
2 T		564		564	6	1970	30		0.694	4.4	63	500
3 R			238	238	6	1919	12		0.791	34.2	70*	50
	55	1074	238	1367	6				0.791	10.2	70	
East: Moss St East												
1 L	250			250	6	1919	12		0.832	45.6	83	100
2 TR		9	200	209	6	1919	10		0.847	47.2	73	500
	250	9	200	459	6				0.847	46.3	83	
North: Kingston Rd North												
1 L	166			166	6	1970	30		0.255	20.2	29	70
2 T		731		731	6	1970	30		0.900	8.7	138	500
3 T		731		731	6	1970	30		0.900	8.7	138	500
4 R			161	161	3	1970	12		0.512	39.2	49	50
	166	1462	161	1789	6				0.900	12.5	138	
West: Rudge St West												
1 LTR	42	16	32	90	2	1970	18	9	0.164	15.6	16	500
	42	16	32	90	2				0.164	15.6	15	
ALL VEHICLES												
				Total Flow	% HV		Cycle Time		Max X	Aver. Delay	Max Queue	
				3705	6		70		0.900	15.9	138	

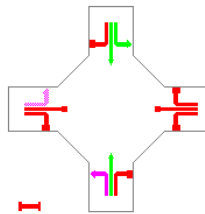
Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (metres).

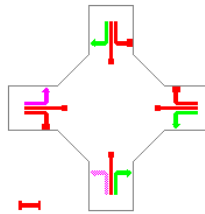
Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops.

* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

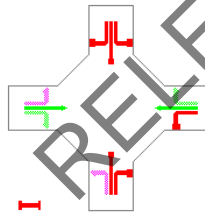
Phasing diagram
 Phase A 36 sec



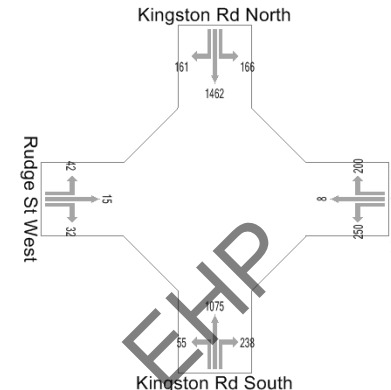
Phase B 18 sec



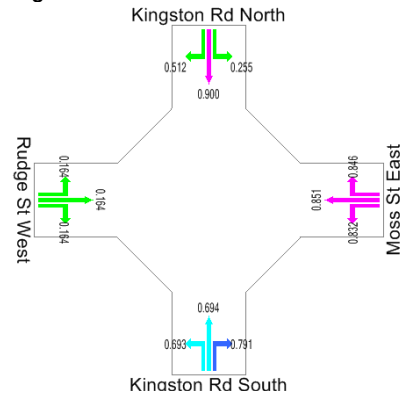
Phase C 16 sec



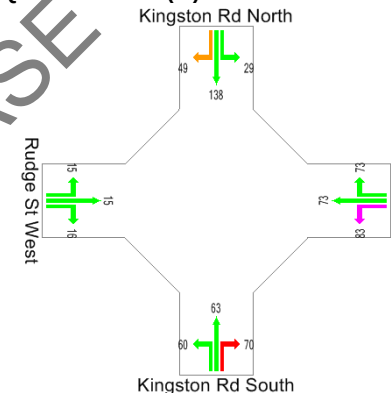
Demand flows



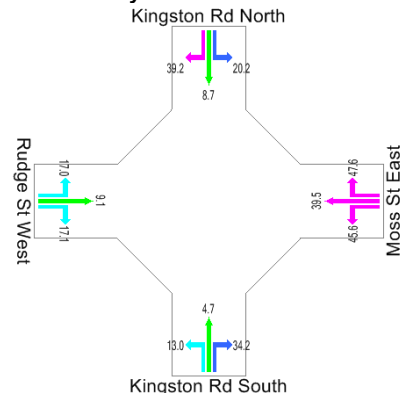
Degree of saturation



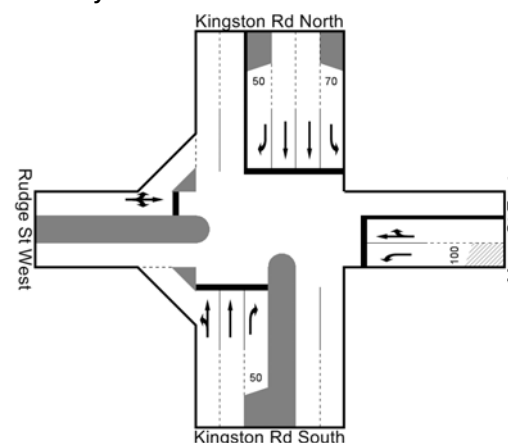
Queue distance (m)



Control delay



Geometry



SKM

Kingston Rd / Moss St / Rudge St
 2006 PM Peak analysis
 Existing base case

Table S14 from Sidra output tables

Kingston/Moss/Rudge St (PM Peak)
 2011 Base Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 70 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff Grn (secs)		Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot			1st	2nd				
South: Kingston Rd South												
1 LT	55	511		566	6	1970	30	1	0.695	5.7	61	500
2 T		565		565	6	1970	30		0.695	4.4	63	500
3 R			238	238	6	1919	12		0.791	34.2	70*	50
	55	1076	238	1369	6				0.791	10.2	70	
East: Moss St East												
1 L	250			250	6	1919	12		0.832	45.6	83	100
2 TR		9	200	209	6	1919	10		0.847	47.2	73	500
	250	9	200	459	6				0.847	46.3	83	
North: Kingston Rd North												
1 L	166			166	6	1970	30		0.255	20.2	29	70
2 T		732		732	6	1970	30		0.901	8.8	138	500
3 T		732		732	6	1970	30		0.901	8.8	138	500
4 R			161	161	3	1970	12		0.512	39.2	49	50
	166	1464	161	1791	6				0.901	12.6	138	
West: Rudge St West												
1 LTR	42	16	32	90	2	1970	18	9	0.164	15.6	16	500
	42	16	32	90	2				0.164	15.6	15	
ALL VEHICLES												
	Total Flow				% HV	Cycle Time			Max X	Aver. Delay	Max Queue	
	3709				6	70			0.901	15.9	138	

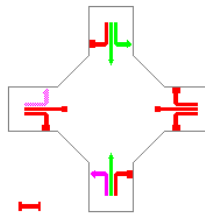
Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (metres).

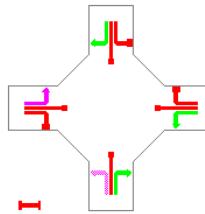
Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops.

* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

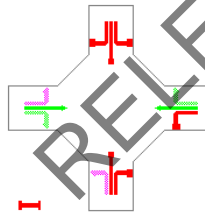
Phasing diagram
Phase A 36 sec



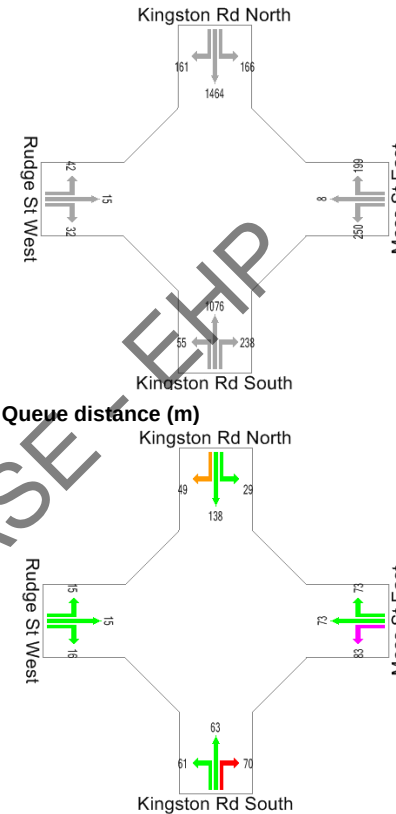
Phase B 18 sec



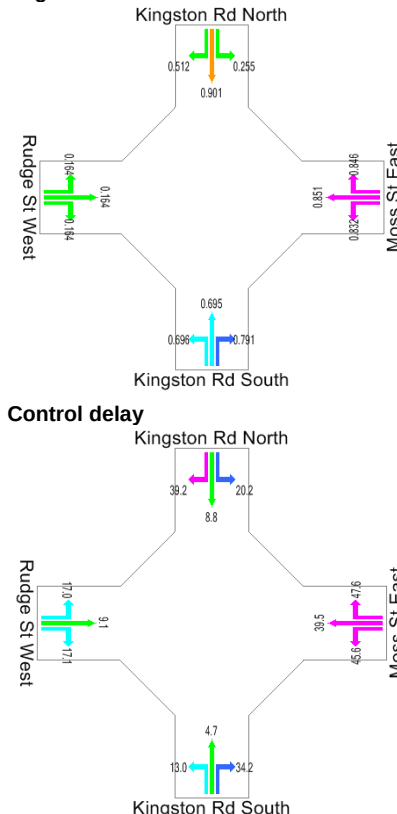
Phase C 16 sec



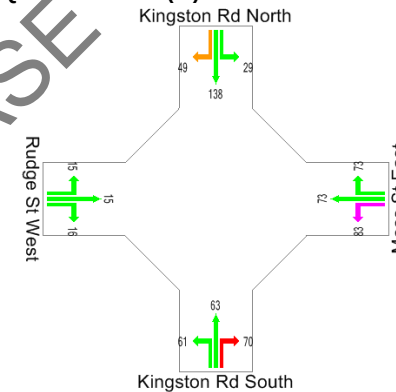
Demand flows



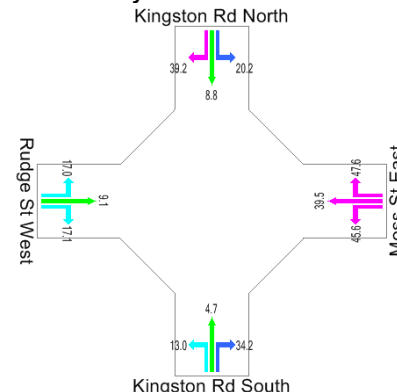
Degree of saturation



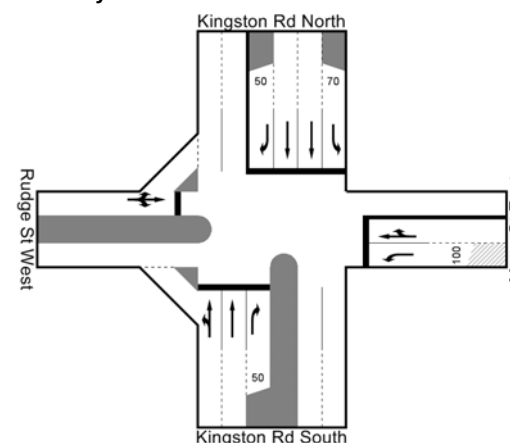
Queue distance (m)



Control delay



Geometry



SKM

Kingston Rd / Moss St / Rudge St
 2011 PM Peak analysis
 2011 Base case

Table S14 from Sidra output tables

Kingston/Moss/Rudge St (PM Peak)
 2011 Design Case
 Intersection ID: 0
 Fixed-Time Signals, Cycle Time = 70 (Practical Cycle Time)

Lane No.	Demand Flow (veh/h)				%HV	Adj. Basic Satf.	Eff Grn (secs)		Deg Sat x	Aver. Delay (sec)	Longest Queue (m)	Shrt Lane (m)
	L	T	R	Tot			1st	2nd				
South: Kingston Rd South												
1 LT	54	540		594	6	1970	31	1	0.707	4.7	55	500
2 T		594		594	6	1970	31		0.707	3.6	58	500
3 R			236	236	6	1919	11		0.856	36.7	73*	50
	54	1134	236	1424	6				0.856	9.5	73	
East: Moss St East												
1 L	248			248	6	1919	11		0.900	52.4	89	100
2 TR		9	210	219	6	1919	10		0.888	50.8	79	500
	248	9	210	467	6				0.900	51.7	89	
North: Kingston Rd North												
1 L	171			171	6	1970	31		0.255	19.4	29	70
2 T		749		749	6	1970	31		0.892	7.3	125	500
3 T		749		749	6	1970	31		0.892	7.3	125	500
4 R			160	160	3	1970	11		0.555	40.3	50	50
	171	1498	160	1829	6				0.892	11.3	125	
West: Rudge St West												
1 LTR	41	16	32	89	2	1970	19	9	0.165	15.4	15	500
	41	16	32	89	2				0.165	15.4	15	
ALL VEHICLES												
	Total Flow				% HV	Cycle Time		Max X	Aver. Delay	Max Queue		
	3809				6	70		0.900	15.7	125		

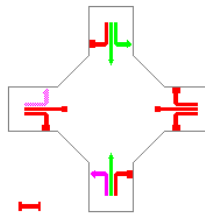
Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (metres).

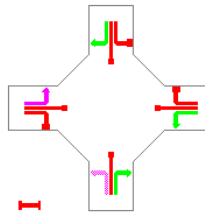
Note: Basic Saturation Flows (in through car units) have been adjusted for grade, lane widths, parking manoeuvres and bus stops.

* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.

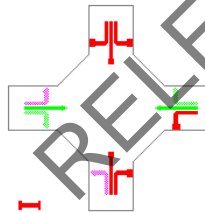
Phasing diagram
Phase A 37 sec



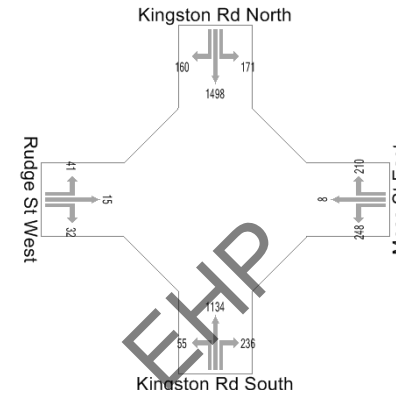
Phase B 17 sec



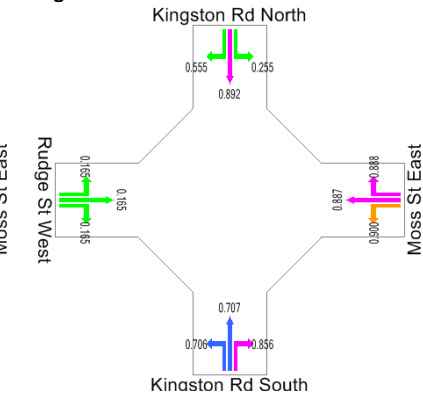
Phase C 16 sec



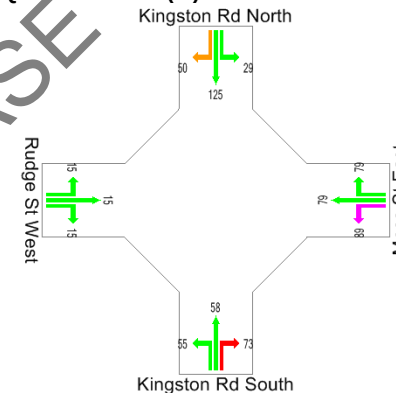
Demand flows



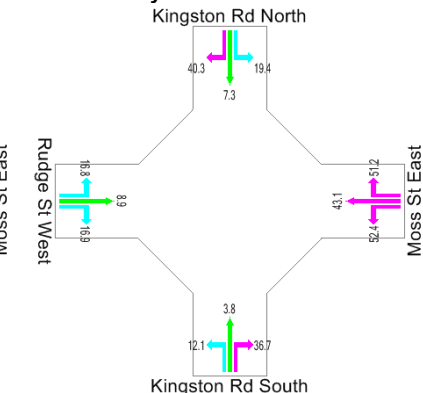
Degree of saturation



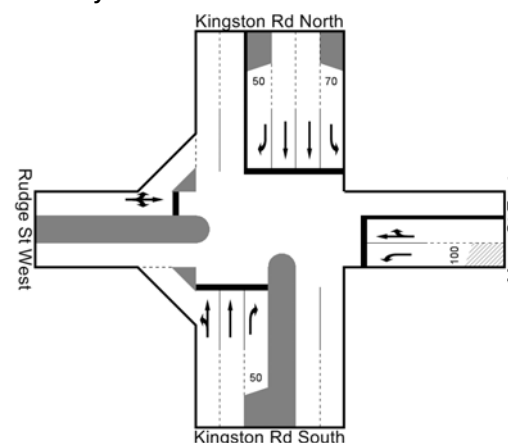
Queue distance (m)



Control delay



Geometry



SKM

Kingston Rd / Moss St / Rudge St
 2011 PM Peak analysis
 2011 Design case

Appendix F Responses to LCC constraint codes

RTI DL RELEASE - EHP

Specific outcomes and prescribed solutions for a parking area

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
Parking spaces for vehicles		
<p>O1 Development provides sufficient parking spaces on the premises to satisfy the expected demand for the number and type of vehicles likely to be generated by the activity having regard to—</p> <p>(a) the particular circumstances of the development including—</p> <p>(i) the nature, intensity and hours of operation of the development; and</p> <p>(ii) the desirability of providing car parking and attracting vehicles to the particular location; and</p> <p>(iii) the proposed layout; and</p> <p>(b) the particular characteristics of the premises including—</p> <p>(i) the existing development on the premises; and</p> <p>(ii) the size, levels and dimensions of the premises; and</p> <p>(c) the safety and convenience of access for vehicles, cyclists and pedestrians; and</p> <p>(d) the proximity of the development to existing or future public car parking facilities, other available car parking areas or public transport facilities; and</p>	<p>S1.1 Development provides parking spaces on the premises in accordance with column 2 of Table 5.3.4A (Vehicle parking spaces).</p> <p>S1.2 Development for a non-residential use provides parking spaces on the premises for persons with disabilities in accordance with column 2 of Table 5.3.4C (Vehicle parking spaces for persons with disabilities).</p> <p>S1.3 Development, which incorporates a facility for the issuing of a ticket to enter the premises or a security gate (<i>ticket and security facility</i>), provides parking spaces on the premises outside the ticket and security facility in accordance with column 2 of Table 5.3.4D (Vehicle parking spaces for uses incorporating a security gate).</p> <p>S1.4 Development in respect of a community title lot provides—</p> <p>(a) the required parking spaces on the lot; and</p> <p>(b) required visitor parking spaces on the common property.</p> <p>S1.5 Development provides that a parking space is—</p> <p>(a) kept exclusively for parking; and</p> <p>(b) used exclusively for parking; and</p> <p>(c) maintained for continued use for parking; and</p>	<p>S1.1 The type of development is not listed in Table 5.3.4A. The proposed parking yield (static capacity) of 50 greyhound trailer parks plus 165 patron car parks is consistent with anticipated parking demand, based on the existing greyhound facility in Albion.</p> <p>S1.2 Complies. A total of three (3) persons with disabilities (PWD) parking spaces are proposed.</p> <p>S1.3 Not applicable. The proposed development does not include a ticket and security facility.</p> <p>S1.4 Not applicable.</p> <p>S1.5 Complies.</p>

SINCLAIR KNIGHT MERZ

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
<ul style="list-style-type: none"> (e) in the case of an extension to an existing development, whether— <ul style="list-style-type: none"> (i) the existing car parking area is fully utilised; and (ii) the car parking requirements of the proposed extension will result in a car parking problem on the premises or in the zone and sub-area during normal peak demand periods; and (f) the existence of a car parking area which— <ul style="list-style-type: none"> (i) is within 100 metres of the premises; and (ii) has convenient pedestrian access; and (iii) is the subject of a legal arrangement which prevents the parking area from being alienated, leased or otherwise disposed of so that it is available for the development which it is intended to serve; and (g) the maximum number of employees and customers to be on the premises at any one time; and (h) whether any relaxation of the number of car parking spaces will result in a car parking problem on the premises or in the zone and sub-area or cause a traffic problem on an adjacent road. 	<ul style="list-style-type: none"> (d) available for use by both staff and visitors; and (e) not sold or leased (other than in accordance with a development approval for a carpark). <p><i>Note: For the purposes of the calculation of parking spaces in these prescribed solutions—</i></p> <ul style="list-style-type: none"> (a) <i>tandem parking spaces are only counted as one space unless—</i> <ul style="list-style-type: none"> (i) <i>the tandem parking spaces are—</i> <ul style="list-style-type: none"> (A) <i>provided for a residential use; or</i> (B) <i>used by the occupants of the premises in one tenancy; or</i> (C) <i>operated as part of a car park with management provided on the premises; and</i> (ii) <i>the tandem parking spaces have a minimum length of 10.4 metres or 11 metres in the case of a tandem garage; and</i> (iii) <i>the tandem parking spaces are provided on the premises; and</i> (b) <i>a motorcycle parking space is counted as 0.25 of a parking space.</i> 	

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
Manoeuvring areas within a parking area		
<p>O2 Development provides a manoeuvring area for vehicles on the premises—</p> <ul style="list-style-type: none"> (a) to satisfy the expected demand for the number and type of service vehicles likely to be generated by the activity; and (b) which allows for safe, efficient and legible vehicle circulation; and (c) which allows for safe, efficient and legible emergency vehicle access; and (d) to allow the free influx of traffic into a parking area; and (e) to prevent an adverse impact on the safety and efficiency of the existing or planned road network. 	<p>S2.1 Development provides manoeuvring areas for the design vehicles specified in Table 5.3.4E (Design vehicles for manoeuvring areas).</p> <p>S2.2 Development provides that in relation to access, the design vehicle is able to—</p> <ul style="list-style-type: none"> (a) enter and leave the premises in a forward direction; and (b) circulate around the premises on primary aisles; and (c) park in a manner allowing loading and unloading operations clear of circulating roadway aisles. <p>S2.3 Development provides—</p> <ul style="list-style-type: none"> (a) a loading bay, in accordance with column 3 of Table 5.3.4A (Vehicle parking spaces); and (b) a pick up/set down area, in accordance with column 4 of Table 5.3.4A (Vehicle parking spaces); and (c) vehicle queuing spaces, in accordance with column 5 of Table 5.3.4A (Vehicle parking spaces) and column 2 of Table 5.3.4B (Queuing spaces) unless— <ul style="list-style-type: none"> (i) the development is located on a minor road, a minimum queue length of six metres; or 	<p>S2.1 Complies. The proposed development plan includes manoeuvring areas for heavy rigid vehicles (HRVs), including refuse vehicles.</p> <p>S2.2 Complies. The proposed development plan's service vehicle parking and circulation provisions allows an HRV to enter and leave the premises in a forward direction, and circulate around the premises on primary aisles, and park in a manner allowing loading and unloading operations clear of circulating roadway aisles (refer to Section 2 of the traffic report).</p> <p>S2.3 (a) The type of development is not listed in Table 5.3.4A. However, a dedicated loading bay suitable for two HRVs within the site (refer to Section 2 of the traffic report). (b) Not applicable. The type of development is not listed in Table 5.3.4A. (c) Not applicable. The type of development is not listed in Table 5.3.4A. Queuing spaces has been provided in accordance with AS/NZS2890.1:2002 (refer to Section 2 of the traffic report).</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>(ii) in the case of a residential use, the development provides a vehicle turning area and visitor parking spaces outside the security gates of the development in accordance with Table 5.3.4D (Vehicle parking spaces for users incorporating a security gate).</p> <p>S2.4 Development provides that the gradient of an area used for the manoeuvring of a vehicle is a maximum of 1 in 12.</p> <p>S2.5 Development provides a manoeuvring area for the design vehicle which complies with the critical dimensions and minimum turning paths derived geometrically from the dimensions specified in—</p> <p>(a) Figure 5.1 of AS2890.1:1993: <i>Parking facilities – Off-street parking</i>, for a car (B99); and</p> <p>(b) Figure 5.3 of AS2890.2:2002: <i>Parking facilities – Off-street commercial vehicle facilities</i>, for a small rigid vehicle (SRV); and</p> <p>(c) Figure 5.4 of AS2890.2:2002: <i>Parking facilities – Off-street facilities</i>; and</p> <p>(d) Figure B5 of AS2890.2:2002: <i>Parking facilities – Off-street commercial vehicle facilities</i>, for an articulated vehicle (AV).</p> <p>S2.6 Development provides a turning path with a design clearance of—</p>	<p>S2.4 Complies – refer to Section 2 of the traffic report.</p> <p>S2.5 Complies – refer to Section 2 of the traffic report.</p> <p>S2.5 Complies – refer to Section 2 of the traffic report.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>(a) a minimum of 300mm; or (b) a working clearance of a minimum of 600mm for a driveway and an accessway.</p> <p>S2.7 Development provides headroom to provide clearance for the design vehicle.</p> <p>S2.8 Development provides a loading bay for the design vehicle which has—</p> <p>(a) a minimum width of 3.5 metres; and (b) a minimum length of—</p> <p>(i) 7 metres for a SRV; and (ii) 13.5 metres for a HRV; and (iii) 21 metres for a AV; and (c) a minimum vertical clearance of—</p> <p>(i) 3.5 metres for a SRV; and (ii) 4.5 metres for a HRV and a AV.</p>	<p>S2.7 Not applicable the proposed development does not include overhead structures in parking and circulation areas.</p> <p>S2.8 Complies – refer to Section 2 of the traffic report.</p>
Layout of a parking area		
<p>O3 Development provides that a parking area on the premises—</p> <p>(a) limits the maximum length of a parking aisle in a parking area to 100 metres; and (b) does not provide unnecessary space in a parking area which would encourage illegal parking; and (c) provides for a progressive reduction in the speed environment in moving between the road and parking spaces; and (d) provides a clear and safe pedestrian</p>	<p>S3.1 None applicable.</p>	<p>S3.1 None applicable. Refer to Section 2 of the traffic report.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
<p>circulation network; and</p> <p>(e) provides adequate sight distances at all potential conflict points; and</p> <p>(f) provides for efficient and simple parking space search patterns; and</p> <p>(g) provides for uncongested public transport and service vehicle movements through the premises; and</p> <p>(h) keeps a heavy vehicle out of a parking aisle; and</p> <p>(i) ensures that no heavy vehicle reverses across a pathway; and</p> <p>(j) does not provide cross intersections; and</p> <p>(k) does not provide for a parking or turning movement, an intersecting aisle or a speed hump in a queuing area; and</p> <p>(l) does not provide parking off a circulation road; and</p> <p>(m) provides a direct pathway with adequate storage capacity at a road crossing; and</p> <p>(n) is laid out so that vehicular and pedestrian traffic may conveniently connect and travel between adjoining development.</p>		
Design and construction of a parking area		
<p>O4 Development provides that a parking area on the premises—</p> <p>(a) is safe, efficient and legible in meeting the</p>	<p>S4.1 Development being assessable development provides a parking area which complies with the standards for a parking area specified in</p>	<p>S4.1 Complies – refer to Section 2 of the traffic report.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
<p>(b) requirements of the use; and does not have an adverse impact on the safety and efficiency of the existing or planned road network.</p>	<p><i>Planning Scheme Policy No 5 (Design and construction of work) 2006.</i></p> <p>S4.2 Development provides that a parking area complies with—</p> <p>(a) <i>AS 2890.1:1993: Parking facilities – Off-street car parking</i>; and</p> <p>(b) <i>AS 2890.2:2002: Parking facilities – Off-street commercial vehicle facilities</i>, in the case of commercial vehicles.</p> <p>S4.3 Development provides—</p> <p>(a) a parking area in accordance with standard drawing LCC 8-00806 in <i>Planning Scheme Policy No 5 (Design and construction of work) 2006</i> ; and</p> <p>(b) for a median which is greater than 1 metre wide from the back of the kerb, to be landscaped as a mulched garden area; and</p> <p>(c) for a median and a traffic island less than 1 metre wide to be concreted.</p> <p>S4.4 Development provides that all signs, landscaping and other parking furniture are a minimum of 0.5 metre behind a kerb.</p> <p>S4.5 Development provides that a parking area is finished with an all weather paved surface, such as asphaltic concrete, insitu concrete or paving blocks.</p> <p>S4.6 Development provides that—</p> <p>(a) if the parking area is graded such that</p>	<p>S4.2 (a) and (b) Complies – refer to Section 2 of the traffic report.</p> <p>S4.3 (a) Island and kerb setbacks to car park areas will be in accordance with standard drawing LCC 8-00806 in detailed development design. (b) Will comply in detailed design (c) Will comply in detailed design</p> <p>S4.4 Will comply through detailed development design.</p> <p>S4.5 Will comply through detailed development design.</p> <p>S4.6 Will comply through detailed development design.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>stormwater would drain across the verge via a crossover, a grated inlet is provided for the full width of the crossover immediately inside the premises; and</p> <p>(b) all stormwater collected on the parking area is piped to a nominated legal point of discharge.</p> <p>S4.7 Development provides for the lighting of a car park in accordance with section 4 of AS 2890.1:1993: <i>Parking facilities- Off-street car parking</i>.</p> <p>S4.8 Development provides lighting of a parking area that illuminates—</p> <p>(a) an open surface car park to 15 lux; and</p> <p>(b) a basement car park to 50 lux; and</p> <p>(c) the first 12 metres of the basement driveway from a daylight area to a minimum of 200 lux; and</p> <p>(d) the first 6 metres for a basement driveway from a daylight area to a minimum of 1000 lux; and</p> <p>(e) a pay station, ticket spitter and the like to a minimum of 300 lux; and</p> <p>(f) a footpath crossing to a minimum of 50 lux.</p> <p>S4.9 Development provides signs and line markings in accordance with Queensland Manual of Uniform Traffic Control Devices to indicate the location of the parking area and the position of an access</p>	<p>S4.7 Will comply through detailed development design.</p> <p>S4.8 Will comply through detailed development design.</p> <p>S4.9 Will comply through detailed development design.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>point for a parking area used by the public where—</p> <p>(a) the parking area is located at the rear of the premises; or</p> <p>(b) access to the parking area is not located on the primary frontage of the premises; or</p> <p>(c) there are a number of access points serving different parts of the premises.</p>	
Design and construction of a parking area for people with disabilities		
O5 Development provides that a parking area on the premises is safe, efficient and legible in meeting the requirements of people with disabilities.	<p>S5.1 Development provides parking spaces for use by people with disabilities which—</p> <p>(a) comply with the requirements of section 2 of AS 2890.1:1993: <i>Parking facilities – Off-street car parking</i>; and</p> <p>(b) have flat access between each parking space and the adjoining walkway, unless there is a change in level from the parking space to the walkway, in which case a kerb ramp is provided.</p> <p>S5.2 Development provides a wheelchair access to and from a parking space for the use of people with disabilities, which is clear of obstructions and in good condition.</p>	<p>S5.1 (a) Complies – refer to Section 2 of the traffic report.</p> <p>(b) Will comply through detailed development design.</p> <p>S5.2 Will comply through detailed development design.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
Access to a parking area		
<p>O6 Development provides access to the premises which—</p> <p>(a) is safe, efficient and legible in meeting the requirements of the intended use; and</p> <p>(b) does not have an adverse impact on the safety and efficiency of the existing or planned road network.</p>	<p>S6.1 Development provides that each lot and building site is accessible to a road.</p> <p>S6.2 Development (other than for a car park) provides a parking area which—</p> <p>(a) is freely accessible to all employees and visitors during the normal hours of operation of the development with no encumbrance, fee or charge; and</p> <p>(b) has no gateway, door or similar device which restricts vehicular access by employees or visitors.</p> <p>S6.3 Development provides that the gradient of a driveway does not exceed in the case of—</p> <p>(a) a single unit residential activity, a development display and sales and a dual occupancy, a maximum of 1 in 4; and</p> <p>(b) other uses, a maximum of 1 in 10.</p> <p>S6.4 Development provides a driveway which complies with section 3 of AS 2890.1:1993: <i>Parking facilities – Off-street car parking</i>; and</p> <p>S6.5 Development in respect of a community title lot provides for—</p> <p>(a) the proposed community title lot to abut the common property; and</p> <p>(b) the vehicular access—</p> <p>(i) to be located within the common</p>	<p>S6.1 Complies – facility is accessible by road.</p> <p>S6.2 (a) Complies- development will be freely accessible to all employees and visitors during the normal hours of operation of the development with no encumbrance, fee or charge.</p> <p>(b) Complies – development has no such restrictions with exception of the trailer park and maintenance shed area, for safety and security reasons.</p> <p>S6.2 (a) Not applicable.</p> <p>(b)Complies – proposed crossovers will have a grade of less than 1 in 10.</p> <p>S6.4 Complies – see Section 2 of traffic report.</p> <p>S6.4 Not applicable – proposal is not for a community title lot.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>property; and</p> <p>(ii) to be connected to a road which is constructed; and</p> <p>(iii) to have only one access point to the road.</p> <p>S6.6 Development which incorporates a facility for the issuing of a ticket to enter the premises or a security gate (<i>ticket and security facility</i>) provides that the ticket and security facility is located on the premises such that a vehicle does not queue across the footpath.</p> <p>S6.7 Development which incorporates a drive-through facility provides that the queue does not—</p> <p>(a) block access to the premises; and</p> <p>(b) interfere with a parking aisle.</p>	<p>S6.6 Not applicable – no ticket facility is proposed.</p> <p>S6.7 Not applicable – no drive-through facility is proposed.</p>
Vehicle washing bay in a parking area		
<p>O7 Development provides that a vehicle washing bay—</p> <p>(a) is safe and efficient in meeting the requirements of the use; and</p> <p>(b) does not cause environmental nuisance or environmental harm.</p>	<p>S7.1 Development provides that the run-off from a vehicle washing bay is captured and lawfully discharged to the sewerage system if the vehicle loading bay is not located on a grassed or turfed area.</p>	<p>S7.1 Not applicable – no washing bay facility is proposed.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
Pedestrian path in a parking area		
O8 Development provides for safe pedestrian access to a building's pedestrian entrance from the frontage and from any parking area or set down area.	<p>S8.1 Development provides for a pedestrian path to be separated from vehicle traffic.</p> <p>S8.2 Development provides for a pedestrian path along the shortest possible route from the parking area and the frontage of the premises to the building's pedestrian entrance.</p> <p>S8.3 Development provides a pedestrian path that is— (a) even and uses non-slippery pavement materials; and (b) at a gradient not exceeding 1 in 12.</p>	<p>S8.1 Complies – see Section 2 of traffic report</p> <p>S8.2 Complies – see Section 2 of traffic report</p> <p>S8.3 Will comply through detailed design.</p> <p>S8.3 Will comply through detailed design.</p>
Bicycle parking in a parking area		
<i>Provision of cyclist facilities and bicycle parking</i>		
O9 Development provides cyclist facilities and bicycle parking spaces on the premises that satisfies the expected demand for bicycles likely to be generated by the activity.	<p>S9.1 Development provides bicycle parking spaces on the premises at the rate specified in Table 5.3.4F (Bicycle parking spaces).</p> <p>S9.2 Development provides in respect of each bicycle parking space rail-type locking facilities which allow the frame and both wheels of a bicycle to be locked.</p> <p>S9.3 Development for a passenger terminal provides for— (a) 20% of the bicycle parking spaces to be available for rental on a monthly or a</p>	<p>S9.1 The type of development is not listed in Table 5.3.4F. refer to section 2 of the traffic report on bicycle provisions.</p> <p>S9.2 Not applicable – see Section 2 of traffic report.</p> <p>S9.3 Not applicable – proposal is not for a passenger terminal.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
	<p>quarterly basis; and</p> <p>(b) enclosed bicycle lockers or a bicycle storage cage.</p> <p>S9.4 Development for a commercial use provides employees with shower cubicles and change rooms and makes provision for both males and females, at a minimum rate of—</p> <p>(a) one (1) cubicle, where the GLA of the development is between 1500m² and 5500m²; and</p> <p>(b) one (1) additional cubicle, where the GLA of the development exceeds 5500m²; and</p> <p>(c) two (2) additional cubicles, where the GLA of the development exceeds 30000m².</p> <p>S9.5 Development for an industrial use which has a GLA of 2000m² or greater, provides employees with shower cubicles and change rooms and makes provision for both males and females.</p>	<p>S9.4 Not applicable – see Section 2 of traffic report.</p> <p>S9.5 Not applicable – proposal is not for an industrial use.</p>
<i>Layout of bicycle parking spaces</i>		
<p>O10 Development provides bicycle parking spaces in areas which—</p> <p>(a) are visible; and</p> <p>(b) are well lit; and</p> <p>(c) are subject to significant pedestrian traffic; and</p> <p>(d) are well signed; and</p>	<p>S10.1 None applicable.</p>	<p>S10.1 None applicable.</p>

Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
<ul style="list-style-type: none"> (e) are close to the major pedestrian entrance to the development; and (f) does not impede the movement of pedestrians or vehicles; and (g) are separated from vehicle traffic. 		
<i>Design and construction of cyclist facilities and bicycle parking spaces</i>		
O11 Development provides bicycle parking spaces on the premises that are safe, efficient and legible in meeting the requirements of the use.	S11.1 Development provides that cyclist facilities and bicycle parking spaces are designed and constructed in accordance with Part 14 of <i>Austroads</i> .	S11.1 Not applicable – see Section 2 of traffic report.
Motorcycle parking in a parking area		
<i>Provision of motor cycle parking spaces</i>		
O12 Development provides motorcycle parking spaces on the premises that— <ul style="list-style-type: none"> (a) satisfies the expected demand for motorcycles likely to be generated by the activity; and (b) are safe, efficient and legible in meeting the requirements of the use. 	S12.1 Development provides motorcycle parking spaces in accordance with the provisions of section 2.4.7 of AS 2890.1:1993: <i>Parking facilities – Off-street car parking</i> .	S12.1 Not applicable – no demand for motorcycle parking has been determined.
<i>Layout of motorcycle parking spaces</i>		
O13 Development provides motorcycle parking spaces in an area which is—	S13.1 None applicable.	S12.1 Not applicable – no demand for motorcycle parking has been determined.



Column 1 Specific outcomes	Column 2 Acceptable solutions—if self-assessable Probable solutions—if code assessable	Column 3
(a) visible; and (b) well lit; and (c) subject to significant pedestrian traffic; and (d) well signed; and (e) close to the major pedestrian entrance to the development.		