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11.066l02v2

28 June 2016

Loftex
Level 16, 61 Lavender Street
MILSONS POINT NSW 2061

Attention: Mr George Banjanin, Development Manager

Re: **1-13a Marshal Avenue, St Leonards**
Response to Resident Submission

Dear George

We refer to the subject development and in particular, correspondence dated 23 June 2016 which forwards on a submission made by two residents for the consideration of the Sydney East Joint Regional Planning Panel (JRPP). Having regard for the Traffic Impact Assessments prepared for the current proposed and previous schemes, we now respond to all traffic related items which have been raised.

- *"The traffic study supporting the DA is old and out of date. The study does not take into account the developments in the adjoining area. Council often refers to a study they have undertaken but we the residents did not have access to this study and thus we do not know how comprehensive the study has been."*

Response:

The Traffic Impact Assessment that accompanied the development application submission was finalised on Wednesday 18 November 2015 (Reference: 11.066r03v04) and relies on traffic surveys conducted on Tuesday 9 April 2013. These surveys counted the traffic volumes for the following intersections between 7:00am-9:00am and 4:00pm-6:00pm:

- Pacific Highway, Reserve Road and Berry Road; and
- Duntroon Avenue and River Road.

A copy of the survey results is presented in **Attachment 1** which forms the basis for the software modelling outputs included in that report for *'existing'* and *'existing plus development'* scenarios.

Whilst background growth in traffic volumes are to be expected in following years, Traffic Impact Assessments are almost always commissioned to examine impacts under existing traffic conditions. The only exception to this under the Roads and Maritime Services (RMS) *Guide to Traffic Generating Developments* is if there are existing proposals for improvements to the adjacent road network and hierarchy. Currently, there is no observed change or known proposal to modify these key intersections (noting that a seagull treatment was implemented at the intersection of River Road and Duntroon Avenue in the second half of 2011).

Though TRAFFIX is not directly involved in the development assessment process, we understand from experience that submissions can be a lengthy process with two-way involvement between Council and the applicant. We consider it unreasonable for an applicant to re-engage a Traffic Engineering Consultant to conduct a new assessment each time a refinement has been made to a development proposal which doesn't affect its traffic generating potential. We therefore trust Council to rely on the modelling assessment undertaken for this survey in light of their foreknowledge of surrounding proposals and expectations of background traffic growth.

- *"The traffic study for the DA has many versions but is based on one actual count (ie street survey). You will note from the attached Appendix that each version of the study shows lower background traffic levels even though only one survey was undertaken. Surprisingly, the final version of the report shows the background traffic levels that make the traffic generated from this DA acceptable."*

Response:

Please see below response to the below points raised in the Appendix.

- *Highlighted below are our concerns with some of the significant issues around this proposal:*

  - *The studies not matching previously provided for the same development (with no new surveys). See tables below;*
  - *No genuine assessments provided for adjoining high density developments in the locality. In other words the numbers keep getting better with every version of the report and with different consultant adopting different figures for the same intersections; and*
  - *There is also no legitimate pedestrian flow study.*

  Table provided in Traffic Assessment report by Traffix report 11.066r02v04: 15-25 Marshall Avenue, St Leonards page 11, shows Pacific Highway, Berry Road and Reserve Road Intersection to have Intersection Delay of 30.7.

Table 1: Intersection Performance - Existing Conditions

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Pacific Highway, Berry Road and Reserve Road	signals	AM	0.882	30.7	C
		PM	0.880	34.6	C
Berry Road and Marshall Lane	priority	AM	0.033	11.1	A
		PM	0.060	10.4	A
Berry Road and Marshall Avenue	roundabout	AM	0.090	10.2	A
		PM	0.114	12.1	A
River Road and Duntroon Avenue	priority ('seagull')	AM	0.262	43.7	D
		PM	0.104	11.8	A

Table provided in Traffic Assessment report by Traffix report: 11.066r02v07: 15-25 Marshall Avenue, St Leonards page 11, shows Pacific Highway, Berry Road and Reserve Road Intersection to have Intersection Delay of 16.9 or 20.6 (not 30.7 as per Ver 4).

Table 1: Intersection Performance - Existing Conditions (as at 20 March 2013)

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Pacific Highway, Berry Road and Reserve Road	signals	AM	0.687	16.9	B
		PM	0.797	33.3	C
Berry Road and Marshall Lane	priority	AM	0.023	10.8	A
		PM	0.075	11.5	A
Berry Road and Marshall Avenue	roundabout	AM	0.017	9.4	A
		PM	0.033	11.1	A
River Road and Duntroon Avenue	priority ('seagull')	AM	0.108	18.9	B
		PM	0.076	11.9	A

Table 2: Intersection Performance - Existing Conditions (as at 09 April 2013)

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Pacific Highway, Berry Road and Reserve Road	signals	AM	0.892	20.6	B
		PM	0.762	30.2	C
Berry Road and Marshall Lane	priority	AM	0.052	11.8	A
		PM	0.101	11.5	A
Berry Road and Marshall Avenue	roundabout	AM	0.094	10.3	A
		PM	0.089	10.2	A
River Road and Duntroon Avenue	priority ('seagull')	AM	0.068	16.8	B
		PM	0.052	11.4	A

Table provided in Traffic Assessment report by Traffix report: 11.066r03v03: 1-13A Marshall Avenue, St Leonards, shows Pacific Highway, Berry Road and Reserve Road Intersection to have Intersection Delay of 19.8 (not 30.7 as per Ver 4 or 20.6 as per Ver 7).

Table 1: Intersection Performance – 'Base Case' Conditions

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Pacific Highway, Berry Road and Reserve Road	Signals	AM	0.779	19.8	B
		PM	0.755	28.6	C
River Road and Duntroon Avenue	Priority ('seagull')	AM	0.141	22.0	B
		PM	0.064	9.5	A

Response:

The Traffic Impact Assessments undertaken for this development, including for previous submissions, relied on SIDRA Intersection modelling software. These discrepancies in delays has been acknowledged in the latest report (Reference: 11.066r03v04), as resulting from changes introduced from a generational release of the software, which incorporated technical improvements and updated methodologies of the RMS. Whilst it is presumed that with time, modelling packages become more accurate by making less and less conservative assumptions with each advancement, the context in which this software has been used is to provide a comparison of the delays brought on by the subject development over existing conditions. In this regard, the outputs between 'existing' and 'existing plus development' scenarios is generally consistent, thereby enabling the consent authority to make a measured judgement on the traffic impacts of the proposal.

As mentioned earlier, determining the impacts of adjoining developments or development proposals are considered to be Council's responsibility given they have knowledge of privileged information regarding their size and therefore traffic generating potential.

The impacts and analysis of pedestrian flows, including identification of necessary upgrades, is also considered to be a responsibility of Council.

- *"The traffic assessment/study report was based on old historical data which is no longer relevant given the level of change in the locality since the time the study was conducted. It is clear that significant developments were excluded."*

Response:

Please see below response.

- *"The traffic assessment/ study did not consider in aggregate the impact of traffic from other proposed high density residential developments (refer attached map of upcoming high density residential developments in the area); compounded by developments in the vicinity by the other councils such as North Sydney Council and Willoughby Council in the St Leonard's area, only a couple of streets apart. This point was raised by the Department of Planning as well but only a one page update was provided by the developer."*

Response:

As previously mentioned, a level of background growth should be assumed by Council when assessing the traffic impacts of a proposal, noting that the outputs of the modelling undertaken give a Level of Service indication of how much spare capacity is available at each of the key intersections. The traffic survey underpinning this modelling is not considered old or historical, as no changes to the intersection layouts have since been implemented, and simply serves to determine the additional delays associated solely by the proposed development

Queries regarding the 'aggregate' impacts of other developments should be directed separately of this development application as it would relate to a strategic planning issue. Transport modelling undertaken at this level is typically commissioned by Councils and focus on identifying potential upgrades to the road network resulting from land use rezoning. With this in mind, Traffic Impact Assessments for development proposals should only give guidance as to the extents of the traffic impacts imparted on individual intersections, so as to allow Council to determine whether they can be accommodated or warrant the intersection upgrades (with the applicant contributing in proportion to the impacts arising from their development).

- *"To calibrate the base line, a single day's sample was taken during a holiday period. Which you will agree is not good practice, unless there was a motivation for choosing such a period."*

Response:

The traffic survey conducted on Tuesday 9 April 2013 was not undertaken during a gazetted school holiday period and therefore reflect typical weekday traffic volumes. A single days sample is considered to be adequate to assess the traffic impacts of development application for a compliant land use, as opposed to a strategic planning study, where large scale rezoning of land will have more uncertain traffic impacts on the surrounding road network.

- *"Various versions of the traffic report had lower back ground base line traffic volumes. That is, the same intersection and roads had traffic numbers reduced with every version of the report with no justification. Refer attached Appendix which shows numbers reducing with every report released by the same consultant for the same development and for adjoin development."*

Response:

The numbers highlighted in the Appendix refer to the duration of delays anticipated by the modelling analysis. Base line traffic volumes for each modelling assessment were adopted from the most recent traffic survey undertaken. In the case of the submitted Traffic Impact Assessment, the volumes were adopted directly from the traffic survey undertaken on Tuesday 9 April 2013. Variances in the delays published in previous reports can be attributed to whether the modelling was undertaken using the results of a different traffic survey, and/or the version of SIDRA Intersection software available at the time (discussed previously).

- *"The traffic study for the proposed developments is too limited in its scope. Assessments with inconclusive and inappropriate measures not taking into account the different "time of day" demands (e.g. residential areas tend to experience peaks at later periods as residents return home from work and weekend trips)."*

Response:

The modelling undertaken in the Traffic Impact Assessment follows on from the traffic surveys which were conducted between 7:00am-9:00am and 4:00pm-6:00pm on the chosen day. These timeframes correspond to the typical morning and evening peak periods experienced on the network during weekdays. Whilst the weekend peak period is typically between 11:00am and 1:00pm only, volumes are generally greater on weekday peak periods for most roads. By modelling the traffic impacts during the period anticipated to have the highest traffic volumes on the road network, the assessment is considered to represent a worst case scenario, where further analysis during other times only considered warranted should delays already prove to be unacceptable.

- *"The study did not take account of the conditions and nature of the road network. The real issues that affect traffic from an influx of vehicles in a small area with narrow streets (as compounding impacts of increased demand across various travel routes). The traffic impact study did not provide proper consideration to traffic or parking problems such as congestion, bottlenecks, pedestrian traffic, traffic flow, safety, on street and off street parking."*

Response:

The Traffic Impact Assessment has previously modelled intersections on Berry Road at Marshall Lane and Marshall Street, for which a Level of Service of A was achieved. These intersections are therefore considered to have ample capacity to accommodate the additional volumes associated with the proposed development. It is also noteworthy that access from lower order roads is encouraged by the RMS to avoid potentially greater impacts on arterial roads.

With respect to parking, the development was assessed to comply with the minimum parking rates for high density residential developments in *Metropolitan Sub-Regional Centres* under the RMS *Guide to Traffic Generating Developments*. Under *State Environmental Planning Policy No 65*, the development would quality for even less strict minimum parking rates for a *Metropolitan Regional CBD Centre* as it is situated within 800 metres from a railway station in a *Strategic Centre* (*Plan for Growing Sydney).* As such, it is expected that the proposed development will readily accommodate all normal parking demands off-street, including visitor parking, with no or minimal reliance on on-street parking.

Whether a carriageway width for a road is appropriate often depends on other factors than traffic volumes. In built-up areas with larger scale developments, it may be desirable to have a narrow road width to have the effect of reducing vehicle speeds or to create pedestrian friendly areas. In this regard, it is up to Council to determine what types of land uses should be permitted on a street, or whether additional public domain works would be needed to create the desired setting. In our experience this only the case where the development site is in a critical location such as directly adjacent to a train station or bus terminal facility.

- *"No consideration was given to the fact that the area in question has a wide catchment area. River Road is a major feed for the Lower and wider Northern side of Sydney. At the same time, the Pacific Highway has a wide catchment and covers a major hospital Royal North Shore."*

Response:

The Traffic Impact Assessment acknowledges the presence of arterial roads by assessing the traffic impacts at key intersections on Pacific Highway (with Berry Road and Reserve Road) and River Road (with Duntroon Avenue). As these intersections are closest to the site, they are expected to experience the highest volumes of traffic associated with the development before vehicle trips become dispersed to (or converge from) the surrounding road network. The assessment therefore focuses on the points on the arterial road network where the proposed development will impart the most severe impacts.

- **Summary**

We trust the above is of assistance. Please contact the undersigned should you have any queries or require any further information regarding the above.

Yours faithfully,

traffix

Graham Pindar

Director

Attachment 1

Traffic Survey (9 April 2013)

R.O.A.R. DATA

Reliable, Original & Authentic Results

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

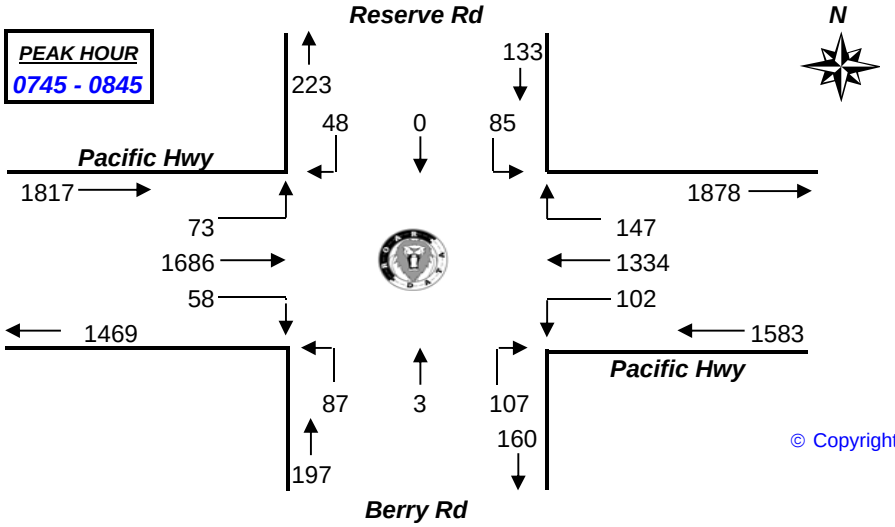
Client : Traffix
Job No/Name : 4556 ST LEONARDS Berry Rd 2
Day/Date : Tuesday 9th April 2013

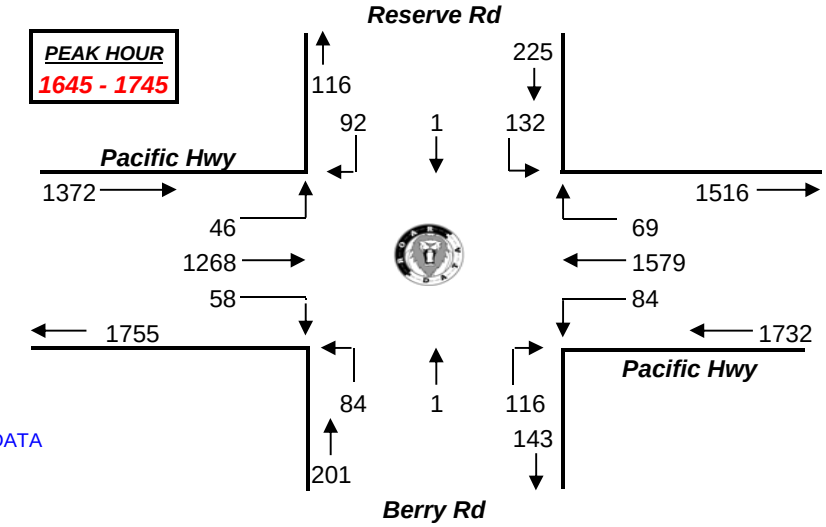
All Vehicles	NORTH Reserve Rd			WEST Pacific Hwy			SOUTH Berry Rd			EAST Pacific Hwy			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0700 - 0715	13	2	9	16	278	8	11	0	5	30	254	27	**653**
0715 - 0730	14	2	9	21	282	15	19	0	17	20	261	31	**691**
0730 - 0745	15	1	17	21	312	13	16	1	16	24	293	26	**755**
0745 - 0800	22	0	15	20	425	9	24	1	27	25	336	37	**941**
0800 - 0815	20	0	9	13	418	11	22	2	27	24	333	32	**911**
0815 - 0830	27	0	10	22	386	21	19	0	27	27	330	47	**916**
0830 - 0845	16	0	14	18	457	17	22	0	26	26	335	31	**962**
0845 - 0900	17	2	7	28	347	12	18	1	38	29	301	25	**825**
Period End	**144**	**7**	**90**	**159**	**2905**	**106**	**151**	**5**	**183**	**205**	**2443**	**256**	**6654**

All Vehicles	NORTH Reserve Rd			WEST Pacific Hwy			SOUTH Berry Rd			EAST Pacific Hwy			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
1600 - 1615	24	0	31	10	243	10	23	3	12	17	329	14	**716**
1615 - 1630	30	2	18	7	231	15	25	1	26	22	307	19	**703**
1630 - 1645	30	1	16	8	234	9	13	1	20	22	348	19	**721**
1645 - 1700	35	0	23	11	317	13	23	0	22	24	360	17	**845**
1700 - 1715	37	0	28	14	311	18	24	1	34	27	405	16	**915**
1715 - 1730	31	1	21	7	302	8	27	0	37	18	402	18	**872**
1730 - 1745	29	0	20	14	338	19	10	0	23	15	412	18	**898**
1745 - 1800	21	0	20	8	324	17	12	1	22	16	358	19	**818**
Period End	**237**	**4**	**177**	**79**	**2300**	**109**	**157**	**7**	**196**	**161**	**2921**	**140**	**6488**

Peak Time	NORTH Reserve Rd			WEST Pacific Hwy			SOUTH Berry Rd			EAST Pacific Hwy			
	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0700 - 0800	64	5	50	78	1297	45	70	2	65	99	1144	121	**3040**
0715 - 0815	71	3	50	75	1437	48	81	4	87	93	1223	126	**3298**
0730 - 0830	84	1	51	76	1541	54	81	4	97	100	1292	142	**3523**
0745 - 0845	85	0	48	73	1686	58	87	3	107	102	1334	147	**3730**
0800 - 0900	80	2	40	81	1608	61	81	3	118	106	1299	135	**3614**
PEAK HOUR	**85**	**0**	**48**	**73**	**1686**	**58**	**87**	**3**	**107**	**102**	**1334**	**147**	**3730**

Peak Time	NORTH Reserve Rd			WEST Pacific Hwy			SOUTH Berry Rd			EAST Pacific Hwy			
	L	T	R	L	T	R	L	T	R	L	T	R	TOT
1600 - 1700	119	3	88	36	1025	47	84	5	80	85	1344	69	**2985**
1615 - 1715	132	3	85	40	1093	55	85	3	102	95	1420	71	**3184**
1630 - 1730	133	2	88	40	1164	48	87	2	113	91	1515	70	**3353**
1645 - 1745	132	1	92	46	1268	58	84	1	116	84	1579	69	**3530**
1700 - 1800	118	1	89	43	1275	62	73	2	116	76	1577	71	**3503**
PEAK HOUR	**132**	**1**	**92**	**46**	**1268**	**58**	**84**	**1**	**116**	**84**	**1579**	**69**	**3530**





R.O.A.R. DATA

Reliable, Original & Authentic Results

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Client : Traffix

Job No/Name : 4556 ST LEONARDS Berry Rd 2

Day/Date : Tuesday 9th April 2013

All Vehicles	WEST		NORTH		EAST		
	River Rd		*Duntroon*		*River Rd*		
Time Per	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0715	3	213	4	8	118	6	**352**
0715 - 0730	0	264	7	11	108	5	**395**
0730 - 0745	0	263	4	11	132	7	**417**
0745 - 0800	0	276	4	16	124	16	**436**
0800 - 0815	2	276	6	7	109	12	**412**
0815 - 0830	1	222	8	13	125	11	**380**
0830 - 0845	2	254	14	15	124	7	**416**
0845 - 0900	1	240	9	10	123	12	**395**
Period End	**9**	**2008**	**56**	**91**	**963**	**76**	**3203**

All Vehicles	WEST		NORTH		EAST		
	River Rd		*Duntroon*		*River Rd*		
Time Per	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1615	2	134	3	7	219	4	**369**
1615 - 1630	1	134	4	9	200	4	**352**
1630 - 1645	0	159	10	9	173	8	**359**
1645 - 1700	1	139	5	8	202	7	**362**
1700 - 1715	0	161	7	14	209	8	**399**
1715 - 1730	1	174	9	17	222	6	**429**
1730 - 1745	0	194	7	11	233	8	**453**
1745 - 1800	1	158	8	13	160	12	**352**
Period End	**6**	**1253**	**53**	**88**	**1618**	**57**	**3075**

	WEST		NORTH		EAST		
	River Rd		*Duntroon*		*River Rd*		
Peak Per	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0800	3	1016	19	46	482	34	**1600**
0715 - 0815	2	1079	21	45	473	40	**1660**
0730 - 0830	3	1037	22	47	490	46	**1645**
0745 - 0845	5	1028	32	51	482	46	**1644**
0800 - 0900	6	992	37	45	481	42	**1603**
PEAK HR	**2**	**1079**	**21**	**45**	**473**	**40**	**1660**

	WEST		NORTH		EAST		
	River Rd		*Duntroon*		*River Rd*		
Peak Per	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	4	566	22	33	794	23	**1442**
1615 - 1715	2	593	26	40	784	27	**1472**
1630 - 1730	2	633	31	48	806	29	**1549**
1645 - 1745	2	668	28	50	866	29	**1643**
1700 - 1800	2	687	31	55	824	34	**1633**
PEAK HOUR	**2**	**668**	**28**	**50**	**866**	**29**	**1643**