Submission for: SSD-8996 Loreto Normanhurst School Redevelopment (Concept Proposal and Stage 1)

Objects

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I object to three aspects of the proposed project.

1) Traffic and Pedestrian access
2) Street Scape
3) Absence of a Student Management Plan

I further object to the apparent statistical discrepancies in the Traffic Report (TA) and I have outlined some below. In particular the TA uses projected student numbers which differ from those specified by Loreto and those derived from the Loreto school survey. This has a domino effect on a number of assumptions in the TA.

I apologise for the length of the submission, but I cannot see any other way to get the crucial points across.

The state of the traffic is a long standing and deeply felt issue for the local residents.

Residents' objections have been politely put and politely received. But residents are left with the feeling that there have been no solutions achieved. The Master Plan should work to solving the residents' concerns.
If not, then when?

Loreto should be obliged to provide structures and procedures within the school that minimise the effects of the development on surrounding residents. If this is not possible, then the development should not proceed.

1) Traffic and Pedestrian access

Traffic

Traffic is a major and long standing issue for both Mount Pleasant Ave (MPA) and Osborn Rd (OR) residents. Both are essentially cul-de-sac streets with the only exit onto a very busy Pennant Hills Rd (PHR).

Mount Pleasant Ave has a private road (Waratah Way) off it that services the Adventist Aged Care Retirement Village (AACRV). MPA has about 94 houses within the street structure. In addition, the AACRV has at least 3 multiple room buildings housing people with varying care needs. The intersection of MPA & PHR is controlled by a Stop sign. Access to Loreto is provided by 3 gates. One gate provides access to Loreto's Junior School, Swimming Pool, Gymnasium & staff car park. A second gate provides access to the Loreto oval and the third gate access to a staff house. The Early Learning Centre (ELC) has been approved to be built with car and pedestrian access from MPA.

Osborn Rd has 5 feeder streets with about 200 houses in the street structure. The intersection of OB & PHR is controlled by traffic lights and the intersection includes Normanhurst Rd (NR) almost directly opposite OR. Off OR is the Loreto student Drop Off / Pick Up (DOPU) zone in a slip road that is on Loreto land. The DOPU zone services school buses and parent / staff passenger vehicles. Also off OR is one of the Loreto car parks as well as access to roads within Loreto School.

Comments on Traffic Report (TA)

More detailed comments are listed in the appendix, but here are some of the salient points.

In reading the TA, I was not satisfied that a consistent set of numbers were being used for the student population. So I started to develop numbers based on the stated student expansion (2019 1150; 2027 1600, 2047 2000) and used the school survey numbers to distribute those numbers in the relevant sections of the TA. Later I saw that this had also been suggested by the TfNSW comments.

Student Numbers: The stated expansions in student numbers are 450 in 2027 and 850 in 2047. But the TA uses the numbers for 2027 as variously being 250, 253, 311, 314 & 370; and for 2047 as being 400, 577, 588 & 770. To say the least, this does not give confidence in the analysis.

DOPU: In the section on Drop Off / Pick up (DOPU) Section 7.1.3 p37, the increase in students involved are stated as being 117 for 2027 and 233 in 2047. The corresponding numbers of vehicles per hour are stated as 78 and 155. There is no explanation of how any of those numbers are obtained. Using the survey results the student numbers would be 184 and 256, that is increases of 72 and 136 on 2019. The TA does not state the student / vehicle numbers for 2019.

The TA states that the DOPU off Osborn Rd operates efficiently and that queue lengths are accommodated on-site rather than extending into Osborn Road. This is absolutely in direct contrast with the experience of Osborn Road

residents (and, I suspect, of Loreto staff). If the DOPU is working so efficiently, then why have parents been observed using MPA for DOPU.
The Bus access in Osborne Rd to the Loreto Drop Off / Pick Up slip road is woefully inadequate and I would be surprised if it meets an Australian Standard. The TA is silent on improving this access by buses.
The TA seriously underestimates the increase in bus / car traffic in Osborn Rd for 2027 & 2047. The TA is based on +311 & +577 students for 2027 & 2047 respectively (should be 450 & 850); the TA indicates that there would be an additional 4 (am & pm) bus arrival / departures in 2027 with 8 (am & pm) more in 2047.
Car Parking: The survey based figures indicates that current parking requirements are not being met. That is there are 179 spaces available and the school survey indicates that 266 are being used. Loreto has some serious thinking to do about parking if it is going to be a good neighbour and minimise the impact on surrounding streets.
Train / STA Bus Travel: The TA in Section 9.2, shows train travel increases for students numbers as 34 (am), 35 (pm) for 2027 and 107 (am), 142 (pm) for 2047. In contrast the survey predicted increases would be 88 (am &pm) for 2027 and 166 (am & pm) for 2047. In Section 9.2, for STA Bus travel has increases for students numbers as being 28 (am & pm) for 2027 and 105 (am & pm) for 2047. In contrast the survey predicted increases would be 73 (am &pm) for 2027 and 138 (am & pm) for 2047. This indicates a serious underestimate in the numbers.
TA Appendix C Swept Path Analysis: The CTMP does not address difficulty for large trucks entering MPA with traffic queued to exit MPA and with cars parked south of the existing no stopping zones. It also ignores resident / student / staff cars parked in Osborne Rd.
The TA states that there will be no expectation of additional trips through the MPA / PHR intersection. This ignores:

- Student parking in MPA (survey: 16% of students)
- Staff parking in MPA (survey: 28% of staff)
- ELC drop off / pick up (this, verbally, was to be part of the Master Plan)
- Parking in the basement car park of the boarding house
- Deliveries to the boarding house

Outcome of Early Learning Centre (ELC) DA

There was a lot of discussion about the long existing traffic problems in the area during the meetings with the North Sydney Planning Panel (2019SNH026). This discussion centred on MPA / PHR intersection, the OR / PHR / NR intersection and the DOPU generated congestion in OR.

The verbal outcome was that Loreto and its advisors would undertake a study of the traffic problems and solutions as expressed by the residents of Mount Pleasant Ave and Osborne Rd.
One proposal was for Loreto to use some of its land at the OR / PHR / NR intersection to widen OR so that 4 lanes could be used. This would improve access to the Loreto Drop Off / Pick up slip road and would provide better access for buses. The current access for buses is far from adequate.
Another was to add arrows at the right turn from OR and right turn from NR to eliminate danger and confusion with turning traffic and through traffic.
Another was to install traffic lights at the MPA / PHR intersection. The issue of traffic lights has been a fight with RMS over many years.

Intersection of Mount Pleasant Ave & Pennant Hills Rd

The four attached photos in the Appendix show the difficulty of turning right or left into Pennant Hills Road. They also illustrate the difficulty in turning left and getting into the right hand lane in preparation to turn right into Normanhurst Road.
Drivers regularly have to wait for the lights to change at the Hinemoa Ave/PHR intersection so that they can safely exit MPA. The boundary fence at #1 MPA in particular obscures vision of the approaching traffic in the PHR kerb side lane. During school zone times, the traffic is slowed to 40 Kph but gaps in the traffic are reduced in size and frequency.
Traffic turning right from PHR to MPA often has a difficulty with the south bound PHR traffic where the traffic is stopped in the two centre lanes but not stopped in the curb side lane. I believe that this was the case for the fatal accident at this intersection.
Currently the “Do not Queue across Intersection” sign is obscured by another sign. There is immediate need for a “Keep intersection clear” sign to be painted on the Pennant Hills Road.
A resident has confirmed that only 3 streets between the M1 & M2 along PHR do not have access to a light controlled intersection with PHR. They are Redgrave Rd, Mount Pleasant Ave and Hillmont Ave.

Intersection of Pennant Hills Rd & Osborn Rd

Osborne Rd residents have, for a long time, expressed deep dissatisfaction with the effect of school traffic on Osborn Rd. One said she has delayed her departure by 30min because of the congestion in Osborn Rd. Residents have to provide guidance to bus drivers who are finding difficulty negotiating the turn back into Osborn Rd.

After submissions were made on the ELC application, Loreto's consultants performed a drone surveillance of both the OR and MPA intersections. However this was done on 2 days of reduced activity at the school.
It would be a serious error to base long term planning on 2 days of observation. A better plan would be to interview / survey people with day to day experience of conditions. For example:

- Loreto staff supervising the arrival / departure of students
- Bus drivers who are transporting Loreto students
- Parents dropping off and picking up Loreto students
- Residents in surrounding streets

Parking in Mount Pleasant Ave

Being a dead end street, the only egress is via the intersection with Pennant Hills Road. This intersection is already dangerous with the worst F rating for vehicle delay. The SSD 8996 & ELC will only add to this difficulty. It would also cause problems for Loreto's evacuation plan. What is Loreto's solution? In the past the Adventist Retirement Village/Aged Care Nursing Home at the end of the street has required evacuation due to fire threat. They also need ready access for emergency vehicles such as ambulances.

The photos in the Appendix show the current level of parking in MPA. They also show a traffic jam where an AusGrid vehicle was delayed for some time while trying to attend a fallen tree branch on power lines.

Pedestrian access

At the intersection of MPA / PHR vehicles have to slow from 70 Kph to about 30 Kph to make sure they do not go over the centre line in MPA. Many vehicles do not reduce the speed sufficiently.
Many pedestrians also cross over MPA at this intersection on their way to Normanhurst Station, Normanhurst shops, Loreto Bus stop and three Schools (Loreto Primary and Senior; Normanhurst Primary Public, Normanhurst Boys High). School children are particularly at risk here. There is no pedestrian crossing.
My suggestion would be:

- Move the No Stopping sign on both sides of MPA further to the south
- Add a pedestrian crossing across MPA before the new location of the stop signs
- Locate pedestrian barriers at the existing MPA / PHR intersection to direct pedestrians to the crossing

Or

- Install traffic lights

- Add a pedestrian crossing

2) Street Scape

The Stage 1 Boarding House is proposed to have an envelope of 22 m. This height would dominate the Mount Pleasant Ave street scape and, together with its bulk and scale, will impact adversely on nearby properties. The street is currently in the Hornsby Council LEP with a maximum of 8.5 m.
Other proposed building envelopes also exceed the maximum of 8.5m by a considerable margin.

I suggest that revised plans for any intended boarding house should respect and complement the street scape.

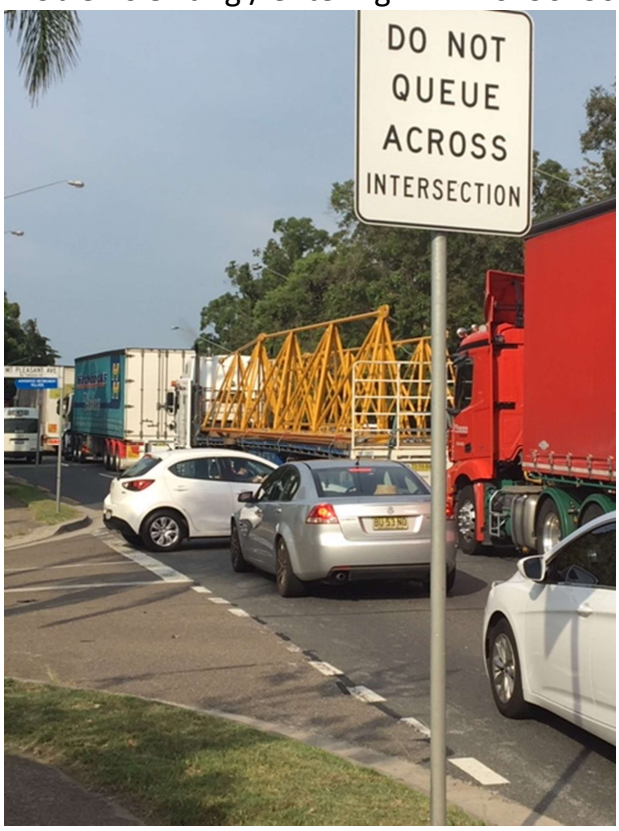
3) Absence of a Student Management Plan

All schools must have a management plan to supervise students as they arrive and depart the school. This is part of the duty of care responsibilities of the school. This plan shows the staff allocated to supervise the students and specifies the duties of those staff.
I would have expected such a plan to be included in the application, particularly since a lot of the Traffic Report is about students arriving at and departing from the school. The absence of this plan was raised by a resident at the North Sydney Planning Panel meeting. The Panel instructed the applicant to provide the plan.

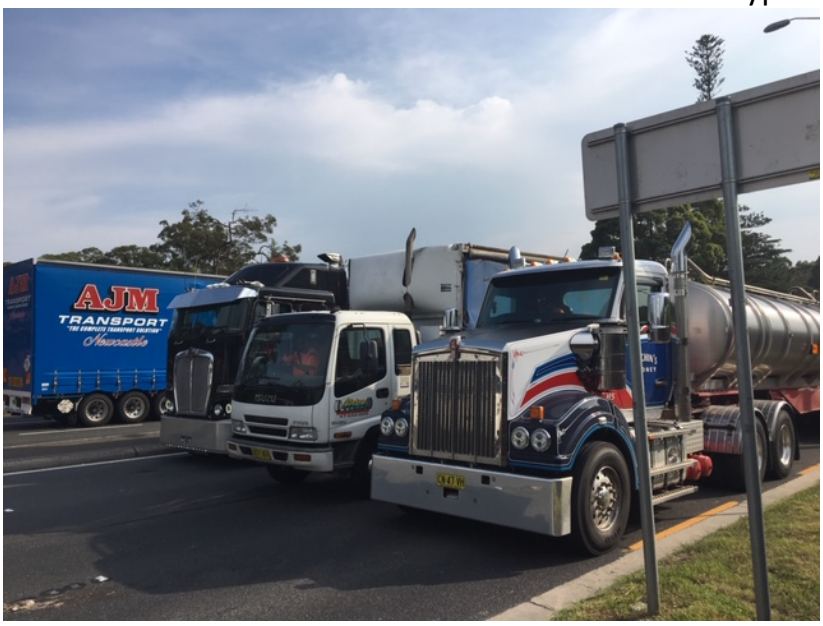
Appendices

Intersection MPA and PHR Photos

Problems exiting / entering MPA 20190130 0839

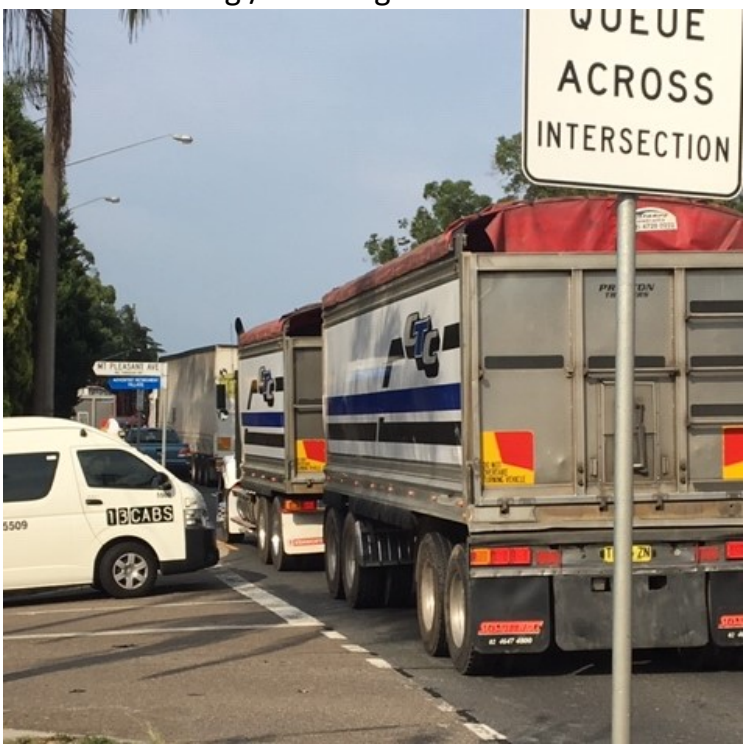


View of traffic at intersection 30 Jan 2019 8:45am. Typical scene in peak times.

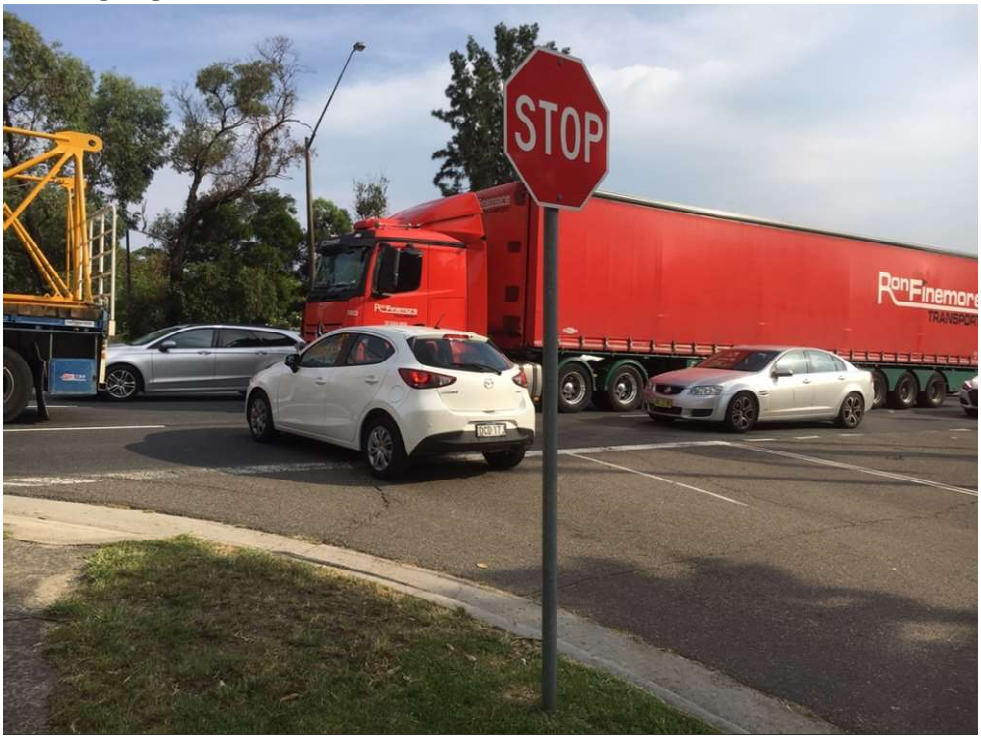


Incidentally, it shows some considerate truck drivers.

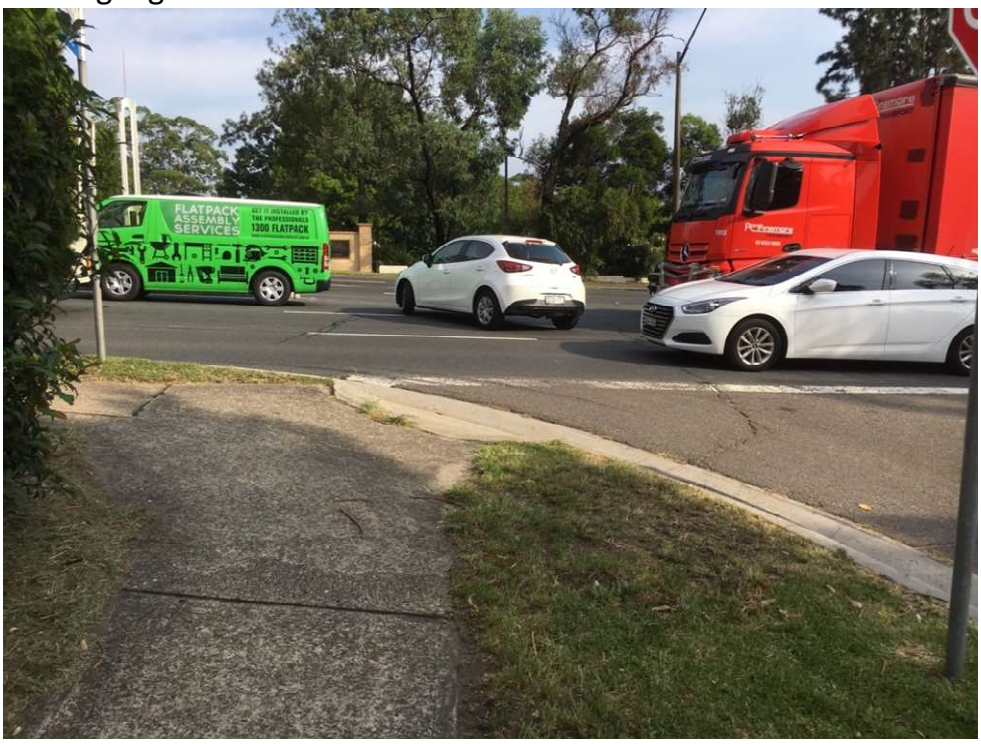
Problems exiting / entering MPA 20190130 0838



Turning Right from MPA to PH Rd 2019 01 30 at 08:39am #1



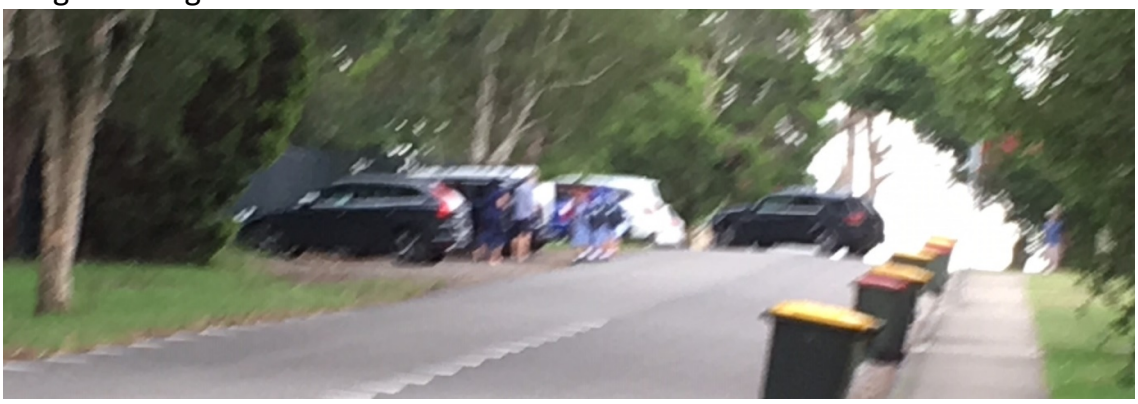
Turning Right from MPA to PH Rd 2019 01 30 at 08:39am #2



Parking MPA Photos

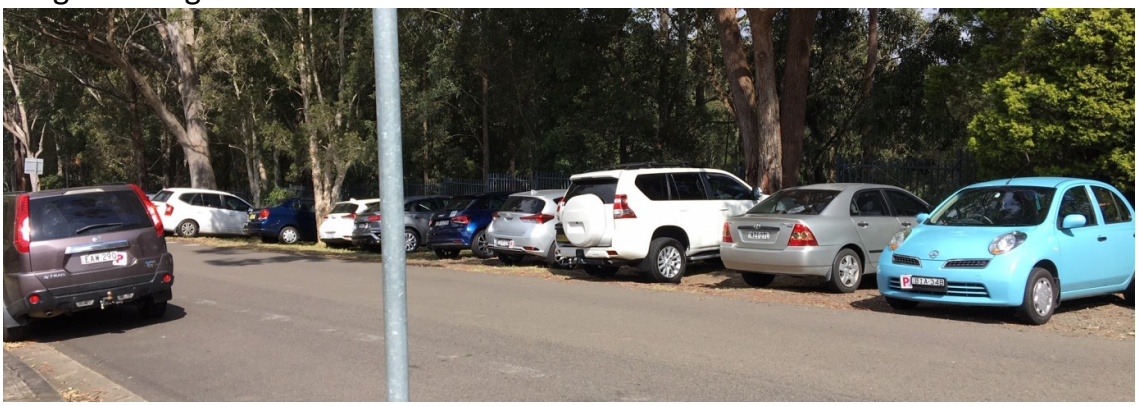
Verge Parking MPA 20190130 0817

Verge Parking MPA 20190131 0755

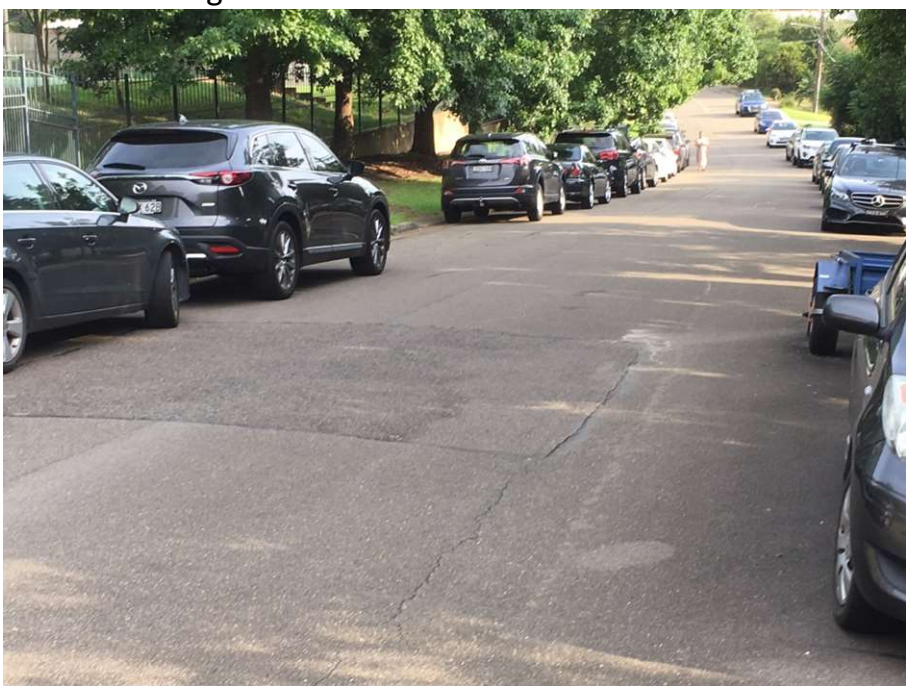


Verge Parking MPA 20190131 0928

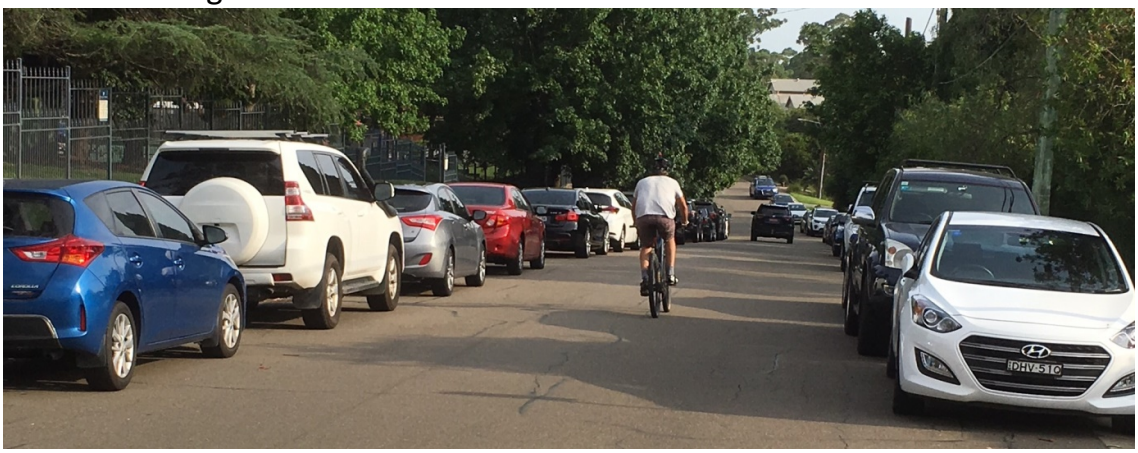
Verge Parking MPA 20190918 1015



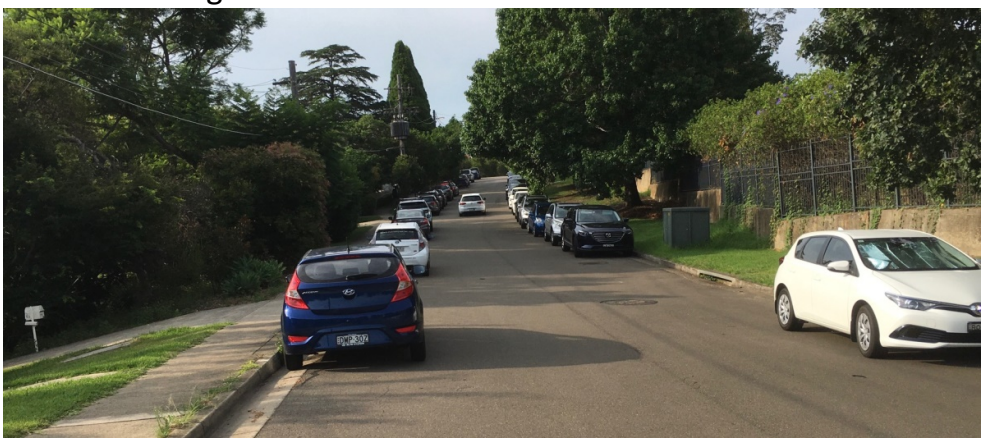
Parallel Parking MPA 20190130 0823



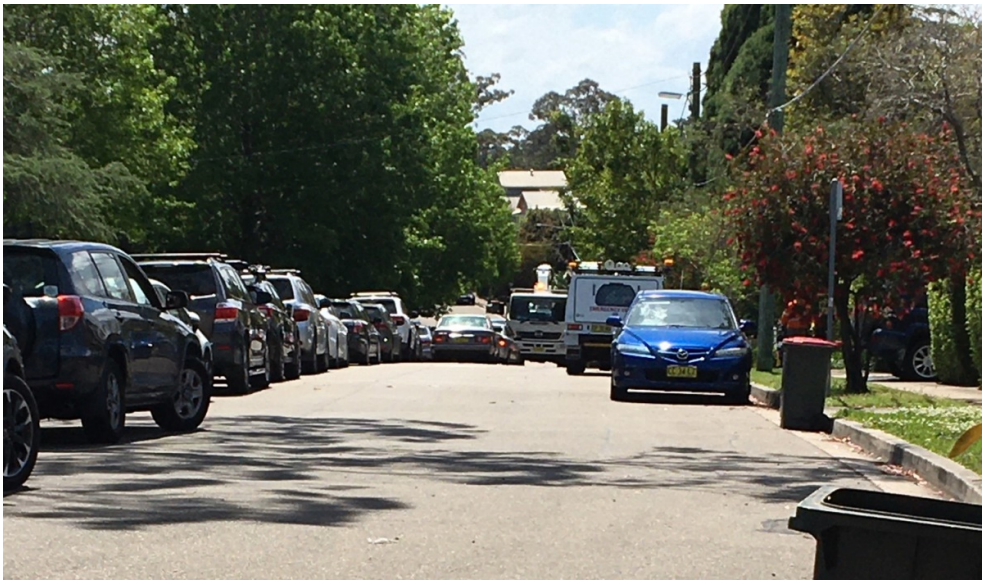
Parallel Parking MPA 20190130 0823



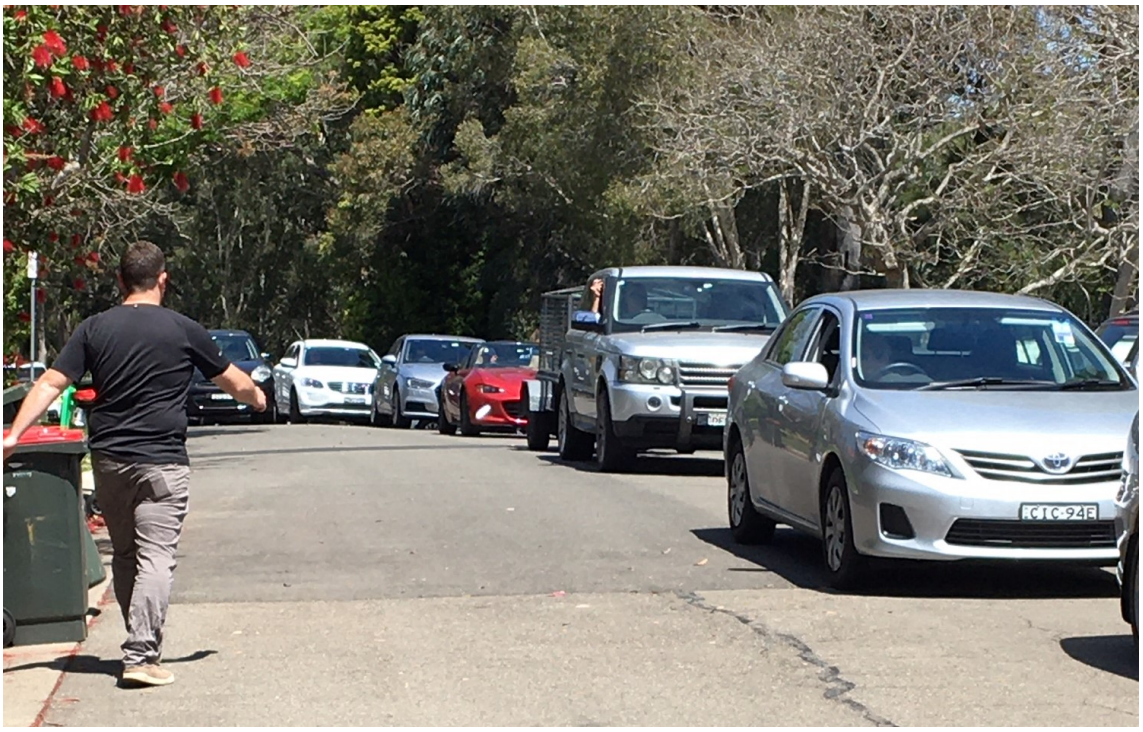
Parallel Parking MPA 20190130 0826



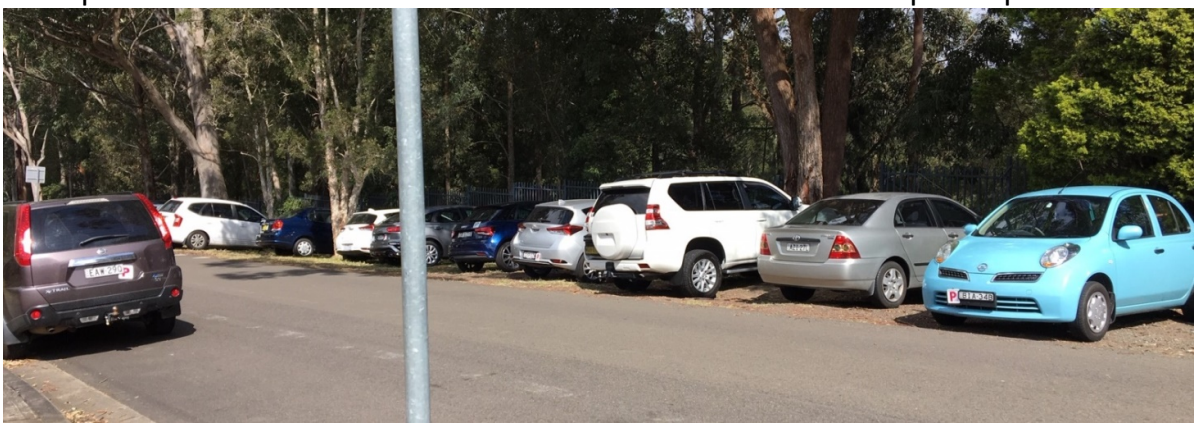
17 Oct 19: Ausgrid emergency vehicle unable to progress down Mt Pleasant Avenue to remove fallen branches on electrical wires in Mt Pleasant Avenue



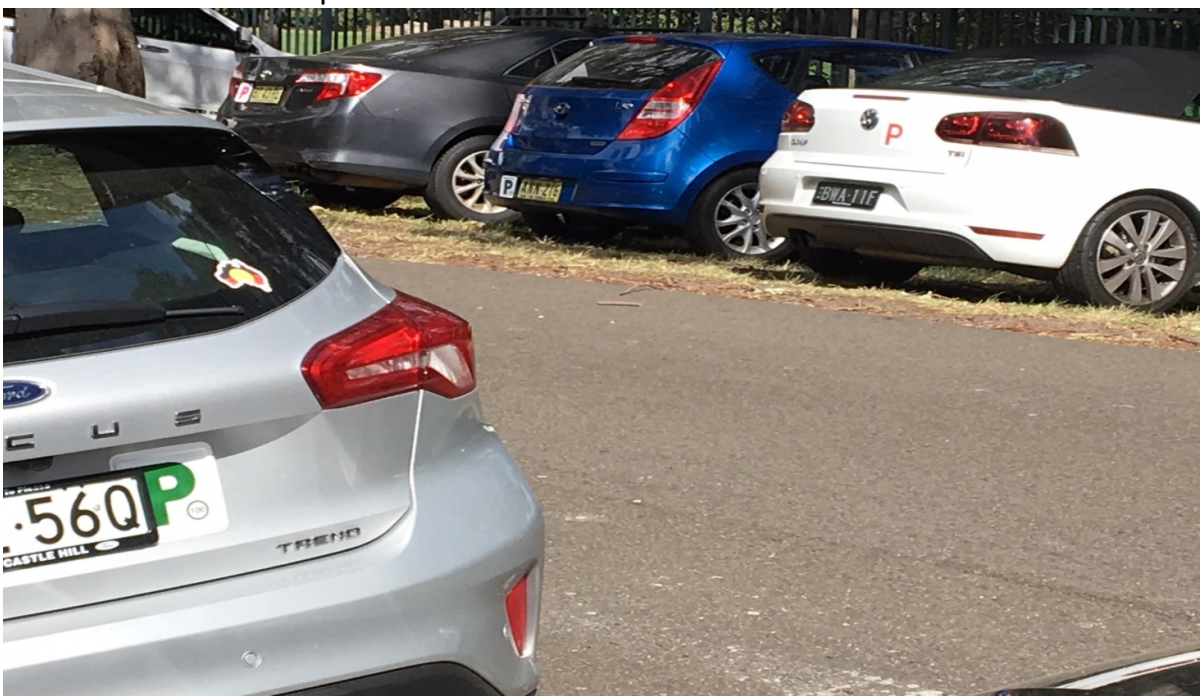
17 Oct 19: traffic banked up further south in Mt Pleasant Avenue because of previous photo incident



13 Sep 19: This small section of Mt Pleasant Avenue shows 5 P-plates parked.



13 Sep 19: 4 more P-Plates on same day. I have evidence of at least 19 P-plates on this day. A number of other parked cars have likely taken off P-plates. The ELC (North Sydney Planning Panel: 2019SNH026) traffic report on P8 maintains that about 4 students park in MPA



Comments on Traffic report

From Traffic Report of SSD 8996 Issue #1 22/01/2019

Page 7:
"It is not expected that upgrading or road improvement works are required as part of the development. The 2027 Master Plan is not expected to have a material impact on the road network…"
Considering the current difficulties experienced by Osborn Rd & Mount Pleasant Ave residents, it is easy to understand residents' anger and despair on reading this statement.

Page 8:
"The car parking currently accessed via Pennant Hills Road and Mount Pleasant Avenue would be replaced with underground car parking, with the number of spaces to remain the as per the Status Quo."
"It is worthy of note that Mount Pleasant Avenue would not be subject to any increased traffic volumes as result of the Master Plan, with the pick-up / drop-off and additional parking accessed via Osborn Road. This strategy recognises the safety benefits that signals provide. There have been no recorded fatal accidents at the Osborn Road / Pennant Hills Road intersection and only 1 serious injury."

The Early Learning Centre (ELC) drop off / pick up is located in Mount Pleasant Ave (MPA) which has no traffic lights and has had a fatal accident.

Note that RMS is stating that the current Pennant Hills Rd school entrance is to be closed to vehicles. That is removed, kerbed and guttered!

TfNSW: Talks about gaps in traffic and speed of traffic on Pennant Hills Road (PHR) as being 40kph & 70kph. However driving experience shows that when school zones are operating, the traffic gaps are reduced in size & frequency.

Page 9:
"The School is also proposing to develop an Early Learning Centre (ELC), which is subject to a separate Development Application process. The ELC traffic generation as discussed in the ELC Report. "

When problems were raised with the TA for the ELC, the verbal response to the North Shore Planning Panel (2019SNH026) was to defer the discussion to the Master Plan TA.

Page 10:
"To demonstrate that all proposed access driveways, car parks and service facilities can be designed to provide full compliance with the relevant Australian Standards."
The Bus access in Osborne Rd to the Loreto Drop Off / Pick Up slip road is woefully inadequate and I would be surprised if it meets an Australian Standard. The TA is silent on improving this access by buses.
Residents have to provide guidance to bus drivers who are finding difficulty negotiating the turn back into Osborn Rd.

Page 18:
"Approximately 30% of students drive or are driven to/from the School"

Page 20:
Students arrive at School over a 90-minute period between 7:00am and 8:30am (91.5%)
Students depart the School within the 30-minute period 3:00pm – 3:30pm (74.59%)
The % figures are taken from TA Figures 4 and 5.
Figure 4 has 8.7% of students arriving outside 7:00am to 8:30am.
Figure 5 has 25.4% of students departing outside 3:00pm – 3:30pm.
With 10.4% departing during 3:30-4:00pm.
We also note that Kindergarten usually finishes at 2:30pm.
The ELC is expected to operate from 7.00am to 6.00pm, Monday to Friday, 52 weeks of the year, excluding public holidays.
There is a swim club that operates six days a week and hours range from 5:30 to 6:45pm.

Page 21:
Survey: Approximately 90% of staff drive or are driven to/from the School

Page 22 – 23:
Survey: Staff arrives and departs the School over significantly broader periods than students

Page 24: Table 3: Extract from Travel Mode List

Travel Mode	Existing Mode Share of Students	Existing Mode Share of Staff
Vehicle driver	13.9%	89.1%
Dropped Off	15.8%	0.5%
Taxi / Uber	0.2%	0.0%

Page 24: Car Occupancy:
1.2 students per vehicle 1 staff member per vehicle

Page 25 Section 4.5 Trip Distribution:
65% of all trips are to/from Osborn Road
20% of all trips are to/from Mount Pleasant Avenue
15% of all trips are shared between the Car Park 1 driveway off Pennant Hills Road, Normanhurst Rd & streets north of PHR
See earlier note about RMS closing vehicle access to Car Park 1 from PHR.
The School currently provides 179 car parking spaces across campus

Page 27, 36 (2019: 1150)(2027: 1600)(2047: 2000):
Car Parking:
Students (1150 x 14% = 161)(1600x14%=224)(2000x14%=280)/ 1.2 occupancy
(1150 x 11.7% = 135)(1600x11.7%=187)(2000x11.7%=234)
50% within the School grounds (68)(94)(117)
12% in Osborn Road (16)(22)(28)
16% in Mount Pleasant Avenue (22)(30)(37)
16% on-street north of Pennant Hills Road (22)(30)(37)
Staff (2019: 300)(2027: 337)(2047: 377)
66% within School grounds (198)(222)(249)
6% in Osborn Road (18)(20)(23)
28% in Mount Pleasant Avenue (84)(94)(106)
Currently it is estimated that there are 15 to 20 student cars parked in MPA.
Currently it is estimated that there are 15 to 20 staff cars parked in MPA.

Page 36: Parking spaces within school grounds

	Traffic Report p36			Based on survey figures				
	2019	2027	2047	2019	2027	2047	19-27	19-47
Student spaces		+14	+25	68	94	117	+26	+49
Staff spaces		+37	+40	198	222	249	+24	+51
Totals	179	230	295	266	316	366	+50	+100

Parking requirement overall Based on survey figures as above

	2019	2027	2047	19-27	19-47
Student parking spaces	128	176	219	+48	+91
Staff parking spaces	300	336	378	+36	+78
Total	428	512	597	+84	+169

The survey based figures indicates that current parking requirements are not being met. That is there are 179 spaces available and the survey indicates that 266 are being used.
It would seem likely that the 50% student parking within school grounds is a high figure.

Page 13, 37, 38, 40:
"7.1.3 Pick-up / Drop-Off Facilities
The School currently provides a dedicated pick-up and drop-off facility off Osborn Road; our observations indicate that the facility operates efficiently, and that queue lengths are accommodated on-site rather than extending into Osborn Road."
This is a direct contrast with the experience of Osborne Road residents.

Student numbers 2019 1150; 2027 1600; 2047 2000
Drop off / pick up
Student # based on 2019 survey is 16%
(1150 x 16% = 184)(1600x16%=256)(2000x16%=320)

Students arriving by car
Student # based on 2019 survey 30%
(1150 x 30% = 345)(1600x30%=480)(2000x30%=600)
Using 1.2 occupancy
(1150 x 25% = 288)(1600x25%=400)(2000x25%=500)

Drop off / pick up	Traffic Report p37-38			Based on survey figures				
	2019	2027	2047	2019	2027	2047	19-27	19-47
Number Students		+117	+233	184	256	320	+72	+136
Vehicles/hr		+78	+155					

How are the figures 117, 233, 78 and 155 on pages 37 & 38 derived? It would seem that the number of students dropped off / picked up for 2019 used in the TA is an underestimate.

Staff (2019: 300)(2027: 337)(2047: 377)

Page 22 figure 7 has staff arriving in AM peak as 38.5+15.6= 54.1%
Page 23 figure 8 has staff departures in PM peak as 5.7+18.2= 23.9%

Vehicle driver	89.1%	1 AM car movement; 1 PM car movement
Dropped Off	0.5%	2 AM car movements; 2 PM car movements

2019 staff car movements

AM 300x0.541x(0.891x1 + 0.005x2)=162.3x0.901=146
PM 300x0.239x(0.891x1 + 0.005x2)=71.7x0.901=65

	2019	2027	2047	19-27	19-47	27-47
Staff AM peak	162	182	204	+20	+42	+22
Staff car mv AM peak	146	164	184	+18	+38	+20
Staff PM peak	72	81	90	+9	+18	+9
Staff car mv PM peak	65	73	81	+8	+16	+8

Essentially this agrees with page 45, section 8.1.2

Page 13, 40:
Student numbers 2019 1150; 2027 1600; 2047 2000
2019 / 2027 Student # increase 1600-1150 = 450
2019 / 2047 students # increase 2000-1150= 850
2027 / 2047 students # increase 2000-1600= 400
The Traffic report states on p40 section 8.1.1:
"Based on current projections for the proposed increase in student numbers (370 students to 2027, and an additional 400 students to 2047)…"
This is clearly wrong for 2027 and it should be 450.
Page 46 Table 13 also has the 2027 students increase as 370; it also has the 2047 increase as 770 not 850.

Page 40-44 Tables 7 & 9 & 11 & 12:

Student #	2027AM	2027PM	2047AM	2047PM
K-Yr2	120	120		
Yr3-4	90	90		
Yr5-6	0	0		
Yr7-12	40	43		
Total	250	253	577	588

From where do the numbers 250, 253, 577 and 588 come?
The entries for Yr 5-6 has 0 students listed in the tables 7 & 9. Why?
What is the source of the split up of student numbers into the year groups?
Why 250 & 253 and not 450?

Table 8 has 311 additional students arriving in the 2027 AM peak hour.
Table 10 has 314 additional students departing in the 2027 PM peak hour.
Page 24 section 4.4 has AM peak 7:30am – 8:30am; PM peak 3:00pm – 4:00pm
Page 19 figure 4 shows 32.6+49.8= 82.4% of students arriving in the AM peak
Page 20 figure 5 shows 74.59+10.44= 85.03% of students departing in the PM peak.
The survey figures would give:

	2019	2027	2047	19-27	19-47	27-47
AM peak	948	1318	1648	+370	+700	+330
PM peak	978	1360	1701	+382	+723	+341

So from where do the numbers 311 and 314 come?

Page 57 Table 19: Existing Mode Share Summary
Numbers based on 2019 school survey

Travel Mode	Existing Mode Share of Students				Existing Mode Share of Staff			
	%	2019	2027	2047	%	2019	2027	2047
		1150	1600	2000		300	337	377
Vehicle driver	13.9	160	222	278	89.1	267	300	336
Dropped Off	15.8	181	253	316	0.5	2	2	2
Taxi / Uber	0.2	2	3	4	0.0	0	0	0
Train	19.5	224	312	390	5.7	17	19	22
STA Bus	16.2	186	259	324	0.0	0	0	0
Loreto School Bus	12.7	146	203	254	0.0	0	0	0
Bicycle	0.0	0	0	0	0.5	2	2	2
Walk	3.7	43	59	74	2.6	8	9	10
Live on Campus	10.4	120	166	208	0.0	0	0	0
Other mode	7.5	86	120	150	1.6	5	5	6

Page 29 section 5.2 Traffic Surveys:
MPA Mount Pleasant Ave; PHR Pennant Hills Rd; OR Osborne Rd; NR Normanhurst Rd
SB South Bound; NB North Bound; LH Left Hand; RH Right hand

Traffic survey flows	AM		PM	
MPA	LV	HV	LV	HV
PHR SB LH	33	0	25	1
PHR NB RH	42	0	16	0
MPA RH	25	0	28	0
MPA LH	20	0	62	0
OR	LV	HV	LV	HV
PHR SB LH	68	2	56	1
PHR NB RH	82	6	41	3
OR RH	95	2	67	3
OR LH	62	8	56	6
OR NR	48	1	28	1
NR	LV	HV	LV	HV
PHR SB RH	59	1	62	3
PHR NB LH	32	0	29	1
NR RH	87	2	63	5
NR LH	110	4	100	6
NR OB	76	0	28	1

From Loreto Transport web pages.
Bus traffic entering / leaving Osborne Rd (OR)

LoretoBus	AM	LC/NR	08:00	Osborne Rd	PHR R OR
LoretoBus	AM	D/G	08:00	Osborne Rd	PHR R OR
LoretoBus	AM	M/NS	08:10	Osborne Rd	PHR L OR
LoretoBus	AM	HD	08:10	Osborne Rd	PHR R OR
LoretoBus	AM	Arc	08:10	Osborne Rd	PHR R OR
LoretoBus	AM	NB	08:05	Osborne Rd	PHR L OR
LoretoBus	PM	LC/NR	15:25	Osborne Rd	OR L PHR
LoretoBus	PM	D/G	15:25	Osborne Rd	OR L PHR
LoretoBus	PM	M/NS	15:25	Osborne Rd	OR R PHR
LoretoBus	PM	HD	15:25	Osborne Rd	OR L PHR
LoretoBus	PM	Arc	15:25	Osborne Rd	OR L PHR
LoretoBus	PM	NB	15:25	Osborne Rd	OR R PHR
HillsBus	AM	3158	~07:45	Osborne Rd	PHR R OR
HillsBus	AM	3109	~08:00	Osborne Rd	PHR R OR
HillsBus	PM	3579	15:25	Osborne Rd	OR L PHR

According to the Loreto Transport web pages there are 8 buses entering and leaving OR in the AM (6 Loreto Buses and 2 HillsBus). Also the web site has 7 buses entering and leaving OR in the PM (6 Loreto buses & 1 Hillbus). This accounts for most of the HV traffic.

Student travel on buses

		OR	PHR
2019	#stu	146	186
	Bus AM	8	
	Bus PM	7	
2027	#stu	203	259
2047	#stu	254	324
19-27		+57	+73
19-47		+108	+138

Page 44+: Tables 8, 10, 11 & 12:
For a stated increase of 314 students in 2027 the TA estimates that 4 additional buses would be required in the AM and in the PM.
For a stated increase of 577 students in 2047 the TA estimates that 8 additional buses would be required in the AM and in the PM.
Considering the design increases are 450 & 850, these numbers would be a serious under estimate.

A Loreto student was so concerned about overcrowding on the Wahroonga 7:45 Bus that she started a petition. See https://www.change.org/p/loreto-normanhurst-wahroonga-bus-passengers-assign-two-buses-leaving-from-wahroonga-at-7-45

Travel on train services as derived from survey results:.

	2019	2027	2047	19-27	19-47
Stu AM/PM	224	312	390	+88	+166
Staff AM/PM	17	19	22	+2	+5

Page 54 section 9.2 has in 2027, 34 AM & 35 PM increase in student travelling by train.
The survey number indicates an increase of 88 for both. A difference of 250%.
Page 54 section 9.2 has in 2027, 28 AM & 28 PM increase in student travelling by STA bus.
The survey number indicates an increase of 73 for both. A 260% difference.
Page 54 section 9.2 has in 2047, 107 AM & 142 PM increase in student travelling by train.

The survey number indicates an increase of 166 in both. A 155/117% difference.
Page 54 section 9.2 has in 2047, 105 AM & 105 PM increase in student travelling by STA bus.
The survey number indicates an increase of 138. A 130% difference.

Page 46 section 8.2 Trip Distribution
The TA states that there will be no expectation of additional trips through the MPA / PHR intersection.
This ignores:

- Student parking in MPA (Survey 16% in MPA (22)(30)(37))
- Staff parking in MPA (Survey 28% in MPA (84)(94)(106))
- ELC drop off / pick up (this, verbally, was to be part of the Master Plan)
- Parking in the basement car park of the boarding house
- Deliveries to the boarding house

Note the earlier comments about the effect of school zones on the traffic gaps on PHR.

TA Appendix C Swept Path
Construction Traffic Management Plan (CTMP) does not address difficulty for large trucks entering MPA with traffic queued to exit MPA and with cars parked south of the existing no stopping zones. Also cars parked in Osborne Rd.

There is no analysis of the foot traffic across the pedestrian footbridge over Pennant Hills Road.