

Attachment A - Volume I

City-Wide Schools Traffic, Parking & Safety Review

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**City of
Norwood
Payneham
& St Peters**

City-Wide Schools Traffic, Safety & Parking Review

Volume I – Final Report

City of Norwood Payneham & St Peters



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City of
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Refer Volume II

Introduction

Tonkin Consulting and GTA Consultants were engaged by the City of Norwood Payneham & St Peters (“the Council”) in mid-2015 to undertake a comprehensive review of traffic, parking and road safety around each of the following 16 schools which are located within the City (“the Schools Review”).

1. East Adelaide Junior and Primary School, St Peters
2. Kensington Centre, Kensington*
3. Loreto College, Marryatville
4. Marden Senior College, Marden
5. Marryatville High School, Marryatville
6. Marryatville Primary School, Kensington
7. Mary MacKillop, Kensington
8. Norwood Primary School, Norwood
9. Prince Alfred College, Kent Town
10. St Ignatius Junior College, Norwood
11. St Joseph's Memorial School, Kensington
12. St Joseph's Memorial School, Norwood
13. St Joseph's Primary, Payneham
14. St Peters College, Hackney
15. Trinity Gardens Primary School, Trinity Gardens
16. Felixstow Community School, Felixstow

(The Kensington Centre was closed at the time of the Schools Review having been purchased by Pembroke College for development).

This report outlines the findings of investigations and consultation undertaken with all stakeholders which was an integral part of the Schools Review and provides recommendations for the Council's consideration and implementation.

A supplementary report (Volume II) includes all associated traffic data which was collected and collated for the Schools Review, namely parking surveys and collision data for each school. Volume II also includes consultation responses formally received.

Recommendations in this report have been grouped as being specific to a school or more broadly applying to many of the schools. Importantly, the recommendations acknowledge that a shared approach and responsibility will be needed to better manage traffic, parking and safety around all school.

While the Council has care, control and management over traffic and parking within the local road system, the Department of Planning Transport and Infrastructure (“DPTI”) have a responsibility for conditions along arterial roads, the South Australia Police (“SAPOL”) over speed and traffic behaviour. In this respect, the schools have a duty of care and indeed a responsibility to support improved driving and parking behaviour through education of parents and students and active participation in assisting the Council and SAPOL to address on-going issues and ensure efficiency of the use of on-street parking and the like.

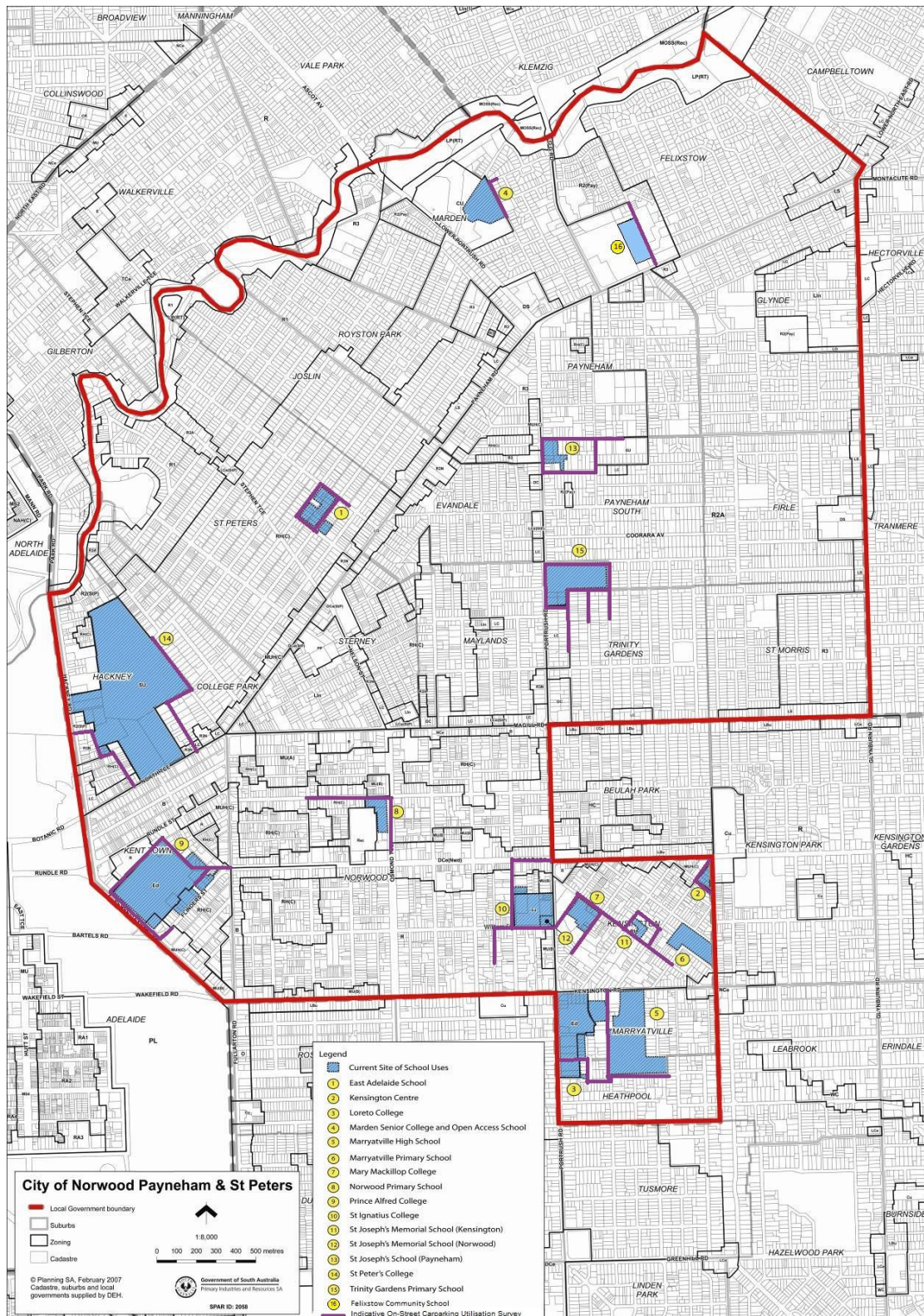


Figure 1 Location of schools located within the City of Norwood Payneham & St Peters

Background/Methodology

Background

Traffic and parking management are two of the more challenging issues which the Council is required to regularly consider. This is due to the competing demands on local roads which must be taken into account and the difficulty in striking a balance for all road users.

Traffic and parking management also affect the whole community and the Council is therefore required and obligated to balance the needs of a broad range of road users with an appropriate and acceptable level of amenity for its citizens and community.

There are 16 schools located within the City. Almost all of these schools have grown and expanded over the past decade. As a result, the number of students and teaching/support staff have also increased. In some cases, the number of students has doubled.

The majority of the schools have very little or no on-site parking provisions to accommodate the needs of staff or parents. This often means that during the morning and afternoon school periods traffic manoeuvrability and circulation adjacent the schools is quite chaotic and on-street parking is at an absolute premium. These issues combined can and often do result in various safety concerns for school children and residents who reside adjacent the schools.

At the time of the Schools Review, the Council was undertaking a Development Plan Amendment (DPA) for Education Zones throughout the City, which incorporates all 16 schools. The DPA was to examine and propose planning policy for new development on school grounds. At the time of preparing this report the DPA had yet to be finalised or approved.

Reference to AM and PM peak periods in this report specifically relates to the school drop off peak time of 8.00am to 9.00am and pick up peak time of 3.00pm - 4.00pm on school days.

Methodology

This report and recommendations contained herein have been based on a broad range of investigations around each school including:

- site inspections during the AM and PM peak periods;
- mapping of current parking and traffic controls in the surrounding street networks;
- parking surveys undertaken to measure parking demand at different times of the day;
- analysis of crash data provided by DPTI;
- collection and analysis of traffic data (speeds and volumes);
- pedestrian counts in identified locations;
- consultation with each of the school principals (or their delegates) by way of:
 - an introductory workshop;
 - email questionnaire;
 - the opportunity for two (2) face-to-face meetings with the consultancy project team; and
 - review and comment on the draft recommendations released for consultation;

- consultation with all stakeholders, namely the schools, DPTI - including holding a specific workshop with DPTI to discuss various recommendations as they apply to arterial roads or authority for traffic control devices, SAPOL, Department of Education and Child Development ("DECD"), Catholic Education South Australia ("CESA"), Independent Schools Association of South Australia ("ISSA") and the Council's Elected Members. Consultation on the draft report and recommendations was also undertaken with residents and business owners who were considered to be directly affected by any of the draft recommendations.

A draft report was released for stakeholders' consultation between 27 November 2015 and 18 December 2015 (inclusive). The draft report contained all data collated, the findings of the Schools Review and the proposed draft recommendations. A copy of the draft report and associated appendices were provided to each school, DPTI, DECD, CESA, SAPOL and ISSA and written comments were invited to be submitted.

Copies of the draft report and associated appendices were made available at the Norwood Council Offices with all residents and business owners directly affected by any of the draft recommendations provided with a letter outlining the review and inviting their written comments to be submitted. Approximately 600 notification letters were hand delivered between 28-30 November, with draft reports on Council website.

The residents and business owners were invited to review the documents at the Norwood Council Offices in providing their feedback. Notifications were also placed in the two (2) Messenger Newspapers which are circulated within the City providing information on the draft report and inviting written comments to be received.

In response to the stakeholders' consultation process, a total of 28 written correspondences were received from residents. The following outlines a summary of the feedback received on the draft report (noting that some responses commented on more than one school). Copies of all correspondences are contained in Volume II of this report.

Summary of residential feedback received on draft report.

• East Adelaide School	1 response
• Loreto College	3 responses
• Marryatville High School	5 responses
• Marryatville Primary School, Kensington	1 response
• Mary MacKillop, Kensington	2 responses
• St Ignatius Junior College, Norwood	3 responses
• St Joseph's Memorial School, Norwood	2 responses
• St Joseph's Memorial School, Kensington	1 response
• St Joseph's Primary, Payneham	2 responses
• St Peters College, Hackney	6 responses
• Trinity Gardens Primary School, Trinity Gardens	3 responses
• General responses (40 km/h speed limit)	3 responses

Verbal responses were obtained from all schools as part of face to face consultation.

DECD responded as follows:

The Department for Education and Child Development supports any measures that will result in an increased awareness that improves the safety of students, staff and the broader community in regards to traffic management around schools. This is of particular importance during drop off and pick up times. The recommendations are comprehensive and the department looks forward to working with all key stakeholders to support these recommendations within existing policy requirements and associated budgetary measures/constraints.

A formal response was not received from SAPOL, CESA or ISSA.

In addition, the RAA of SA Inc offered the comments, as part of the Association's response to Council over the possible introduction of 40 km/h residential precinct speed limits (which was separate consultation occurring at the same time as the schools review).

- The RAA supports measure to improve safety around schools
- Schools zones need to be around 200m in length to be effective
- Adequate signage is required of any speed limit changes
- Consideration must be given to signage within side roads
- Consideration should be given to the impact of lower speed limits on traffic signal coordination
- Should 40 km/h speed limits be imposed on Portrush Road, precedence will be set for schools on other arterial roads such as South Road. Further work will be required to assess the impact of the proposal at a network level and there should be recognition that this will affect other jurisdictions.

(It is worth noting at this point, that the recommendation for 40 km/h speed limits past schools on arterial, is for Council to request DPTI to trial the installation of a 40 km/h speed limit past schools on arterial roads, using Variable Message Sign Technology, as outlined in the following section).

Common Issues and Treatment Options

There were a number of issues and behaviours observed at different schools that can be addressed through a collaborative and coordinated approach across the whole of the City.

Parking Signs

There is a diversity of signs used to define the short term (kiss-n-drop) parking restrictions around each of the schools.

Alternative messages include:

- Passenger Loading Zone;
- No Parking;
- Immediate Pick Up and Set Down Only 5 Minute Max; and
- Immediate Pick Up and Set Down Only 2 Minute Max – Driver Must Remain with Vehicle.



Draft Recommendation: The Council clearly and consistently signpost the kiss-n-drop zones around schools, and supplement the regulatory signage with the adjacent example (already used in some locations) where locally needed.



Consultation Responses

There was widespread support for the recommendation in principle.

DTPI noted that existing regulatory signs show the 'negative form' of No Parking by exception. It was pointed out by DPTI that within the current signing standards, there is a more positive format using 'positive' parking permissive signs as shown opposite. DPTI recommended use of the new P – 2 minute signs for kiss-n-drop zones in accordance with AS1742.11 – Parking Controls.

However, this creates enforcement difficulties as drivers can actually leave their vehicles with the parking permissive sign, and Council then need to monitor the actual length of stay. Retaining the use of No Parking (2 minute maximum) requires the driver to stay with the vehicle and reinforces the kiss-n-drop provisions.



Final Recommendation: The Council clearly and consistently signpost the kiss-n-drop zones around schools, and supplement the regulatory signage with the adjacent example (already used in some locations) where locally needed.

Council consistently paint continuous yellow No Stopping lines over driveways within the streets of high parking demand around each school (over 60% occupancy demand in peak times as shown in parking survey data contained in Vol II). Plans showing the affected streets are also contained in Vol II.



Recommended Regulatory Sign



Supplementary Fence/Property Sign

Concentration of Traffic

The root cause of many problems is the concentration of traffic and pedestrians in the same place at the same time. Kiss-n-drop zones as an example are typically closest to the main entrance of each school, which automatically is the source of queuing and congestion.

As a matter of principle, the relocation of these zones away from the immediate school entrances, would 'spread the load' and dilute the concentration of traffic in the immediate vicinity of the school and highest pedestrian numbers.

However, there are no easy solutions to this problem. Relocation of the kiss-n-drop zones and other parking provisions further away from the main entrances to schools could be seen as shifting the problem into other nearby streets or areas, and is likely to be met with opposition from the residents and businesses of those areas. During the various Information Sessions held with the Council, this was not supported by the Elected Members and hence was not pursued.

Treatments on Arterial Roads

The investigations have highlighted the limited treatment options available for arterial roads. While school zones (25 km/h) and alternative pedestrian crossings can be used on local streets, the only treatment available for arterial roads is the installation of Pedestrian Activated Crossings (PAC's) which are subject to a DPTI 'warrant' based on pedestrian numbers.

There is value in considering having 40 km/h time limited speed limits as a treatment option for arterial roads. Variable speed limit school zones using electronic speed signs already exist in some other states (e.g. New South Wales and Victoria) and in this respect, there is no reason why DPTI should not consider them in South Australia. This is considered to be an ideal opportunity for DPTI to consider this matter, in discussions with the Council.

Draft Recommendation: The Council formally requests DPTI to trial the installation of a 40 km/h speed limit past schools on arterial roads, via Variable Message Signs (VMS), to operate during the school AM and PM peak times.

Consultation Responses

There were several negative community and stakeholder responses to this recommendation. The South Australian Road Transport Association also opposed the idea of lower speed limits along Portrush Road as a key freight route.

A summary of DPTI's response included:

- DPTI is an advocate for road safety and uses the safe system principles to determine various road safety measures.
- The SA Road Safety Strategy 'Towards Zero Together' acknowledges the inter-relationship of strategies under 'Safer Roads' and 'Safer Speeds', and that speed limits must align to roads with similar functions, design standards and access management to create safe and credible operating speeds.
- DPTI also noted that the schools which abut arterial roads are provided with Pedestrian Activated Crossings (PAC) for safe pedestrian access (further details outlined below).
- DPTI noted that the recommendation to trial a 40 km/h speed limit past schools on arterial roads was 'strongly influenced' by interstate practices, without any analysis of their effectiveness and suitability to conditions in South Australia.
- DPTI suggested that the Council could consider a trial of a variable 40 km/h speed limit on Osmond Terrace (being a Council road) to gauge the safety benefits that may be achieved for the school community.

The purpose of the trial as recommended was to identify the conditions in which 40 km/h variable speed limits might be appropriate in South Australia. It was also recognised that the trial would allow a thorough comparison of interstate practices and potential analysis of associated road safety research into the effectiveness of the limits, beyond the scope of this current project. To this end, it is believed that there is still merit in pursuing a trial 40 km/h lower limit using variable electronic signage.

However, in light of the responses received during the stakeholder consultation process, the Council needs to consider whether it will pursue this matter with DPTI. It should be noted that of the 6 schools that abut an arterial road, all provided qualified support for the recommendation.

Regardless of which road/s are used, the trial will still need the approval of DPTI. Importantly the parameters of the trial and ongoing analysis should be undertaken in partnership with DPTI, given the outcomes of the trial could have ongoing implications to other councils throughout the State. The trial should include a review of interstate practices and relevant research.

Issues that should be considered by the trial include:

- under what conditions (demands/warrants) might a lower speed limit be considered;
- fully integrated VMS signage or fixed time based LED signage (similar to Goodwood Road);
- cost implications (which will vary per site and depend on the choice of sign technology);
- more detailed literature review;
- before and after site speed data; and
- current average travel times (what impact will the lower limit have in practical options?).

Final Recommendation: The Council consider formally requesting DPTI to establish a working partnership to trial the installation of a 40 km/h speed limit past schools on arterial roads, via Variable Message Signs (VMS), to operate during the school AM and PM peak times. The trial should include a comparison of interstate practices and review of relevant research to establish guidelines under which the use of 40 km/h speed limits might be appropriate in South Australian conditions. The Council needs to consider this recommendation in light of all the feedback received on the draft report.

Pedestrian Activated Crossings (PAC's) on Arterial Roads

There should be a consistent treatment of PAC's on arterial roads including the installation of red light and speed cameras ('Safety Cameras'). The operation of these speed cameras will need to be reviewed if the part time 40 km/h speed limit is introduced.

Consideration should be given to the installation of 'count-down timers' on all PAC's adjacent schools. This will provide greater clarity to school students of the time left available to cross the road.

Draft Recommendation: The Council formally requests DPTI to install count-down timers at all PAC's on arterial roads adjacent schools. The Council should also request DPTI to consider the installation of speed and red light camera technology at these PAC's in enforcing lower speed limits operating during school peak times.

Consultation Responses

DPTI advised that countdown timers are specifically not used adjacent schools as some children may not be old enough to estimate the time required to cross the road and the remaining time available. It was also thought by DPTI that some students might take the countdown timers as a 'challenge' and run across the roads as late as possible. Reference was made to the DPTI Operational Instruction 14.3 addressing the use of countdown timers.

Accordingly, the amended recommendation removes the use of countdown timers at PAC's.

With regard to the operation of PAC's adjacent the schools, DPTI noted that there are several technologies already implemented, that may not be fully understood.

- The green walk can be extended by 10-15 seconds by holding the button for 5 seconds to facilitate the crossing of larger groups of children.
- Microwave detectors have been installed at some sites to enable extra crossing time to be allocated to the pedestrian phase when required. These detectors automatically increase the flashing red clearance time if there are (for example) slower students still on the crossing.
- Road safety (speed and red light) cameras are already installed on one approach of some of the crossings, although there are limitations on how many cameras can be used in the same direction of travel.

Final Recommendation: The Council consider formally requesting DPTI to review the consistent installation of all appropriate technological enhancements at PAC's including extended walk times, microwave technology and safety cameras. The Council and DPTI should provide appropriate information to the schools on the specific operational facilities associated with these crossings.

Way 2 Go Program / Active Travel Plans

DPTI coordinate a 'Way 2 Go' Program for schools (particularly DECD primary schools). The program is designed to encourage active travel to schools (walking and cycling) as well as safe behaviours.

At the time of preparing this report, the Trinity Gardens Primary School had commenced the Way 2 Go Program in 2014 and developed a Safe Travel Plan. The Norwood Primary School commenced the program in 2015 and was about to start school travel surveys and workshops with teachers.

These travel plans should establish target goals for student and staff participation that is a goal to encourage higher numbers to walk and ride to school.

Draft Recommendation: All schools participate in DPTI's Way 2 Go Program in order to encourage active travel and for the Council to integrate outcomes from the Program for each school with any recommendations which are contained in this report.

Consultation Responses

There was widespread support for this recommendation from all of the schools.

DPTI also supported the recommendation noting that the success of the Program emanates from its partnership approach with the whole school community and change over time. DPTI confirmed that Norwood Primary School and Trinity Gardens Primary School are already engaged with the Way 2 Go Program.

DPTI also noted:

- St Ignatius, St Joseph's Memorial Norwood and Kensington have been previously involved;
- East Adelaide has already been approached and expressed interest;
- Three (3) schools are secondary only and the Kensington Centre (now closed) in part of the Pembroke School in the City of Burnside (the Way 2 Go Program currently targets primary schools).
- The remaining six (6) schools could be contacted by DPTI to discuss their interest and capacity to join the program.

DPTI would be interested in continuing to work with the Council on the Way 2 Go Program as a road safety initiative. DPTI is also interested in the development of an NPSP secondary school trial in 2016-2017.

Final Recommendation: All secondary schools to participate in DPTI's Way 2 Go Program in order to encourage active travel, and for the Council to integrate outcomes from the Program for each school with any recommendations which are contained in this report. The Council is to work with DPTI on the preparation and potential trial of a secondary school Way 2 Go Program.

On Street Parking Behaviour

A consistent observation and complaint of school principals is the poor parking practices of many of their parents including:

- double ranking during the AM and PM peak periods;
- overstaying time limits particularly within the kiss-n-drop zones;
- parking across property driveways; and
- parking in other No Stopping zones.

Draft Recommendations: The Council develops a program of regular parking enforcement around each school, and liaise with the schools regarding information on parking and traffic rules. All schools provide regular information in their newsletters distributed to parents reminding them of the need to adhere to parking controls adjacent their site and the safety issues associated with not doing so. All schools make a commitment towards assisting the Council with enforcing parking controls by (for example) allocating teachers on a roster basis to monitor parking adjacent their site. This information will assist the Council with refining its enforcement program and the school with identifying what information may be needed for circulation with parents.

Consultation Responses

Community responses reiterated the poor parking behaviour with some drivers around schools.

Some schools were reluctant to become involved in parking 'enforcement' due to staffing implications.

DPTI supported the recommendation with particular reference to 'ensuring' that there is no queuing or vehicles onto the arterial roads during the AM and PM peak periods.

Final Recommendations: The Council develops a roster of regular parking enforcement around each school, and liaise with the schools regarding information on parking and traffic rules.

All schools provide regular information in their newsletters distributed to parents reminding them of the need to adhere to parking controls adjacent their site and the safety issues associated with not doing so.

All schools support the Council with their enforcement activities by (for example) allocating teachers on a roster basis to manage and monitor parking adjacent their site. This information will assist the Council with refining its enforcement program and the school with indenting what information may be needed for circulation with parents.

On Site Parking Provisions

Very few schools have adequate on site car parking to meet the demands of teachers, staff, parents and visitors, and there is a resulting high demand for on street parking around each school. High school students also add to this parking demand in some instances where year 11-12 students drive to school.

DECD Building Facility Policy recommends one (1) car park space for each staff member (full time equivalent) plus 10% of that number for visitors (or five (5) spaces whichever is greater). The Policy also recommends the provision of additional off street parking adjacent schools, in recognition of the increasing use of schools by the community. The Policy does not provide for on-site student parking. It is not clear whether CESA or ISSA have a similar policy.

The retrospective application of this Policy will be difficult noting that some schools have seen considerable growth in recent years. Nonetheless, the DPA process currently being undertaken by the Council should ensure that any future growth that triggers a development application can accommodate future demands.

DECD, CESA and ISSA have an obligation and duty of care to work closely with their respective schools and the Council in addressing issues which have been identified in this review. With regard to on-site parking, consideration should be given to measures (where possible) to be implemented on each site to assist with the parking issues identified.

Most importantly, these agencies should be liaising closely with the Council in terms of cost sharing for changes which need to be made adjacent each of the schools in implementing the recommendations contained in this report.

Draft Recommendation: The Council should ensure adequate parking provisions are included in its Education Zones DPA and liaise with DECD, CSA, ISSA and individual schools to seek additional on-site parking where viable to address current shortfalls. The Council should also liaise with these agencies and the schools regarding assistance they could offer the Council in terms of cost sharing for the implementation of recommendations contained in this report.

Consultation Responses

Some schools noted that the provision of additional on-site parking will be very difficult within the constraints of their site.

The intent of the recommendation to seek additional parking where viable and to establish a working relationship with relevant agencies is still considered valid. Whilst the Council has a role to play it is not a sole role and DECD, CESA and ISSA all have a role to play.

Final Recommendation: The Council should ensure adequate parking provisions are included in its Education Zones DPA and liaise with DECD, CESA, ISSA and individual schools to seek additional on-site parking where viable to address current shortfalls. The Council should also liaise with these agencies and the schools regarding assistance they could offer the Council in terms of cost sharing for the implementation of recommendations contained in this report.

Signage and Line marking of School Zones

In some locations the signage and line marking associated with school zones is worn and fading. 'Children Crossing' flags at Emu Crossings were observed to be regularly left out all day, whereas they should only be installed when children are most likely to be using the crossings at the start and end of school. Leaving flags out at all times 'dilutes' the impact of the flags and drivers are less likely to pay attention to their presence.

There were no responses received on the draft recommendation with respect to this matter.

Final Recommendation: The Council should inspect all sites every six (6) months to identify renewal of line marking associated with the school zones which may be required and replace fading signs as needed. Schools are required to adhere to the appropriate use of 'Children Crossing' flags for Emu Crossings adjacent their sites.

Precinct Treatments

While school zones define a lower speed limit generally adjacent the school, this is restricted to a very short section of the street. In many cases the 'zone of influence' extends well beyond the school zone with parking often taking place in a number of adjoining streets and pedestrian and cycling activity also occurring in the side streets, or in some cases streets on the other side of an arterial road, well beyond the limited extent of the school zone.

Raising the awareness of drivers to the likely presence of school children over this wide zone of influence could provide an opportunity to overcome one of the key concerns of many parents preventing children walking and cycling to school, which is the speed of vehicles on the route to school. Whilst a significant extension of 25 km/h zones is not desirable, the designation of a wider school travel area could assist in raising driver awareness of the potential for school children further away from the school and encourage some speed moderation.

Potential features could include:

- gateway signage and/or pavement markings noting that you are approaching (name) school;
- street graphics, particularly at less formal crossing locations;
- public art locations, potentially provided by the nearby school, on build-outs or roundabouts, or stobie poles;
- informal signage with a road safety message designed by school children and possibly linked to gateway signage; or
- adopt a street or whole of street treatments, particularly if the school is adjacent other activities

DPTI's Way 2 Go Program is a great opportunity for the Council to link into regarding the above possible measures. At the time of Schools Review, Norwood Primary School had engaged an artist to commence works on a mosaic type artwork which would encourage and promote walking and cycling as part of their Way 2 go Program participation with DPTI. The Council should explore the opportunities which may exist at the Norwood Primary School site which may be emulated elsewhere throughout the City with other projects.

Draft Recommendation: The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

Consultation Responses

DPTI has no objections to the concept of precinct treatments, provided there are no 'traffic control devices' as part of the treatment, and that there are no negative impacts on the arterial road interface. DPTI is currently developing an operational instruction for the use of street murals.

Final Recommendation: The Council explores opportunities with DECD, DPTI (particularly though the Way 2 Go Program) and SAPOL for the installation of various 'School Precinct' treatments to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

Periodic Review – Ongoing Commitment

It is important that the recommendations contained in this report are regularly reviewed through ongoing consultation with the individual schools and key stakeholders.

Various recommendations such as education and enforcement will require the support and commitment of all parties, and cannot be considered a 'one-off' solution. Schools have an ever changing population as new students are introduced to the schools each year. Further it should be noted that some schools have ongoing development plans which may in time change travel patterns.

Whilst the Council has a 'leading' role to play, it cannot resolve all issues alone. The various stakeholders who were identified with the Schools Review all have a role to play. The Council actively engaged all stakeholders in the undertaking of the Schools Review and provided an opportunity for these stakeholders to participate in the issue gathering exercise and resolving these issues. These stakeholders must also now actively engage with the Council to achieve the desired outcomes.

Specific School Observations and Recommendations

The following sections summarise the main traffic and parking issues which are associated with each of the schools incorporated in the Schools Review.

Each section contains:

- details about the school including a summary of school questionnaires;
- observations made during the detailed site inspections;
- results of the traffic and parking surveys;
- results of specific pedestrian surveys (where undertaken);
- key issues;
- options; and
- recommendations.

Volume 2 of this report includes all of the appendices detailing traffic data, parking demand and collision data for each of the schools incorporated in the Schools Review. Volume II also includes consultation responses formally received.

1 East Adelaide School

1.1 Summary of issues

- Primary school, reception to year 7. Currently 670 students, increasing to 730 in 2016. Total of 53 staff.
- School is zoned but many students come from outside the zone.
- No existing transport/travel related policies.
- Will be involved in Way 2 Go program in 2016.
- One only collision immediately adjacent the school (corner of Second Avenue and Westminster Street), and two (2) recorded crashes in past five (5) years involving cyclists in the broader vicinity of the school. The one (1) reported crash adjacent the school resulted in property damage only. The crash occurred on a Saturday and outside school times.
- Travel modes usage (estimated):
 - walk 3% (convenience of drop off/pick up by parents is a barrier to children walking to school);
 - cycle 2% (believe bike education may help encourage more children to ride to school);
 - driven 95%; and
 - public transport <1% (three (3) students currently use buses to school) (students too young to use public transport by themselves).
- Parents are major cause of traffic and parking related issues around school (e.g. unsafe behaviours).
- School Principal actively talks to parents regarding breaking the rules with reminders in the newsletter.
- Currently 15 on-site carparks plus three (3) disabled parking spaces. There is insufficient on-site carparks and limited on-street carparks.
- Staff use side streets for parking, some park further away (i.e. not on surrounding streets).
- Key issues raised by school staff and Governing Council:
 - unsafe access to staff/visitor carparks; and
 - parents illegally using on site carparks as drop off area.
- Conflicts with rubbish collection on Mondays and parked vehicles.
- No expansions or new buildings planned.
- Want to work with the Council to improve current situation.

1.2 Observations

- Flags at the Emu Crossing on Second Avenue were left out throughout the day (not appropriate according to DPTI's Operational Instruction for Emu Crossings).
- Vehicles travelling with excessive speed in school zones, particularly on Third Avenue and after parents drop off and pick up their children.
- Some vehicles with drivers inside (assumed to be parents) parked in the kiss-n-drop zones for over 20-30 minutes while waiting to pick up children in the afternoon. This behaviour also occurred in the No Stopping Zones near intersections and the Emu Crossing.

- Double parking on Westminster Avenue during AM and PM peak periods, creating congestion and unsafe environment for students and parents accessing school grounds.
- Very limited on-site parking for staff and visitors.
- U-turns and 3-point turns performed by parents in mid-block sections creating congestion and unsafe environment for students and parents accessing school grounds.
- Second Avenue is identified as a local bike route in the Council's City Wide Cycling Plan.

1.3 Traffic and parking data

- Tube counters were placed on all four (4) roads that surround the school (Winchester Street, Westminster Street, Second Avenue and Third Avenue).
- Average speeds during the AM and PM peak periods are approximately 28 km/h - 29 km/h for Second Avenue, Third Avenue and Winchester Street approximately 20 km/h - 22 km/h for Westminster Street with 85th percentile speeds ranging from approximately 34 km/hr - 35 km/h for the former and 28 km/h - 29 km/h for the latter.
- Weekday average volumes of 730 vpd on Winchester Street, 1020 on Third Avenue, 350 on Westminster Street and 1,230 on Second Avenue.
- Significant numbers of pedestrian crossings made at intersection of Second Avenue/Westminster Street and to a lesser extent at Third Avenue/Westminster Street.
- Parking surveys indicated that the surrounding streets were either at or over capacity during the PM peak period. Parking extended beyond the extremities of the school. However, it was noted that the further away from the school the less parked vehicles were evident. There were notably less vehicles observed to be parked during the AM peak period.

1.4 Key issues

- Non-compliance with kiss-n-drop zones with parents parking for over 20-30 minutes.
- Based on the traffic data collated, travel speed through the school zones, in particular after parents drop off or pick up children, is higher than the required 25 km/h speed limit.
- Double parking on Westminster Street.
- Limited on-site parking for staff and visitors.
- U-turns and 3-point turns performed by parents in mid-block sections creating congestion and unsafe environment.
- Very low levels of walking and cycling to school.

1.5 Options

- Install pedestrian refuge islands at the Second Avenue/Westminster Street and Third Avenue/Westminster Street junctions to provide safer crossing points for pedestrian and better regulate traffic turning movements at the junctions.
- School to ensure appropriate use of flags at the Emu Crossing on Second Avenue.
- Extend kiss-n-drop zones to include Winchester Street.
- Amend operation of kiss-n-drop zones to 10 minutes maximum to encourage higher turnover.
- Enforcement of kiss-n-drop by school staff and the Council.
- School to provide parents with regular information in its newsletter regarding the importance of adhering to on street parking controls and the safety issues associated with this.
- SAPOL to enforce school zone speed limit during AM and PM peak periods.
- School to undertake bike education and Way 2 Go Program to encourage walking (Way 2 Go Program planned for 2016).

1.6 Draft Recommendations

- The Council install pedestrian refuge islands at Second Avenue/Westminster Street and Third Avenue/Westminster Street junctions to provide safer crossing points for pedestrian and better regulate traffic turning movements at the junctions.
- The school ensure appropriate use of flags at the Emu Crossing on Second Avenue.
- The Council extend of the kiss-n-drop zones to include Winchester Street.
- The Council amend operation of kiss-n-drop zones to 10 minutes maximum to encourage higher turnover.
- Enforcement of kiss-n-drop by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council to formally request SAPOL to enforce school zone speed limit during the AM and PM peak periods.
- The school to undertake bike education and Way 2 Go Program to encourage walking (Way 2 Go Program planned for 2016).
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

1.7 Consultation Responses

1.7.1 School

The school was supportive of the draft recommendations

1.7.2 Resident/Stakeholder

- School has grown over last 15 years which has increased problems and expect further growth in 2016
- Difficulty in cleaning/sweeping streets due to parked cars.
- Illegal parking over driveways.
- Second Avenue is a major thoroughfare.
- Parking review not accurate and did not include weekends.
- Parking survey was typical of conditions experienced during all site visits and is not considered inaccurate.
- Additional kiss-n-drop zones will not alleviate the problems.
- Will encourage higher turnover of vehicles and more space for pick up/set down.

1.8 Final Recommendations

The draft recommendations as outlined above are reaffirmed.

- 1.1 The Council install pedestrian refuge islands at Second Avenue/Westminster Street and Third Avenue/Westminster Street junctions to provide safer crossing points for pedestrian and better regulate traffic turning movements at the junctions.
- 1.2 The school ensure appropriate use of flags at Emu Crossing on Second Avenue.
- 1.3 The Council introduce a 15 minute parking zone on the western side of Winchester Street, during peak times (to enable some parents to park and collect their children if needed), this is a slight change from the initial recommendation
- 1.4 The Council amend signposting of the existing kiss-n-drop zones in Second Avenue, Third Avenue and Westminster Street to 2 minute maximum to encourage higher turnover, consistent with the signposting of other kiss n drop areas (refer previous recommendation for whole Council).
- 1.5 Enforcement of kiss-n-drop by school staff and the Council.
- 1.6 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 1.7 The Council to formally request SAPOL to enforce school zone speed limit during the AM and PM peak periods.
- 1.8 The school to undertake bike education and Way 2 Go program to encourage walking (Way 2 Go Program planned for 2016).
- 1.9 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



2 Kensington Centre

2.1 Summary of issues

At the time of the Schools Review, the former Kensington Centre was vacant and not being used as a school, and had been purchased by Pembroke College which is located on the opposite side of Shipsters Road.

Pembroke College is yet to determine how it would use the site, although options included specialist teaching classrooms or the like.

The site was not expected to generate vehicle arrivals and departures at this location, rather students would continue to arrive and leave the school as they do at present. At this stage, there is not likely to be a major change in current traffic past the site.

Subject to the ultimate use of the site being confirmed, there may be additional pedestrian movements over Shipsters Road between the main school campus and the Kensington Centre. There is a current Emu Crossing installed in this area, which might need upgrading depending on future pedestrian numbers.

The middle of the Shipsters Road carriageway forms the boundary with the City of Burnside.

2.2 Draft Recommendations

The Council should continue to monitor developments with the former Kensington Centre to determine future needs for traffic, pedestrian and parking controls around the site.

2.3 Consultation Responses

2.3.1 School

Pembroke College noted that they were still resolving the future use of the site, although they were not expecting any major changes in traffic patterns.

2.3.2 Resident/Stakeholder

No written correspondences or comments received.

2.4 Final Recommendations

- 2.1 The Council should continue to monitor developments with the former Kensington Centre to determine future needs for traffic, pedestrian and parking controls around the site.

3 Loreto College

3.1 Summary of issues

- Currently 709 students and 147 staff. Staff numbers projected to remain stable with student numbers anticipated to rise by 15% in next five (5) to ten (10) years.
- Widely distributed catchment, covering up to 12 kilometres.
- A total of 21 crashes were recorded adjacent the school in the past five (5) years. (between Kensington Road and Talbot Grove). Of these crashes 10 were in the school pickup/drop off times (8-9am and 3-4pm on a weekday). A further 3 crashes occurred at the junction with Watson Avenue, but these are unlikely to be associated with the school as the junction is a left in/left out access to the western side of Portrush Road. As a result of anecdotal comments from the school on historic fatal crashes a more comprehensive crash assessment was completed dating back to 1994.
- History of students hit by vehicles while crossing Portrush Road and Kensington Road, including one (1) fatality and two (2) serious injuries in an incident outside Burnside Shopping Centre (not within the City) in 2001 involving students which are understood but not confirmed to be from Loreto College. Two (2) historical minor injury crashes have occurred at the Portrush Road PAC crossing adjacent the school at around the AM peak period, one (1) crash in 1997 (hit by a cyclist) and one (1) crash in 1999 (hit by a vehicle). The Kensington Road and Portrush Road intersection has recorded three (3) hit pedestrian crashes, although the directions and times indicate that they may not have been students.
- It is important to note that these crashes are now somewhat historic and the more serious crash was outside the primary access area for Loreto College and outside Council's boundaries. However, it has been noted anecdotally by the College that there have been many near misses and minor incidents at the Portrush Road PAC. Incidents without medical treatment or hospitalisation (injury) or with a property damage value under the threshold (which was raised to \$5,000 as of 2003) are not recorded by DPTI.
- Historical crashes as a result of this have occurred either because of vehicles stopped at the PAC or queuing to get into Talbot Grove. Historically (since 1994) seven (7) crashes have occurred that are associated with queuing at school AM and PM peak periods, although many of these are difficult to ascertain whether they occurred due to queuing at the PAC or queuing at Talbot Grove based on the records provided by DPTI. At least two (2) rear end crashes (one in 2001 and one in 2012) were recorded as a vehicle rear ending a stationary vehicle at the intersection in school pick up or drop off times.
- In 2014, a semi-trailer was recorded as rear ending a vehicle entering the school driveway. Anecdotally, it is understood that there may have been other incidents of rear ending due to queuing southbound on Portrush Road associated with the school, or accessing the school driveway or Talbot Grove. However, as noted above incidents without medical treatment or hospitalisation or with a property damage value under the \$5,000 threshold are not recorded by DPTI and the majority of the crashes are prior to the typical five (5) year period for crash analysis.
- Attempts by the Council to resolve the queuing that occurs on Portrush Road from Talbot Grove, primarily during school pick up time, have been made on a number of occasions over the past ten (10) years. These attempts have particularly included high intervention traffic management on Talbot Grove by the school with support from the Council to move on parents who double park or wait in the roadway for a parking space. The considerations included the possible reversing of the one-way traffic flow along Talbot Grove. Whilst this was generally supported by the school, it was strongly opposed by local residents and could be expected to result in local access restrictions and queuing elsewhere, both on Portrush Road due to turning restrictions and on the local road network.

- As a result of these considerations, there is a standing resolution of the Council that specifically states it will not consider the matter of reversal of traffic flow along Talbot Grove unless there is evidence to suggest that local traffic conditions have changed to a point which would compel it to do so. It is also important to note that the Council and State Government attempted to resolve the queuing and circulation issues at the time of the Portrush Road Upgrade {Project by constructing a 'service road' within school grounds but ultimate agreement between the parties on this issue could not be reached. Whilst not a specific recommendation of this report, the potential safety concerns arising from queued and stationary traffic on a road such as Portrush Road, with high levels of heavy vehicle traffic, indicates that the recommended review program of traffic management operations should regularly consider all technically feasible options to minimise the risk of a serious crash occurring. It is important to note, however that the school and DPTI have a key role to play with this and it is not ultimately an issue for the Council to resolve alone.
- Estimated travel modes:
 - walk - 13% including 9% boarders;
 - cycle - <1%;
 - scoot - 0%;
 - driven - 62% (driver for year 11 and 12 - 3%);
 - bus (public) – 6%; and
 - bus (school) – 14%.
- Relevant student education programs:
 - crossing monitor training;
 - wheelie kids bike awareness;
 - year 2 road safety training; and
 - year 11 police driver education.
- The school gym is used on weeknights and weekends for sporting club use, along with the tennis and netball courts and oval on weekends.
- No on-site parking for students or parents. 123 parking spaces provided (eight (8) to be withdrawn in future) for staff executives, visitors, maintenance and early learning centre.
- Staff that do not park on-site and park in St Matthews Church Car Park (The Crescent) and on Hewitt Avenue and Watson Avenue (City of Burnside).
- School buses are parked in the driveways of houses owned by the College in Talbot Grove and Stafford Grove during the day. At night two (2) of the three (3) school buses are housed off-site.
- Visitor parking takes place on Talbot Grove (9:00am to 3:00pm), Hewitt Avenue, Watson Avenue and Grant Avenue.
- Key issues/concerns raised by school staff and the school's Governing Council:
 - managing the concerns of local residents, particularly in relation to student on-street parking;
 - parents using main school access driveway as a drop-off point which is contrary to school policy albeit there are no formal parking controls;
 - parking and traffic congestion on Talbot Grove causing queuing onto Portrush Road. There are concerns of the risk associated with vehicles (including heavy vehicles) having to take evasive action or rear ending stationary (or slow moving) queued vehicles. One (1) confirmed crash in last five (5) years;

- vehicles turning left out of Stafford Grove onto Portrush Road and then immediately right into Grant Avenue (City of Burnside). This manoeuvre can cause queuing on Portrush Road (DPTI) due to the overflow at the right turn lane into Grant Avenue; and
- red light running at PAC's, particularly on Portrush Road, and queuing across immediately adjacent crossing on Portrush Road are a safety concern.
- Current constraints for increasing bicycle/scooter usage:
 - college bounded by a national highway and main arterial road with high traffic volumes and speeds. Cycling on the road is considered unsafe near the school;
 - opportunities to encourage cycling with education and leadership by the Environment Group (student leadership body) with minimal success likely due to safety of cycling on/adjacent main roads; and
 - distance from the school of a large number of the students.
- Two (2) separate school start and end times, with junior students starting at 8.30am and finishing at 3:10pm and senior students starting at 8:30am and finishing at 3:30pm.

3.2 Observations

- The Emu Crossing located in Talbot Grove is used throughout the day with students travelling to and from classes on either side of Talbot Grove.
- Closer to 9.00am vehicles were observed exceeding the 2 minutes parking time-limit in Talbot Grove and leaving their vehicles to enter the school. Generally this did not cause an issue as by this stage drop offs were limited.
- Talbot Grove north-south section vehicles were observed parked in the 10 minute zone for longer than 10 minutes.
- Talbot Grove east-west section heavily congested with parking manoeuvres and double parking waiting for spaces in the afternoon in particular. In the afternoon, vehicles were observed to be regularly queuing onto Portrush Road waiting to turn into Talbot Grove.
- In the afternoon the Emu Crossing is operated by crossing monitors. For the junior school, senior students operate the crossing and teachers operate the Crossing for the senior students. Queuing was observed to be exacerbated by student crossing monitors stopping traffic for every student, and often only letting through one (1) or two (2) vehicles at a time before stopping to let one (1) or two (2) students cross. The Crossing appeared to operate better with the teacher monitors as they would let a few students gather before stopping traffic if they had just stopped it.
- The following observations regarding infrastructure were made:
 - unsealed verge between paved footpath and kerb causes level difference and tripping hazard on Talbot Grove in both the east-west section and the section of short term parking in the north-south section;
 - Kerb ramps on existing school crossing are not compliant with current standards;
 - possible redundant crossover on Talbot Grove east-west section on southern side of the road and west of the school crossing;
 - some narrow and lifting paving on Talbot Grove north-south section due to trees;
 - Kerb ramp on the southern side of Dean Grove / Talbot Grove intersection is not to standard (no tactiles);
 - Talbot Grove / Stafford Grove intersection kerb ramps are not compliant with current standard; and
 - footpath on Kensington Road is narrow particularly adjacent bus stop 7 on the southern side of the road.

3.3 Traffic and parking data

- Tube counters were placed on Talbot Grove north-south section outside number 2b and on Stafford Grove just east of Portrush Road.
- Data indicated that weekday average speeds were recorded at approximately 26.1 km/h on Talbot Grove and 85th percentile speeds recorded a weekday average of approximately 34.0km/h. The tube counter was placed outside of the school zone and immediately south of the right angle bend so these speeds are considered appropriate for this location.
- Data indicated that weekday average speeds were recorded at approximately 30.4 km/h on Stafford Grove and 85th percentile speeds recorded a weekday average of approximately 35.0 km/h. The tube counter was placed outside of the school zone and immediately adjacent Portrush Road so these speeds are considered appropriate for this location.
- Weekday average volumes of 1,390 vehicles per day was recorded on Stafford Grove and 655 vehicles per day on Talbot Grove.
- Significant numbers of pedestrian crossings were made at the PAC on Portrush Road and the Emu Crossing on Talbot Grove. Very few pedestrians crossed Talbot Grove at the intersection with Portrush Road.
- Morning parking surveys indicated that in the early morning (around 7:30am) Talbot Grove east-west section is not used for parking, which was expected as both sides of this section of the street are school frontages. Talbot Grove north-south section and Dean Grove recorded some parking that is presumably associated with adjacent residences. At 8:30am the occupancy levels had significantly increased, particularly in Talbot Grove north-south section which is 10 minute parking, and all-day parking on Dean Grove.
- Afternoon parking surveys indicated that in the early afternoon (approximately 2:15pm) Talbot Grove both the east-west and north-south sections is not highly parked. In the peak pickup time (3:00pm – 3:10pm) both sections of Talbot Grove generally reached or exceeded capacity with some parking in No Standing zones observed. Dean Grove was generally well occupied during both survey times indicating Dean Grove is predominantly used for all day parking.

3.4 Key issues

- Stationary and queued traffic on Portrush Road associated with Talbot Grove causing a safety issue.
- Congestion of kiss-n-drop zones.
- Enforcement / lack of management of parking restrictions and kiss-n-drop turnover.
- Safety of pedestrians crossing Portrush Road (historical record of serious injuries and a fatality).
- Vehicles turning left out of Stafford Grove and immediate right onto Grant Avenue (City of Burnside) causing queuing along Portrush Road (DPTI).
- Localised flooding of Emu Crossing in Talbot Grove reported by the school.

3.5 Options

- Support thorough school management and enforcement of kiss-n-drop zones (teachers actively pushing drivers through Talbot Grove and telling parents to move on if they are parked longer than the signed 2 minutes), as previously resolved by the Council in 2006, for every pick up and drop off period, with support of the Council's inspectors and SAPOL to enforce time limits and address double parking.
- The Council request DPTI implement Variable Message Sign (VMS) speed limits during school periods on Portrush Road (40 km/h), as done in New South Wales and Victoria.
- The Council request the school to set back its fence to better accommodate bus stop shelter on Kensington Road with appropriate footpath width and standing area.
- Install PAC 'count-down timers' on Portrush Road.
- Educate school student Emu Crossing monitors to allow students to queue and thereby allow multiple vehicles to cross before stopping again to alleviate excessive queuing.
- Modify kerblines to resolve reported stormwater ponding issue to the north east of the Emu Crossing on Talbot Grove.
- In accordance with the general recommendations for all schools, a regular review process between the school, the Council and other relevant stakeholders should be established to monitor the operation of the traffic management on Talbot Grove and any resulting traffic and safety implications. This review process should have a regular agenda item to consider whether operator manned traffic management intervention remains the appropriate solution or whether physical changes are required to the local road network to manage and minimise the fundamental safety concern of the queuing traffic on Portrush Road.

The physical traffic management alternatives may need to include but not necessarily be limited to:

- revisit reversal of flow on Talbot Grove to take queuing off Portrush Road in accordance with the Council's resolutions dated 2006;
- extend one-way section on Talbot Grove to Dean Grove (with/without reversal of flow);
- utilise school land (e.g. incorporate on-site Kiss-n-drop loop, widen a section of Talbot Grove to improve passing options); and
- remove first two (2) parking spaces on entrance to Talbot Grove to provide buffer for queuing (particularly if with good management queuing is minimal) so that if one vehicle stops to wait for a space there is room for two (2) or three (3) cars to queue on Talbot Grove before spilling out onto Portrush Road.

3.6 Draft Recommendations

- The Council to formally request the school to re-establish its management and enforcement of the Kiss-n-drop in Talbot Grove east-west section, as previously resolved to do so by the Council and the school is to make a commitment to do so.
- The Council to support the school with appropriate levels of parking enforcement to ensure compliance with the current parking restrictions.
- The school and the Council formally request SAPOL to assist with the enforcement of illegal traffic and parking practices, particularly in Talbot Grove east-west section to address the safety issues which have been identified.
- The school and the Council to establish a regular review process that will include the monitoring of the operation of Talbot Grove and traffic management requirements as a regular agenda item.

- The Council formally request DPTI to trial the installation of a 40 km/h speed limit along Portrush Road, via Variable Message Signs (VMS), to operate during the school AM and PM peak periods.
- The Council formally request the school to set back its fence to better accommodate bus stop shelter on Kensington Road and for the Council to appropriately upgrade the footpath width and standing area. The Council is to also consider the installation of pedestrian fencing in consultation with DPTI.
- The Council formally request DPTI to install PAC 'count-down timers' on Portrush Road.
- The school and the Council formally request SAPOL to implement an appropriate education program for Emu Crossing monitors (students and school staff) in regards to letting more than one (1) or two (2) vehicles across at a time when only a few students are approaching the Emu Crossing.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- Create new kerblines in front of the tree to the north east of the Emu Crossing on Talbot Grove to connect existing kerblines to stormwater drainage channel underneath the crossing build-outs.
- The Council to provide full width paving, other than for tree pits, for the southern and eastern footpaths located on Talbot Grove (subject to consideration of Talbot Grove widening as noted above).
- The Council to remove redundant crossover on Talbot Grove east-west section on southern side of the road and west of the Emu Crossing.
- The Council to upgrade kerb ramp facilities (i.e. install tactiles) to current standard at intersections of Dean Grove and Talbot Grove and Talbot Grove and Stafford Grove.
- The Council to upgrade the existing kerb ramps at the Emu Crossing to current standards (install tactiles).
- The school to undertake DPTI's Way 2 Go Program.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

3.7 Consultation Responses

3.7.1 School

- Relocation of bus stop adjoining fence would impinge on the Oval, potential to use corner area at start of left turn lane.
- School accepts issues with reversal of Talbot Grove, notes the changes in monitoring.
- School notes potential cycling champion in 2016 student leader, possibility to develop cycle access routes. New bus route to run to southern suburbs starting in term 1 in 2016.
- School supports 40 km/h zones on Portrush Road during AM and PM peak periods.
- School supports all other recommendations.

3.7.2 Resident/Stakeholder

- Stafford Grove issues with parking (parking on both sides making it difficult to exit driveway) and congestion from parents having driven to school.
- Resident does not believe Council currently polices parking effectively/enough.

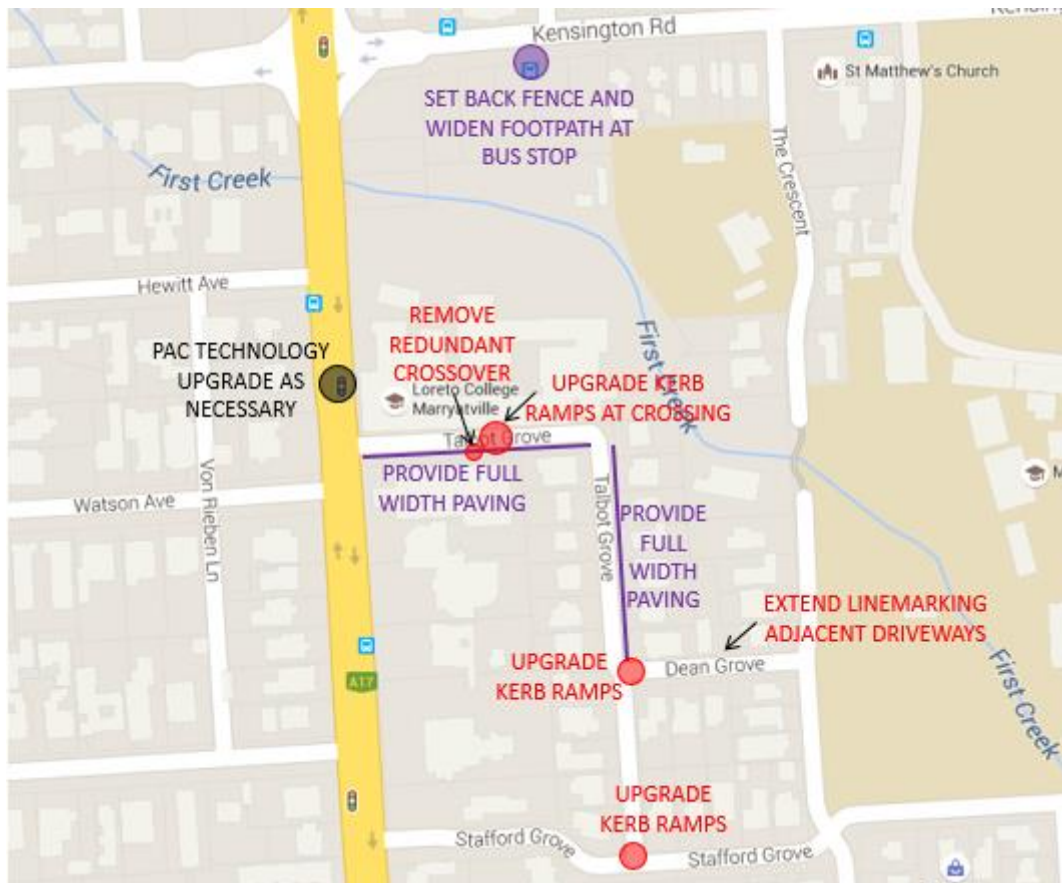
- Parking (including staff and students) narrowing Dean Grove and restricting access for residents and garbage trucks.
- Some residents do not support trial of 40 km/h zones on Portrush Road during AM and PM peak periods.

3.8 Final Recommendations

- 3.1 The Council to formally request the school to re-establish its management and enforcement of the Kiss-n-drop in Talbot Grove east-west section, as previously resolved to do so by the Council and the school is to make a commitment to do so.
- 3.2 Council to support the school with appropriate levels of parking enforcement to ensure compliance with the current parking restrictions.
- 3.3 The school and the Council formally request SAPOL to assist with the enforcement of illegal traffic and parking practices, particularly in Talbot Grove east-west section to address the safety issues which have been identified.
- 3.4 The School and Council to establish a regular review process that will include the monitoring of the operation of Talbot Grove and traffic management requirements as a regular agenda item
- 3.5 The Council formally request the school to set back its fence to better accommodate bus stop shelter on Kensington Road and for the Council to appropriately upgrade the footpath width and standing area. The Council is to also consider the installation of pedestrian fencing in consultation with DPTI.
- 3.6 The school and the Council formally requests SAPOL to implement an appropriate education program for Emu Crossing monitors (students and school staff) in regards to letting more than one (1) or two (2) vehicles at a time across when only a few students are approaching the Emu Crossing.
- 3.7 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 3.8 Create new kerbline in front of the tree to the north east of the Emu Crossing on Talbot Grove to connect existing kerbline to stormwater drainage channel underneath the crossing build-outs.
- 3.9 The Council to provide full width paving, other than for tree pits, for the southern and eastern footpaths located on Talbot Grove (subject to consideration of Talbot Grove widening as noted above).
- 3.10 The Council to remove redundant crossover on Talbot Grove east-west section on southern side of the road and west of the Emu Crossing.
- 3.11 The Council to upgrade kerb ramp facilities (install tactiles) to current standard at intersections of Dean Grove and Talbot Grove and Talbot Grove and Stafford Grove.
- 3.12 The Council to upgrade the existing kerb ramps at the Emu Crossing to current standards (install tactiles).
- 3.13 The school to undertake DPTI's Way 2 Go Program.
- 3.14 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

- 3.15 The Council seeks information from DPTI to inform the school regarding the technologies available at PAC's, including green walk time extensions be holding the push button, microwave detectors to enable extra crossing time to be allocated to the pedestrian phase when required and speed and red light cameras. The Council to formally request DPTI to install any of the above technologies that are not available on the PAC.

The final recommendations for the school are shown on the map below.



4 Marden Senior College and Open Access School

4.1 Summary of issues

- Majority of students are 16 years of age or older. Approximately 1,000 students albeit not all are there at one time and 200 staff. Numbers are likely to remain stable.
- Students come from across Adelaide metropolitan area and beyond. Majority make their own way to school.
- Many of the students have only one (1) class. Also have after-hours classes (3:30pm - 8:00pm).
- Main traffic related concerns are the potential for pedestrian and vehicle incidents on corner of Marden Road and Pitt Street. Vehicle speeds and pedestrian awareness.
- Travel modes usage (estimated):
 - walk 5% (personal choice);
 - cycle 5% (possibility of exploring better bike storage facilities to encourage more cycling);
 - driven 25%; and
 - public transport 65% (more than one (1) mode of public transport seen as barrier by some students however believe school is well serviced by public transport).
- In excess of 200 on-site parking spaces for staff and 200 plus for students. Staff parking is accessed via Marden Road and Lower Portrush Road and student parking via Lower Portrush Road.
- Majority of on-street parking occurs on Marden Road.
- No future plans for expansion.
- Site is a combined site for Marden Senior College and Open Access College. Site is often used during weekends.
- The school does not have any direct transport/travel related policies.

4.2 Observations

- East side of Marden Road is No Stopping from 8.00am to 5.00pm, Monday to Friday (opposite to school side).
- Vehicles traveling with excessive speed through the 25 km/hr school zone (noted to be fairly new and only installed earlier in 2015).
- Observed vehicle corner cutting at corner of Marden Road and Pitt Street (vehicles turning right into Pitt Street).
- Pitt Street popular pedestrian link to O-Bahn interchange/bus stops on OG Road.
- Appears to be high proportion of students accessing school via bus.
- Minimal students parked in main student carpark on Lower Portrush Road.
- Worst traffic congestion on Marden Road occurs at the end of after-hours classes at approximately 8.00pm where most students are being picked up. However only lasts for 5-10 minutes. Some drivers seen performing U-turns at Pitt Street nearly creating rear-end accidents.
- Kerb ramps are not compliant for disability access at the intersection of Marden Road and Pitt Street.
- Majority of parking control signs in the area faded/unreadable.

- Minor tree root issues along footpath on east side of Marden Road opposite the school.
- Some inconsistent (or redundant) line marking on Pitt Street.

4.3 Traffic and parking data

- Tube counters were placed on Marden Road, Pitt Street and Grigg Street. A turning count including pedestrians was conducted at the intersection of Marden Road and Pitt Street.
- Data indicates average speeds during AM and PM peak periods are approximately 43 km/h for Marden Road and 36 km/h for Pitt Street with 85th percentile speeds approximately 51 km/h for the former and 41 km/h for the latter.
- Weekday average volumes of 1,680 on Marden Road, 1,300 on Pitt Street and 2,340 on Grigg Street.
- Numerous pedestrians crossing Marden Road at Pitt Street (50-80 in peak periods).
- Parking surveys indicated that on-street parking is rarely an issue on Marden Road. Staff carparks get close to capacity on Marden Road however there are still numerous carparks always available via Lower Portrush Road (approximately 200).
- There were three (3) crashes on Marden Road, two (2) were mid-block (right-angle which involved a cyclist and hit fixed object) and the other was at the intersection of Pitt Street (hit fixed object). All resulted in property damage only. None occurred during the school peak times.

4.4 Key issues

- Vehicles travelling with excessive speed through school zone.
- Vehicles regularly cutting corner when turning from Marden Road into Pitt Street and at relatively high speed.
- Pedestrian safety at the corner of Marden Road and Pitt Street.

4.5 Options

- Pedestrian refuge across Marden Road at junction of Pitt Street and Marden Road to provide safer crossing point and better regulate turning movements
- Discuss with DPTI safe crossing point on OG Road issue.
- Speed monitoring by SAPOL.
- Change all day parking immediately outside school to time restricted parking.

4.6 Draft Recommendations

- The Council to install a pedestrian refuge across Marden Road at the junction of Pitt Street and Marden Road to provide safer crossing point and better regulate turning movements.
- The Council to formally request DPTI to consider the installation of a safe crossing point on OG Road (at minimum upgrade pram ramps at existing pedestrian refuge immediately north of Pitt Street).
- The Council to formally request SAPOL to enforce school zone speed limit during AM and PM peak periods.
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

4.7 Consultation Responses

4.7.1 School

The school was supportive of the recommendations.

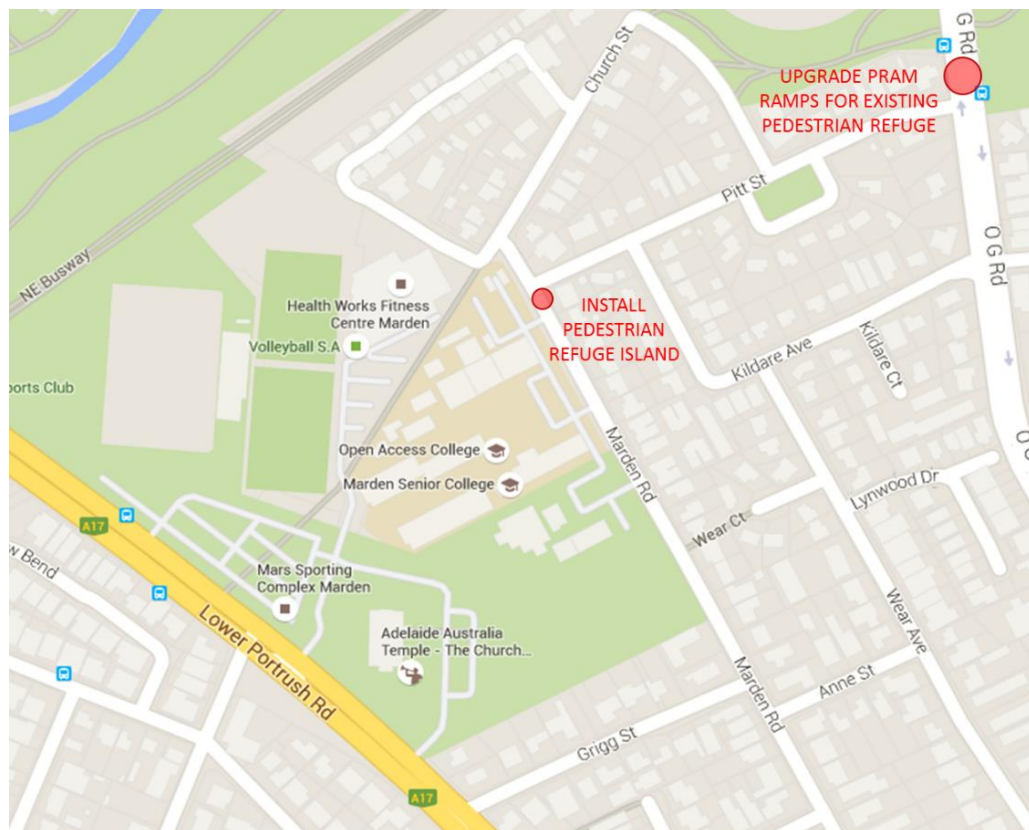
4.7.2 Resident/Stakeholder

No written correspondences or comments received.

4.8 Final Recommendations

- 4.1 The Council to install a pedestrian refuge across Marden Road at the junction of Pitt Street and Marden Road to provide safer crossing point and better regulate turning movements.
- 4.2 The Council to formally request DPTI to consider the installation of a safe crossing point on OG Road (at minimum upgrade pram ramps at existing pedestrian refuge immediately north of Pitt Street).
- 4.3 The Council to formally request SAPOL to enforce school zone speed limit during peak drop off/pick up times.
- 4.4 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



5 Marryatville High School

5.1 Summary of issues

- Currently 1,250 students and 120 staff. Student numbers anticipated to rise to 1,450 in the next five (5) to ten (10) years, with proportionate increase in staffing likely.
- The school has no plans for future building expansion.
- No on-site parking for students, staff parking is accessible from The Crescent and is also used on weekends to provide parking for sports uses of grounds.
- Students are advised to park on Dean Grove or Alnwick Terrace.
- On-site parking is provided for staff, accessible off The Crescent. School noted potential for providing staff carpark access from the south with a boom gate to restrict to staff entry/exit movements only (so the carpark cannot be used for general through access).
- Reportedly less than ten (10) cyclists (<1%), more scooters/skateboards.
- Reasonable number of students use public transport but no actual data.
- Crash records in the past five (5) years include several on Kensington Road as is common with arterial roads, including one (1) hit pedestrian crash to the west of Maesbury Avenue (which occurred at 8:35am on a Thursday in March 2011). Three (3) crashes were recorded on the local streets that front the school with two (2) intersect crashes (a right angle crash at the intersection of Alnwick Terrace and Lesbury Avenue, and a right turn crash at the intersection of Alnwick Terrace and Hanson Avenue), and one (1) midblock rear end crash on The Crescent (south of the creek). Both the Alnwick Terrace crashes occurred around 8:15-8:30am and involved a cyclist being hit by a vehicle. The Hit Parked Vehicle crash occurred at around 3:00pm on a Tuesday.
- Road safety and other key issues raised by the school staff and Governing Council:
 - congestion at the end of The Crescent as no turn around point causing hazard with conflict between U-turn/3 point turning vehicles, vehicles entering and exiting the staff carpark and students walking on footpath and crossing the road. Little awareness of footpath and pedestrians on footpath;
 - space around westbound bus stop 8 on Kensington Road insufficient for number of students waiting;
 - students parking on Alnwick Terrace, parents parking across driveways (school driveways not necessarily residents driveways); and
 - students walking to/from bus stops crossing roads inattentively.
- Constraints discouraging walking or cycling to school were noted by the school as:
 - distance, safety and equipment; and
 - as a music school many students have instruments that they must transport to and from school which limits walking/cycling to school.

5.2 Observations

- Some disregard of No Standing line marking which is located on The Crescent before and during the PM peak period.
- Potential conflict point at the end of The Crescent adjacent staff carpark with vehicles turning around (generally performing 3-point turns) using staff carpark entrance or opposite crossover to assist turning manoeuvre. Students were often present walking on footpath at this location and were generally aware of vehicles and no incidents were observed.
- Some pickup / drop off occurring on The Crescent.

- Student parking generally observed on The Crescent south of the creek and on Dean Grove. Some student parking observed on Alnwick Terrace, Lesbury Avenue and Hanson Avenue.
- No Standing parking controls on Alnwick Terrace (north side) at eastern end of road seem unnecessary.
- The following observations regarding infrastructure were made:
 - Stafford Grove / Alnwick Terrace / Lesbury Avenue intersection kerb ramps are substandard, at odd angles and not in corresponding pairs to appropriately assist pedestrians attempting to cross in any direction;
 - kerb ramps on footpath crossing school entrance on Kensington Road kerb ramps do not provide tactile markers but are otherwise acceptable;
 - Kensington Road PAC kerb ramps are narrow, widths do not match and are not to standard with tactiles, etc;
 - Kensington Road / Maesbury Street intersection kerb ramps are not to standard and are poorly aligned;
 - narrow footpath on Kensington Road adjacent bus stop 8 south side;
 - Kensington Road / Bridge Street intersection kerb ramps on east side are not to standard (with tactiles). The alignment for east to west pedestrians does not offer sufficient sight distance in to Bridge Street, which is also excessively wide to cross. This is on a route for students to/from Portrush Road buses;
 - south of the creek The Crescent has no footpath on the east side north of Dean Grove, the footpath south of Dean Grove ends without a kerb ramp;
 - intersection of Dean Grove and The Crescent kerb ramps are not to standard and do not line up in a desire line for pedestrians;
 - intersection of Kensington Road / The Crescent kerb ramps are not to standard (no tactiles) and are at an odd angle to the pedestrian desire line;
 - sections of paved footpath on The Crescent north of the creek are missing as though trees used to be present but have since been removed;
 - The Crescent south of Dean Grove footpath is narrow and raised adjacent trees, particularly on the eastern side (adjacent school frontage);
 - kerb ramps into The Crescent on either side of the road closure are provided into the road, these are not appropriately located and are not to standard (i.e. no tactiles);
 - school access route through to right angle intersection of Hackett Terrace and Romney Road (to the east of the school) is narrow with poor kerb ramp facilities (not to standard); and
 - full width paving is not provided on north side of Alnwick Terrace where some pick up and drop off takes place.

5.3 Traffic and parking data

- Tube counters were placed on Alnwick Terrace outside number 4a, Lesbury Avenue outside number 8, and The Crescent south of Kensington Road.
- Data indicated that weekday average speeds were recorded at 29.0 km/h and 85th percentile speeds recorded a weekday average of 34.0 km/h on Alnwick Terrace. The tube counter was placed inside a school zone and minimal drop in speeds was recorded during the AM and PM peak periods.

- Data indicated that weekday average speeds were recorded at 35.0 km/h and 85th percentile speeds recorded a weekday average of 42.0 km/h on Lesbury Avenue. Lesbury Avenue is not a school zone and is subject to the default speed limit of 50 km/h and these speeds are considered appropriate.
- Data indicated that weekday average speeds were recorded at 28.4 km/h and 85th percentile speeds recorded a weekday average of 35.0 km/h on The Crescent. The tube counter was placed at the start of the school zone on The Crescent and minimal drop in speeds was recorded during the AM and PM peak periods.
- Weekday average volumes of 1,670, 495 and 818 vehicles per day were recorded on Alnwick Terrace, Lesbury Avenue and The Crescent, respectively.
- Morning parking surveys indicated little residential on street parking at 7:30am on the streets around the school, with Dean Grove recording the most residential associated parking. Dean Grove, Hanson Avenue and Alnwick Terrace west of Hanson Avenue achieve high levels of parking (approaching capacity) at 8:30am. Some parking was observed on The Crescent south of the creek and Alnwick Terrace east of Hanson Avenue. Lower levels of parking were observed on the north side of the creek on The Crescent.
- Afternoon parking surveys indicated that in the early afternoon at approximately 2:15pm moderate parking levels were recorded on The Crescent south of the creek, Hanson Avenue, Dean Grove and Alnwick Terrace west of Hanson Avenue. This indicates that year 12 students are generally parking on these sections of streets as advised by the school. The peak afternoon parking demand at approximately 3:20pm indicates some pickup occurs on the streets around the school, however this is generally spread out over multiple streets and does not occupy on street parking areas to or over capacity.

5.4 Key issues

- Lack of clarity of the priority at the intersection of Stafford Grove / Alnwick Terrace and poor sight distance at Give Way lines;
- Safety issues with vehicles performing U-turns / 3-point turns at The Crescent's dead end (particularly north side of creek) with traffic entering / exiting staff carpark and presence of pedestrians on footpaths, crossovers and crossing The Crescent.
- Speeds of vehicles during school zone times on Alnwick Terrace. This aligns with the recorded data for Alnwick Terrace, with 85th% speeds of around 32km/h and average speeds of around 27-28km/h during the 8-9am and 3-4pm periods recorded. The counter was located within the school zone.
- Students parking in front of residential properties.
- Vehicles stopping and/or parking in No Stopping zones on The Crescent (particularly in the PM peak period).
- Significant number of missing and non-compliant kerb ramps on key pedestrian routes.

5.5 Options

- Line marking and kerb extension treatments at Stafford Grove / Alnwick Terrace intersection to better delineate vehicle priority, improve pedestrian route and crossing definition and move vehicles into appropriate locations for better sight distance.
- Consider turnaround operation on The Crescent adjacent staff car park entry:
- Consider designated turnaround bay inside carpark with some spaces adjacent to the access allocated at start/finish times to encourage kiss-n-drop to occur off street.
- Improve design of footpath across school carpark entrance, reinforcing the footpaths presence and the requirement to give way to pedestrians on the footpath.
- Enforcement of No Stopping zones on The Crescent.
- Speed enforcement by SAPOL on Alnwick Terrace during school zone times.

- Alnwick Terrace east side change No Standing zone / signage during the AM and PM peak periods to No Parking zone / signage so section of road can be used as a kiss-n-drop zone.
- Widen footpath in front of bus stop 8 using part of indented section of Kensington Road carriageway (runs from eastern end of school to The Crescent).

5.6 Draft Recommendations

- The Council to install kerb extension treatments at Stafford Grove / Alnwick Terrace / Lesbury Avenue intersection as outlined on figure below. There is expected to be no loss of on-street parking given existing restrictions around the intersection. This is shown in the figure below.



- The school to install designated turnaround bay and kiss-n-drop spaces in staff carpark.
- The Council in conjunction with the school to increase awareness of footpath across school carpark entrance off The Crescent by installing 'Give Way to Pedestrians' signs for entering and exiting vehicles.
- The Council to enforce No Stopping zones on The Crescent.
- The Council to formally request SAPOL to enforce school zone speed limit on Alnwick Terrace.
- The Council to amend existing No Standing zone / signage during the AM and PM peak periods to No Parking zone / signage on Alnwick Terrace (north side, east end). The Council and the school to then enforce the new kiss-n-drop zone.
- The Council to request DPTI widen the footpath in front of bus stop 8 using part of indented section of Kensington Road carriageway (runs from eastern end of school to The Crescent), as shown in the following concept:



- The Council to upgrade kerb ramps to current standards and to appropriate angles along Kensington Road between the school and Portrush Road (including at the PAC), at The Crescent / Dean Grove intersection, the right angle intersection of Hackett Terrace and Romney Road (to the east of the school) and around Stafford Grove / Alnwick Terrace intersection.
- As part of upgrading kerb ramps at the intersection of Bridge Street and Kensington Road the Council is to realign eastern Bridge Street kerb (based on refuse vehicle turning requirements) with buildouts or similar to appropriately position westbound pedestrians for better sight distance to southbound vehicles.
- The Council formally request the school to relocate its fence in order for the Council to widen the footpath on the east side of The Crescent (south of the creek) into school grounds around existing trees.
- The Council extend footpath on eastern side of The Crescent (south of the creek) from Dean Grove to the road closure or at a minimum provide kerb ramps at current termination point (intersection with Dean Grove) to assist pedestrians to access the western side footpath.
- The Council to provide full width paving of sections of missing footpaths on The Crescent (north of the creek) and provide full width paving on Alnwick Terrace north side.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

5.7 Consultation Responses

5.7.1 School

- Maps do not show Eden Park campus west of The Crescent as part of school.
- Concern whether countdown timer is appropriate as teenagers may not have sufficient skills to judge.
- Supports 40 km/h zones on arterial roads during the AM and PM peak periods.
- Students crossing The Crescent during the day without looking is an issue.
- Suggest alternative to turnaround is to create a shared zone at the end of The Crescent.
- Drivers turning right into Bridge Street hold up traffic.
- Enforcement of parking practices in The Crescent needs to be part of a holistic solution, school would not be able to assist the Council with enforcing parking with staff assistance.
- To accommodate bus stop changes, DPTI is to pay for fence relocation.

5.7.2 Resident/Stakeholder

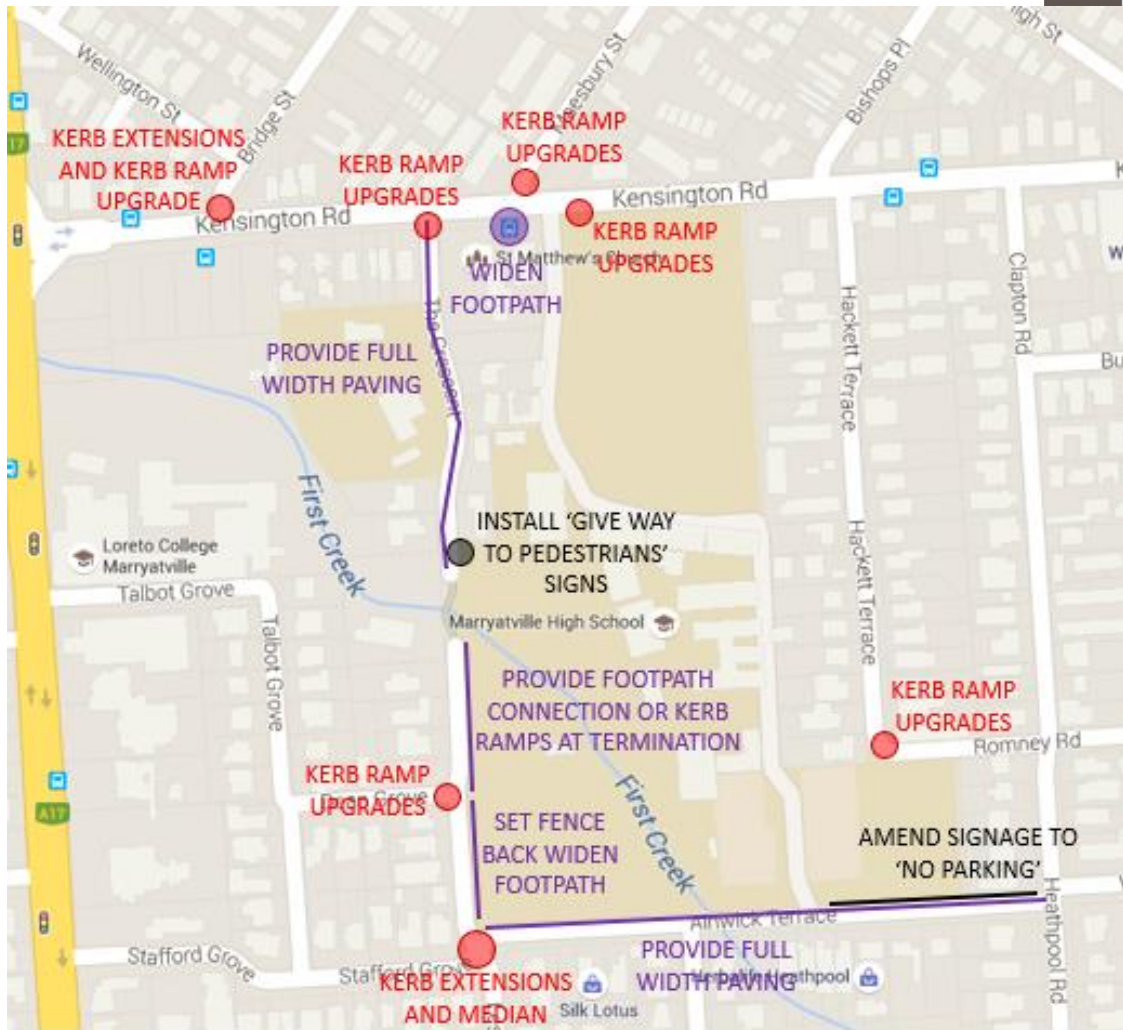
- Drivers turn into The Crescent thinking it is a through route.
- Previous internal roadway linking north and south sections of The Crescent closure maximises congestion.
- Speed of vehicles exiting the school car park is an issue.
- The previous internal roadway linking north and south sections of The Crescent allowed through access, the closure of this link has increased congestion.
- Events outside of school hours create parking problems with parking on both sides of the street restricting vehicle access including emergency services.
- Drivers stopping / parking in No Stopping zones on The Crescent is an issue, signage difficult to read due to angle of signs.
- The Crescent and Dean Grove parked cars overhanging driveways.
- Students should be told not to park on Dean Grove and The Crescent, or parking should be restricted to prevent this from occurring.
- Roundabout at Stafford Grove intersection instead of tightening corners.
- Alnwick Terrace north side to become parking area along school frontage to allow student parking to be moved to school frontage.

5.8 Final Recommendations

- 5.1 The Council to install kerb extension treatments at Stafford Grove / Alnwick Terrace / Lesbury Avenue intersection as outlined on the above figure. There is no resultant loss of on-street parking given existing restrictions around the intersection.
- 5.2 The school to install designated turnaround bay and kiss-n-drop spaces in staff carpark.
- 5.3 The Council in conjunction with the school to increase awareness of footpath across school carpark entrance off The Crescent by installing 'Give Way to Pedestrians' signs for entering and exiting drivers.
- 5.4 The Council to enforce the No Stopping zones located on The Crescent with assistance from the school.
- 5.5 The Council to formally request SAPOL to enforce school zone speed limit on Alnwick Terrace.

- 5.6 The Council to extend unrestricted parking on the north side of Alnwick Terrace along the school frontage, providing pick-up/drop-off area between school entrances and unrestricted parking elsewhere.
- 5.7 The Council to amend existing No Standing zone / signage during the Am and PM peak periods to No Parking zone / signage on Alnwick Terrace (north side, east end). The Council and the school to then enforce the new kiss-n-drop zone.
- 5.8 School to instruct students not to park on Dean Grove (west side) and The Crescent and use Dean Grove (east side) and Alnwick Terrace (north side).
- 5.9 The Council to request DPTI widen the footpath in front of bus stop 8 using part of indented section of Kensington Road carriageway (runs from eastern end of school to The Crescent)
- 5.10 The Council to upgrade kerb ramps to current standards and to appropriate angles along Kensington Road between the school and Portrush Road (including at the PAC), at The Crescent / Dean Grove intersection, the right angle intersection of Hackett Terrace and Romney Road (to the east of the school) and around Stafford Grove / Alnwick Terrace intersection.
- 5.11 As part of upgrading kerb ramps at the intersection of Bridge Street and Kensington Road the Council is to realign eastern Bridge Street kerb (based on refuse vehicle turning requirements) with buildouts or similar to appropriately position westbound pedestrians for better sight distance to southbound vehicles.
- 5.12 The Council formally request the school to relocate its fence in order for the Council to widen the footpath on the east side of The Crescent (south of the creek) into school grounds around existing trees.
- 5.13 The Council extend footpath on eastern side of The Crescent (south of the creek) from Dean Grove to the road closure or at a minimum provide kerb ramps at current termination point (intersection with Dean Grove) to assist pedestrians to access the western side footpath.
- 5.14 The Council to provide full width paving of sections of missing footpaths on The Crescent (north of the creek) and provide full width paving on Alnwick Terrace north side.
- 5.15 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.
- 5.16 Council to improve no-through road signage visibility

The final recommendations for the school are shown on the map below.



6 Marryatville Primary School

6.1 Summary of issues

- Currently 510 students and 43 staff. Student numbers anticipated to increase to 610 students in the next five (5) to ten (10) years.
- The school has a zoned catchment, but are under enrolment pressure to accommodate students within the zone and legitimate demand from outside the zone.
- Current travel modes based on recent classroom surveys are:
 - walk – 35%;
 - cycle – 7%;
 - scoot – 2%;
 - driven – 53%; and
 - bus (public) – 2%.
- The school hall is hired in the evening for sport and on Saturdays.
- No off-street parking is provided for staff, visitors and parents. School staff park on-street in Dankel Avenue, Regent Street and Shipsters Road.
- In the past five (5) years three (3) crashes have been recorded on the roads immediately adjacent the school. Two (2) were Hit Parked Vehicle crashes on Shipsters Road (one at 12:30pm on a Monday and one at 9pm on a Tuesday) and one (1) was a Hit Pedestrian crash (appears unrelated to school operation as occurred on a Saturday).
- Impacts of school parking identified by the local residents include:
 - parents parking in front of residents houses, particularly on Regent Street, as the school has no visitor parking.
- The school does not have any transport / travel related school policies.
- The school has previously undertaken road safety activities at the Road Safety Centre in Thebarton.
- Key issues and concerns raised by the school staff and Governing Council:
 - adults driving unsafely near children; and
 - misuse of the kiss and drop zone.
- Current constraints that discourage walking and cycling to school are seen as:
 - fear of assault (parent concern); and
 - inclement weather.

6.2 Observations

- Dankel Avenue is narrow and parking on both sides helps keep speeds low.
- Some long term parking in kiss-n-drop zones.
- Kerb ramps at intersections of Dankel Avenue and Regent Street with Shipsters Road are not to standard (no tactiles) and no east-west kerb ramps provided.
- Some of Dankel Avenue kiss-n-drop zone footpath is full width pavement but to east and west it is not, with level differences and surface potentially causing a tripping hazard.

- Shipsters Road west side footpath is relatively narrow (1.8 metres) for the level of use (including cyclists), has an adjacent fence for which clearance further limits the effective width and the narrow unsealed verge potentially causes a tripping hazard.
- Short section of kerb to the west of the school crossover on Dankel Avenue is missing / damaged.

6.3 Traffic and parking data

- Tube counters were placed outside number 19 Dankel Avenue, number 62 High Street, number 63 Regent Street and number 66 Shipsters Road.
- Data indicated that weekday average speeds were recorded at 20.2 km/h and 85th percentile speeds recorded a weekday average of 26.0 km/h on Dankel Avenue. The tube counter was placed in a school zone adjacent kiss-n-drop zone, and the recorded speeds during the AM and PM peak periods were generally under the 25 km/h speed limit.
- Data indicated that weekday average speeds were recorded at 34.4 km/h and 85th percentile speeds recorded a weekday average of 41.0 km/h on High Street. The tube counter was not in a school zone and the speeds recorded were generally appropriate for the default urban speed limit of 50 km/h.
- Data indicated that weekday average speeds were recorded at 33.0 km/h and 85th percentile speeds recorded a weekday average of 44.0 km/h on Regent Street. The tube counter was placed inside a school zone and recorded a drop in speeds around school pickup and drop off times with 85th percentile speeds still around 38 km/h.
- Data indicated that weekday average speeds were recorded at 39.0 km/h and 85th percentile speeds recorded a weekday average of 48.0 km/h on Shipsters Road. The tube counter was located close to the koala crossing which is a 25 km/h zone when the Koala Crossing lights are flashing. The counter recorded some drop in speeds around AM and PM peak periods.
- Weekday average volumes of 415, 674, 823 and 3,308 vehicles per day were recorded on Dankel Avenue, High Street, Regent Street and Shipsters Road, respectively.
- Morning parking surveys indicated that little on street parking occurred at around 7:45am, generally on residential frontages and not on the school frontages. The highest concentration of parking occurred on Dankel Avenue (south side) with 10 of 19 spaces filled, likely with predominantly residents' vehicles. In the 8:45am - 8:55am peak parking demand period generally there is some capacity on surrounding streets, particularly in the kiss-n-drop, with the relatively quick drop off time corresponding to quick turnover of spaces. Dankel Avenue south side and Regent Street north side (between Shipsters Road and Bishops Place) recorded a higher concentration of parking, potentially associated with parents parking to walk students into the school or teacher parking.
- Afternoon parking surveys at approximately 2:15pm reaffirm the notion that staff parking (and/or resident parking) is concentrated on Dankel Avenue south side and Regent Street north side (between Shipsters Road and Bishops Place), with some potentially occurring on Shipsters Road west side. In the afternoon peak at approximately 2:55pm - 3:05pm the streets adjacent the school are typically at or near capacity.

6.4 Key issues

- Some long term parking in kiss-n-drop zones.
- Parking impact on residents primarily in Regent Street.
- Space and security of on-site bike parking.
- Connection across Shipsters Road (pedestrians and cyclists).

6.5 Options

- Future connection across Shipsters Road as part of bike network and in conjunction with City of Burnside.
- Education and enforcement to reduce longer term parking in kiss-n-drop zones.
- Encourage school to participate in DPTI's Way 2 Go Program as an exemplar school for cycling.
- Opportunity for cycling 'pilot' school – close to NPSP and Burnside routes and existing cycling base.
- Speed enforcement by SAPOL in school zone times on Regent Street and Shipsters Road.

6.6 Draft Recommendations

- The Council investigate future connection across Shipsters Road as part of bike network and in conjunction with the City of Burnside.
- Enforcement of kiss-n-drop zones by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The school participate in DPTI's Way 2 Go Program, with potential as an exemplar school for cycling should the NPSP and Burnside bike plans be implemented.
- The Council formally request SAPOL to enforce the school zone speed limit on Regent Street and Shipsters Road.
- The Council upgrade kerb ramps at intersections of Dankel Avenue and Regent Street with Shipsters Road to standard.
- The Council fully pave the width of the Dankel Avenue footpath between the right angle bend and Shipsters Road.
- The Council fully pave the western footpath of Shipsters Road along the school frontage between Dankel Avenue and Regent Street.
- The Council reinstate short section of kerb to the west of the school crossover on Dankel Street that is missing / damaged.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

6.7 Consultation Responses

6.7.1 School

- School concerned that staff would not be able to support on street parking management.
- Parking management and enforcement will need to be regular and ongoing otherwise parents will get complacent.
- School happy to consider undertaking Way 2 Go Program.

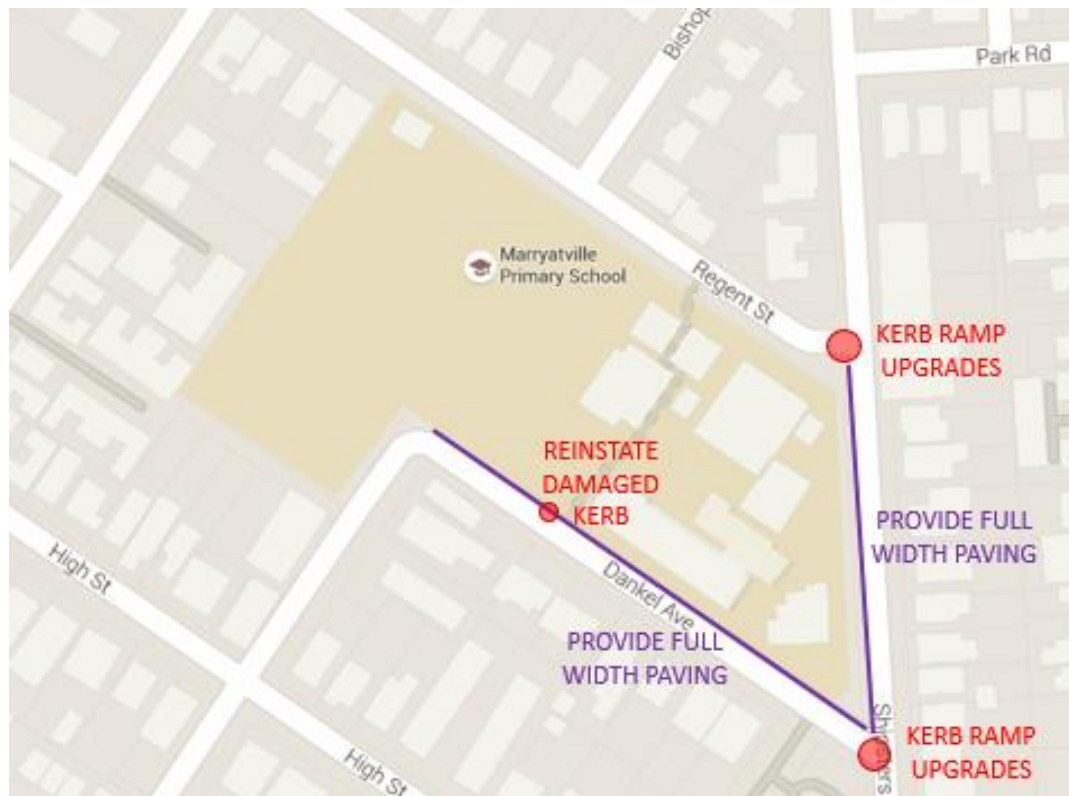
6.7.2 Resident/Stakeholder

- Vehicle speed on Regent Street is a concern during AM and PM peak periods.
- Regular policing of illegal queuing and double parking is required.

6.8 Final Recommendations

- 6.1 The Council investigate future connection across Shipsters Road as part of bike network and in conjunction with the City of Burnside.
- 6.2 Enforcement of kiss-n-drop zones by school staff and the Council.
- 6.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 6.4 The school participate in DPTI's Way 2 Go Program, with potential as an exemplar school for cycling should the NPSP and Burnside bike plans be implemented.
- 6.5 The Council formally request SAPOL to enforce the school zone speed limit on Regent Street and Shipsters Road.
- 6.6 The Council upgrade kerb ramps at intersections of Dankel Avenue and Regent Street with Shipsters Road to standard.
- 6.7 The Council fully pave the width of the Dankel Avenue footpath between the right angle bend and Shipsters Road.
- 6.8 The Council fully pave the western footpath of Shipsters Road along the school frontage between Dankel Avenue and Regent Street.
- 6.9 The Council reinstate short section of kerb to the west of the school crossover on Dankel Street that is missing / damaged.
- 6.10 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



7 Mary MacKillop College

7.1 Summary of issues

- Currently approximately 400 students and 60 staff. Anticipated to increase to around 620 students in the next five (5) to ten (10) years.
- Estimated travel modes:
 - walk – 2%;
 - cycle - <1% (1 cyclist);
 - scoot - 0%;
 - driven – 70%; and
 - bus (public or school) – 28%.
- Five (5) off-street parking spaces are available for staff and visitors on site.
- Staff and visitors park on-street on Phillips Street, High Street and Thornton Street, as well as in the Phillips Street car park (this area is set out like a carpark but is a public road).
- Key issues raised by school staff and Governing Council include:
 - speed of traffic;
 - lack of school crossing on High Street;
 - safety of Phillips Street / High Street intersection;
 - lack of on street parking and poor/double parking;
 - residents' garbage bins placed on the carriageway restricting on-street parking; and
 - on-street parking limiting refuse vehicles access to collecting bins placed on kerbside.
- The school is reasonably well serviced by public buses with the 300 loop every 20 minutes on Portrush Road as well as services along The Parade.
- Current constraints for increasing walking and cycling / scooter usage:
 - distance perceived as too far;
 - busy (time constraints);
 - have to carry school bags; and
 - wearing school uniform.
- Norwood Swimming Centre use during term 1 and term 4 increases pedestrian activities and bus movements around the school.
- Buses have difficulty negotiating High Street / Thornton Street roundabout.
- In the past five (5) years the only crashes recorded adjacent the school were two (2) Hit Fixed Object crashes on High Street (one at 12:15am and one at 8:45am on a Thursday entering a private driveway at number 46), and one Hit Parked Vehicle crash on Phillips Street south of the car park (which occurred at 9:40am on a Tuesday).

7.2 Observations

- Students crossing road between parked vehicles, some vehicles stop and let students cross, others do not see students as they are waiting between parked vehicles to cross High Street.
- Double parking to pick up students occurs on both sides of the street, sometimes even where space was available to park further along.
- Illegal parking observed in Phillips Street (within off main street parking area).
- Overstay of kiss-n-drop zones in the PM peak period is common with drivers parking to wait for school to finish, often for 15 to 20 minutes.
- Generally students cross High Street adjacent the Phillips Street intersection.
- Lower number of students cross High Street at the Thornton Street roundabout.
- Few 'P' plate vehicles park on Thornton Street south of High Street which are potentially year 12 students who drive themselves to / from school.
- A group of St Joseph's Memorial (Norwood) students were walked by two (2) adults from St Joseph's Memorial (Norwood) along High Street to access St Joseph's Memorial (Kensington) for after school care.
- Several students with disabilities were observed being dropped off and picked up on High Street adjacent the school's entrance. On at least one (1) occasion a parent parked across the school access crossover to be close to the student requiring assistance getting in the vehicle.
- School bus arrived approximately 30 minutes before end of school time to park adjacent school frontage. Bus driver then went for a walk and returned at end of school time. No formal bus zone adjacent the school so appears the bus arrives this early so that it can secure a parking space adjacent the school frontage.
- Further observations in term 4 noted two (2) coaches parked on High Street to access the Norwood Swimming Centre, one (1) in on-street parking and the other across the entrance to Phillips Street off main street parking area as there were not enough adjacent vacant parking spaces for it to park while collecting children.
- On approach to the High Street / Thornton Street roundabout, Give Way signs (R1-2) and Roundabout signs (R1-3) along with 'heavy vehicles approach with care' signage were provided on all approaches. The Roundabout sign was not present on the eastbound approach providing a confusing message. No warning signs were present on all approaches. The Roundabout and Give Way signs were installed and the warning signage removed in 2011 following the Council undertaking a Technical Review of the roundabout. The signage did not meet the signage requirements set out in Austroads Guide to Road Design: Part 4B: Roundabouts (2009), albeit that the signs were installed as a result of the Technical Review undertaken. The signs have since been amended to provide roundabout (R1-3) and 'heavy vehicles approach with care' signs and now comply with the provisions of the relevant guides and standards.
- No median refuge is provided on the southern leg of the High Street / Thornton Street roundabout. This is due to the narrow widths.
- Kerb ramps are not to standard (tactile markers not provided) and north-south direction kerb ramps are not provided on High Street at Phillips Street car park crossover, and at the Phillips Street, Bowen Street and Richmond Street intersections.
- Bushes located on private property adjacent the footpath at the intersection of Portrush Road and High Street are overhanging the footpath significantly reducing the available width for pedestrians.
- The footpath on High Street adjacent the school is not fully paved and the level difference is a potential tripping hazard, particularly for the kiss-n-drop zone.
- Stop line at Phillips Street / High Street intersection is faded.

7.3 Traffic and parking data

- Tube counters were placed outside number 35 High Street, number 15 Phillips Street and outside Northwick Park on Thornton Street.
- Data indicated that weekday average speeds were recorded at 33.8 km/h and 85th percentile speeds recorded a weekday average of 44.0 km/h on High Street. The tube counter was placed in a school zone and some drop in speed was recorded during the pickup and drop off times.
- Data indicated that weekday average speeds were recorded at 35.4 km/h and 85th percentile speeds recorded a weekday average of 44.0 km/h on Phillips Street. The tube counter was not placed in a school zone.
- Data indicated that weekday average speeds were recorded at 38.5 km/h and 85th percentile speeds recorded a weekday average of 47.0 km/h on Thornton Street. The tube counter was not placed in a school zone.
- Weekday average volumes of 2,017, 1,089 and 509 vehicles per day were recorded on High Street, Phillips Street and Thornton Street, respectively.
- Morning parking surveys indicated that at around 7:45am some residential on-street parking was recorded. High Street west of Phillips Street recorded the highest levels of on-street parking (50% - 100%) at this time, likely associated with nearby businesses. In the morning peak of approximately 8:45am - 8:55am the surrounding streets generally reach capacity. In particular parking on High Street (with the exception of the kiss-n-drop zone), Phillips Street, Thornton Street and the Phillips Street (carpark). The kiss-n-drop zone on High Street immediately adjacent the school has good use but high turnover due to the nature of morning drop offs and that the students are generally older so are not walked in by parents.
- Afternoon parking surveys indicated that at approximately 2:15pm High Street, Phillips Street, Phillips Street carpark and Thornton Street are highly parked, likely a mixture of all day parking associated with local businesses, residents and school staff. The kiss-n-drop zone on High Street had some parking, potentially associated with visitors to the school, local residents or businesses. At the afternoon parking peak of approximately 3:25pm -3:35pm the streets around the school tend to reach or exceed capacity with significant double parking and illegal parking (in No Standing zones) observed.
- Pedestrian surveys indicate that a crossing on High Street near Phillips Street would be used by students arriving at and departing school. Approximately 60 and 70 people crossed High Street adjacent and to the east of Phillips Street immediately before school and after school hours respectively, with the majority anticipated to use a crossing if it were provided.

7.4 Key issues

- Lack of pedestrian crossing on High Street / pedestrian safety crossing road.
- Lack of formal bus zone adjacent school (and for Norwood Swimming Centre use).
- Congestion of parking in kiss-n-drop zone.
- Illegal parking (in No Standing zones, double parking and lack of compliance with parking restrictions).
- No disabled parking provision on site or on adjacent streets.
- Speeding in school zone on High Street. This aligns with the recorded data for High Street, with 85th% speeds of around 37-39km/h and average speeds of around 28-29km/h during the 8-9am and 3-4pm periods recorded. The counter was located within the school zone.
- Poorly signed school zones, faded line marking, particularly stop bar on Phillips Street and school zone line marking.

7.5 Options

- Pedestrian crossing on High Street near Phillips Street, possibly incorporating cyclist crossing facilities subject to delivery of the Council's Bike Plan.
- Investigate provision of median refuge at High Street / Thornton Street roundabout on southern leg, swept path assessment associated with buses and refuse collection vehicles may reveal geometric constraints that prevent installation of a median refuge.
- Enforcement of existing kiss-n-drop zones to discourage long-term parking.
- Parking changes could incorporate:
 - a formal bus zone on-street for use by school bus and coaches accessing Norwood Swimming Centre on High Street between main school access and Phillips Street car park. This would result in the loss of up to three (3) on-street parking spaces. However, practically in the PM peak period, the school bus parks for 30 plus minutes in general parking spaces so these spaces are not currently available at the PM peak period; and
 - a disability parking space in Phillips Street car parking area west of the school. There is scope to create the required shared space as a shared walkway and result in no loss of parking spaces.
- Speed enforcement by SAPOL on High Street.
- Upgrade linemarking and signage associated with school zone on High Street.

7.6 Draft Recommendations

- The Council to install a pedestrian Crossing on High Street near Phillips Street, decide on format compatible with school demand, general crossing demand, identified bicycle route (High Street) and existing bicycle demand (Phillips Street).
- Enforcement of kiss-n-drop zones by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council install formal bus zone on High Street between the main school access and Phillips Street (car park) to accommodate a minimum of one (1) bus.
- The Council install one (1) disability parking space in Phillips Street car parking area west of the school, incorporating shared zone into the existing walkway.
- The Council formally request SAPOL to enforce school zone speed limit on High Street.
- The Council upgrade existing line marking and signage associated with the school zone on High Street.
- The Council to update signage on all approaches to the High Street / Thornton Street roundabout to meet the requirements set out in Austroads Guide to Road Design: Part 4B: Roundabouts, while maintaining / appropriately locating 'heavy vehicles approach with care' signage on all approaches
- The Council upgrade kerb ramps to standard (with tactiles) on High Street between Portrush Road and Richmond Street.
- The Council trim and maintain vegetation at intersection of Portrush Road and High Street.
- The Council widen the paved footpath width on the south side of High Street between Thornton Street and Phillips Street to include the unpaved verge.
- The Council repaint Stop Line at Phillips Street / High Street intersection.
- The Council explore opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

7.7 Consultation Responses

7.7.1 School

- School suggests potential for one-way High Street to be safer for crossing, ease congestion due to narrowness.

7.7.2 Resident/Stakeholder

- Quite a few 'P' platens park on Thornton Street.
- Observations on High Street apply to Thornton Street as well.
- Speed enforcement on Thornton Street in school zone required.
- Many students and staff park on Thornton Street south of High Street creating parking issues for tradespeople, etc.
- Resident concerns for impact on residential parking with proposed school crossing east of Phillips Street, believes west of Phillips Street would be better as not in front of residential buildings and would suit cyclists better.
- Resident suggests path on Phillips Street should be improved surface and width for pedestrians and cyclists to share use.
- Resident agrees something needs to be done about buses but concerned for pressure on residential parking needs.

7.8 Final Recommendations

- 7.1** The Council to install an Emu school crossing on High Street immediately east of Phillips Street. One-two parking spaces will need to be removed on the southern side of the crossing to accommodate the kerb build-out and there may need to be an adjustment in the kerb line or footpath to maintain a DDA compliant footpath behind the kerb ramp.

Land ownership behind the footpath is anticipated to be Council associated with the maintained road reserve through the southern section of Phillips Street. The build-outs extend to the edge of the parking lane to provide sight distance between pedestrians and vehicles in accordance with the DPTI Code and Australian Standard.

Although the pedestrian numbers indicate that either a Koala or Wombat Crossing warrant would be met, a Koala crossing would reduce the length of the 25 kmh zone in front of the school and remove its school zone designation, whilst a wombat crossing would require the removal of the 25 kmh zone altogether. The DPTI Code does not permit any crossing other than an Emu crossing within a school zone.

There would be potential wider community benefits (such as local pedestrian access to Norwood Pool) and permanent speed reduction benefits should a wombat crossing be implemented. However, this option was not consulted on and is not therefore recommended due to the loss of the 25 kmh school zone. Council has identified the potential for Phillips Street to form part of a local bicycle route and this should also be considered prior to the implementation of the recommended crossing.

The following concept plan refers.



- 7.2 Enforcement of kiss-n-drop zones by school staff and the Council.
- 7.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 7.4 The Council install a formal bus zone on High Street between the main school access and Phillips Street (car parking area) to accommodate one (1) bus.
- 7.5 The Council install one (1) disability parking space in Phillips Street car parking area located west of the school, incorporating shared space into the existing walkway.
- 7.6 The Council formally request SAPOL to enforce school zone speed limit on High Street.
- 7.7 The Council upgrade existing linemarking and signage associated with the school zone on High Street.
- 7.8 The Council upgrade kerb ramps to standard (with tactile markers) on High Street between Portrush Road and Richmond Street.
- 7.9 Speed enforcement by SAPOL on Thornton Street as well as High Street
- 7.10 The path on Phillips Street be upgraded as part of bike plan delivery when deemed necessary by the Council.
- 7.11 The Council trim and maintain vegetation at intersection of Portrush Road and High Street.
- 7.12 The Council widen the paved footpath width on the south side of High Street between Thornton Street and Phillips Street to include the unpaved verge.
- 7.13 The Council repaint the Stop Line at Phillips Street / High Street intersection.
- 7.14 The Council explore opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



8 Norwood Primary School

8.1 Summary of issues

- Currently 396 students and 35 staff. Historically enrolments have grown by 100 students in the last five (5) years and this trend is anticipated to continue with DPA growth.
- Approximately 14 car parking spaces are available on the school grounds for staff and visitors.
- Some staff and visitors park on-street on Beulah Road and on Osmond Terrace.
- Previous request for a crossing of Beulah Road to support informal agreement by school to use Greek Church carpark.
- In the past five (5) years one (1) crash has been recorded on Beulah Road near the school (a crash between a pedestrian, cyclist and vehicle at 4:30pm on Monday 17 December 2012 – likely to be school holidays), and several crashes have been recorded on Osmond Terrace near the School. Of the crashes on Osmond Terrace near the school the crash records suggest five (5) are associated with vehicles parking or un-parking adjacent the school with three (3) of these on the northbound carriageway and two (2) on the southbound carriageway, although only two (2) of these occurred during the school peak times. The following breakdown refers.

Western Carriageway:

Time	Day	Crash Type	Description/Comment
8:51am	Thursday	Side Swipe	Vehicle Parking Hit Pedal Cycle
3:50pm	Saturday	Right Angle	Vehicle Unparking Reversed into Other Car
9:45am	Friday	Rear End	Description indicates in front of school potentially vehicle waiting for park rear ended by a vehicle following too closely

Eastern Carriageway:

Time	Day	Crash Type	Description/Comment
8:47am	Thursday	Side Swipe	Vehicle Parking Hit Pedal Cycle
9:25pm	Friday	Right Angle	Vehicle Unparking Reversed into Other Car

- Existing travel modes (student survey results):
 - walk – 27%;
 - cycle – 9%;
 - scoot – 3%;
 - driven – 60%; and
 - bus (public) – 1%.

- Road safety concerns raised by the school and Governing Council include:
 - congestion at pick up / drop off times;
 - students crossing road between parked vehicles on Beulah Road as no crossing.
 - drop off bays on Osmond Terrace require vehicles to cross through a bike lane and reverse out into a bike lane (history of accidents with two (2) crashes involving vehicles performing parking manoeuvres hitting cyclists in the last five (5) years); and
 - speed of vehicles on Beulah Road.
- Current constraints (as identified by the school) that discourage students from walking to school:
 - lack of crossing on Beulah Road (although few students live on a route that would cross Beulah Road with the crossing primarily to support access to the Greek Church car park); and
 - distance from school / parent work location.
- Current constraints (as noted by the school) that discourage students from cycling/scooting to school:
 - bike lanes are used to access drop off bays on Osmond Terrace (safety concerns); and
 - no bike lanes on Beulah Road (school acknowledges bike boulevard is planned).
- Current road safety plan involvement:
 - 2015 initial involvement with DPTI's Way 2 Go Program; and
 - DPTI's Bike Ed Program.
- Buses park on Osmond Terrace if picking up students for excursions, etc.
- Halls and gym used most evenings and weekends by external groups.

8.2 Observations

- Some parking in No Standing zones for pickup / drop off was observed. Many parents parked in the church carpark to pick up students and walked into the school with young children to collect students.
- Quite a few pedestrians cross Beulah Road adjacent the school entrance, generally associated with school pickup and drop off, but include church users.
- School staff were observed parking on Beulah Road adjacent the school (along the school frontage).
- Some students walked in groups to school along Beulah Road.
- Kerb ramps at the intersection of Beulah Road / Osmond Terrace are not to standard (missing tactile markers) and the east-west kerb ramps do not have kerb ramps on the median opposite.
- Kerb ramps at the intersection of Osmond Terrace / Orange Lane, Osmond Terrace / Police Station Access Driveway and Beulah Road / Plane Tree Lane are not to standard (missing tactile markers).
- Gap between paved footpath and kerb on Beulah Road provides an uneven surface. This is also present adjacent a section of parallel parking on the eastern side of Osmond Terrace but is in better condition.
- Kerbing is uneven and damaged adjacent the school entrance on Beulah Road.
- Leaf litter and seed pods / nuts dropped by trees on Osmond Terrace causing slipping hazard, particularly on the western side of Osmond Terrace.

8.3 Traffic and parking data

- Tube counters were placed outside number 91b Beulah Road, number 32 Osmond Terrace on both the north and southbound carriageways.
- Data indicated that weekday average speeds were recorded at 38.3 km/h and 85th percentile speeds recorded a weekday average of 47.0 km/h on Beulah Road. The tube counter was placed inside a school zone, and although a minor drop in speeds were recorded during the school drop off / pick up times, speeds were considerably higher than the 25 km/h speed limit required when children are present.
- Data indicated that weekday average speeds were recorded at 45.6 km/h and 85th percentile speeds recorded a weekday average of 50.0 km/h on Osmond Terrace northbound carriageway.
- Data indicated that weekday average speeds were recorded at 41.2 km/h and 85th percentile speeds recorded a weekday average of 49.0 km/h on Osmond Terrace southbound carriageway.
- Weekday average volume of 2,042 vehicles per day was recorded on Beulah Road. Weekday average volumes of 7,555 northbound and 7,842 southbound vehicles per day were recorded on Osmond Terrace.
- Morning parking surveys indicated that at approximately 7:45am little on street parking occurs around the school, with the parking on Beulah Road likely to relate to adjacent residential properties or potentially some staff parking, and little parking on Osmond Terrace near the school. In the morning parking peak (approximately 8:45am) Osmond Terrace west side reached capacity, Osmond Terrace east side and Beulah Road approached capacity (80% - 90% occupancy). The church carpark reached just over half its capacity (60 spaces) at this time. It was noted that some parking was associated with the Church as well as with school drop off.
- Afternoon parking surveys indicated that at 2:15pm Beulah Road is fairly heavily parked, generally likely to be associated with the adjacent residential properties, businesses and staff parking. Osmond Terrace has some parking, with the majority further south and as such likely to be associated with The Parade. In the peak parking period of around 3:20pm Beulah Road and Osmond Terrace reach or exceed capacity (with parking in no standing zones and double parking). The Church carpark reaches about 60% of capacity, with all parking seemingly associated with school pickup (i.e. there did not appear to be an event on at the Church as there was in the morning).
- Pedestrian surveys indicated a suitable crossing on Beulah Road adjacent the school entrance would be well used by parents and students accessing the Church carpark. Between 8:00am and 9:00am 55 pedestrians (23 children and 32 adults) were observed crossing Beulah Road adjacent the school entrance and 140 pedestrians (60 children and 80 adults) between 2:30pm and 3:30pm. Some crossing movements associated with the Church were recorded, although there was no specific event taking place. The survey location also covered the access location to Norwood Oval, although it was not in use at the time of the survey.
- Between 8:00am and 9:00am 25 pedestrians were observed crossing Beulah Road at the Osmond Terrace intersection and 60 pedestrians between 2:30pm and 3:30pm.

8.4 Key issues

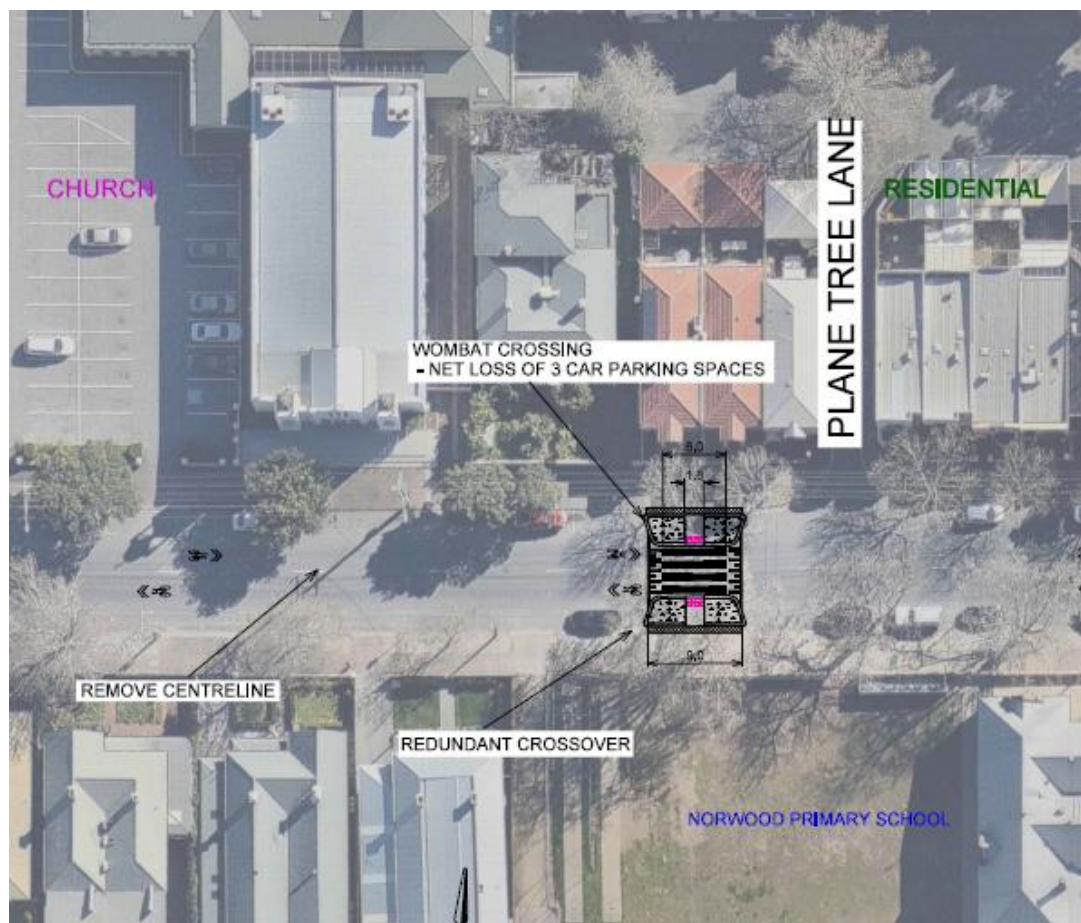
- Lack of pedestrian crossing on Beulah Road / pedestrian safety crossing road for the school and the Church.
- Safety issue (and history of crashes) associated with angle parking on Osmond Terrace (including two (2) hit cyclists).
- Reasonable levels of active travel (40%).
- Speeds on Beulah Road through school zone and visibility of school zone.
- Beulah Road Bicycle Boulevard project recommends a raised zebra/wombat crossing on Beulah Road adjacent the school.

8.5 Options

- Pedestrian crossing (raised wombat crossing in conjunction with Bicycle Boulevard project) on Beulah Road adjacent school entrance. Resulting loss of on-street parking would be minimal (two (2) to three (3) spaces) due to kerb reinstatement at a redundant crossover. It should be noted that the final design of this crossing would be undertaken as part of the Council's Beulah Road Bike Boulevard Project and in this respect, the actual loss of on-street parking will be determined as part of this process.
- Install short-term on-street parking restrictions (15 minutes) during the AM and PM peak periods for four (4) spaces on the south side of Beulah Road adjacent Osmond Terrace.
- Change the existing angled parking north of the PAC to parallel parking on the western side of Osmond Terrace (currently 15 minute zone) to reduce safety concerns associated with angled parking. Potential for redesign and appropriate landscaping amendments to result in a net loss of one (1) parking space (reduce from 13 spaces to 12 spaces). However, this would require substantial changes to existing infrastructure and a balance needs to be struck between the issues and concerns which would be addressed with this change versus what issues may be created with changing the format of the parking at this location. Further information on this is provided in the Final Recommendations section.
- School to consider formalising an agreement with the Greek Church to confirm its usage of the carpark, including potential for staff use.
- Promote cycling opportunities associated with the Beulah Road Bike Boulevard Project.
- Encourage school to continue with DPTI's Way 2 Go Program engagement.
- Speed enforcement on Beulah Road by SAPOL in school zone times.
- Upgrade line marking and signage associated with school zone to improve visibility.

8.6 Draft Recommendations

- The Council install a Pedestrian Crossing (raised wombat) on Beulah Road adjacent the school entrance, as outlined in the map below.



- The Council redesign angled parking north of PAC to parallel parking on western side of Osmond Terrace (15 minute zone) to parallel parking.
- The Council install short term parking restrictions (15 minutes) during the AM and PM peak periods for four (4) spaces on the south side of Beulah Road adjacent Osmond Terrace.
- Enforcement of time-limit (15 minute zone) on Osmond Terrace and Beulah Road by school staff and the Council.
- The school formalise an agreement for the Church carpark use during the AM and PM peak periods, as well as for staff parking.
- The school to continue DPTI's Way 2 Go Program engagement.
- The Council to request SAPOL to enforce school zone speed limit on Beulah Road.
- The Council to upgrade linemarking and signage associated with school zone on Beulah Road to improve visibility.
- The Council upgrade kerb ramps at the Beulah Road / Osmond Terrace intersection to standard with tactile markers and provide east-west pedestrian facilities (appropriate kerb ramps and path across median) as part of the Beulah Road Bike Boulevard upgrades.
- The Council upgrade kerb ramps at the intersections of Osmond Terrace / Orange Lane and Beulah Road / Plane Tree Lane with tactile markers.
- The Council fully pave the width of footpath on Beulah Road south side and Osmond Terrace east side adjacent parallel parking.
- The Council upgrade/reinstate poor quality kerbing in conjunction with crossing installation at the school entrance.

The driver and any passengers in the rear right hand seat would need to exit the car in to this separation zone. Creating additional footpath areas, with localised landscaping around the trees would offer an opportunity for public art, proposed mosaic art treatments by the school and bicycle parking to add value and interest to the streetscape. The change to parallel parking would however be more costly.

A similar number of parallel car parks to the current angle parking provision could be maintained in this area if some of the on road landscape areas are removed. Replacement landscaping has been identified around the Beulah Road intersection and in the Osmond Terrace median as part of the Bicycle Boulevard project which would partially offset this loss of landscaping. The Beulah Road intersection build outs could be designed to accommodate future changes to the Osmond Terrace parking if the project timescales did not align.

- 8.3 The Council to install short-term parking restrictions (15 minutes) during the AM and PM peak periods for four (4) spaces on the south side of Beulah Road adjacent Osmond Terrace.
- 8.4 Enforcement of time-limit (15 minute zone) on Osmond Terrace and Beulah Road by school staff and the Council.
- 8.5 The school formalise an agreement for the Greek Church carpark use during the AM and PM peak periods, as well as for staff parking.
- 8.6 Enforcement of kiss-n-drop and time-limit zones by school staff and the Council.
- 8.7 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 8.8 The school to continue DPTI's Way 2 Go Program engagement.
- 8.9 The Council to request SAPOL to enforce school zone speed limit on Beulah Road.
- 8.10 The Council to upgrade linemarking and signage associated with school zone on Beulah Road to improve visibility.
- 8.11 The Council upgrade kerb ramps at the Beulah Road / Osmond Terrace intersection to standard with tactile markers and provide east-west pedestrian facilities (appropriate kerb ramps and path across median) as part of the Beulah Road Bike Boulevard upgrades.
- 8.12 The Council upgrade kerb ramps at the intersections of Osmond Terrace / Orange Lane and Beulah Road / Plane Tree Lane with tactile markers.
- 8.13 The Council fully pave the width of footpath on Beulah Road south side and Osmond Terrace east side adjacent parallel parking.
- 8.14 The Council upgrade/reinstate poor quality kerbing in conjunction with crossing installation at the school entrance.
- 8.15 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



9 Prince Alfred College

9.1 Summary of issues

- The school is the process of finalising a Master Plan expected to be completed toward mid-2016. The Master Plan includes substantial building modifications including the provision of a new boarding house on the north side of The Parade West.
- The Master Plan is likely to include provision of a pedestrian overpass linking the future boarding house to the main grounds. At the time of drafting this report, the Council had considered the proposal in principle and a range of design matters were being considered by the school.
- Currently 1,200 students with a plan to increase to around 1,400 within ten (10) years.
- Currently approximately 400 staff although only 250 car parks are available within the school grounds.
- A key issue for the school is the DPA review being undertaken by the Council and its ability to develop land between the main grounds and Flinders Street, noting that several of these properties are heritage listed.
- The key areas for traffic and parking are:
 - access to/from The Parade West via Pirie Street;
 - Capper Street as the main access for the middle and high school; and
 - Dequetteville Terrace use by Junior Primary School.
- The school recognises that the vast majority of students (> 90%) arrive by car and that active travel or public transport is quite low.
- The school is about to start some general building works which will result in a reduction of approximately 20 on-site parking spaces.
- Opportunities raised by the school include:
 - possible use of on-street parking along the southern side of The Parade West (currently unrestricted parking) as short-term parking or a kiss-n-drop zone during the AM and PM peak periods;
 - increased parking capacity along Capper Street – potential angle parking and one-way traffic movements; and
 - future car park accessibility via a new access point to Flinders Street.

9.2 Observations

- The school is unique within the City as it provides Early Learning through to Year 12.
- The key areas of traffic and pedestrian activity are :
 - The Parade West / Pirie Street: this junction is highly congested in peak hours with traffic entering and leaving the school car park and internal drop-off zone. A number of students were observed crossing the Parade West after school. Pedestrian infrastructure at the junction is not standard, and there are no kerb ramps along the southern side of The Parade West. The bicycle lane along the Parade West 'disappears' through the junction. Regular queuing occurs on the eastern approach to the junction;
 - Capper Street: is used regularly by student parking despite 2-hour parking restrictions. The road is only just wide enough to accommodate two-way traffic with parking on both sides of the road. Significant congestion occurs with double rank parking at the end of school times; and

- Dequetteville Terrace: is primarily a kiss-n-drop area for the Junior Primary School. Numerous vehicles are parked for longer than allowed, resulting in a lack of turn-over within the zone. Several cars park on the opposite side of Dequetteville Terrace resulting in adults and young students having to cross the arterial road unprotected.

9.3 Traffic and parking data

- Tube counters were placed on the two (2) main frontages to the school onto local roads (The Parade West and Capper Street). A turning count was also completed at the intersection of The Parade West and Pirie Street.
- Data indicated average speeds during the AM and PM peak periods are approximately 40 km/hr - 42 km/h for The Parade West and 21 km/hr - 24 km/h for Capper Street with 85th percentile speeds of approximately 47 km/hr - 48 km/h and 25 km/hr - 27 km/h respectively.
- Weekday average volumes of 7,680 on The Parade West and 1,480 on Capper Street.
- The turning movement count at the intersection of The Parade West and Pirie Street indicated that there are a number of pedestrians crossing at this intersection during peak times (around 30-60 in the AM and PM peak periods). The busiest movement in the AM peak were pedestrians crossing Pirie Street. In the PM peak there were over 30 pedestrians who crossed the Parade West at Pirie Street.
 - In the AM peak there were 290 vehicles entering Pirie Street and 190 vehicles exiting.
 - In the PM peak there were 159 vehicles entering Pirie Street and 187 vehicles exiting.
- The parking surveys indicated that along The Parade West that the all-day parking along the frontage of the school is full by 7:00am in the morning which remains largely the same throughout the day. This parking is probably a mix of local business employees and some city based employees taking advantage of free all day parking.
- There is general parking demand in Capper Street outside of school hours associated with the sports centre on the corner with The Parade West, although this did not cause any significant issues.
- In the AM peak period Capper Street was at approximately 80% capacity. Parking along Dequetteville Terrace closest the school was only around 50% capacity with parks on the parklands side only at 25% capacity. During the PM peak is when Capper Street became over capacity. Similarly along Dequetteville Terrace the parking closest the school was at capacity. Along the parklands side was closer to capacity (75%).
- Reported crashes for the past five (5) years around the school indicated the following:
 - four (4) crashes at the intersection of Capper Street/Parade West (two (2) rear ends, one (1) right turn and one (1) side swipe) of which two (2) resulted in injuries;
 - three (3) crashes at the intersection of Pirie Street/Parade West (all right angle crashes). Two (2) of these crashes involved a cyclist;
 - four (4) other crashes along the Parade West (two (2) rear ends east of Pirie Street of which one (1) resulted in injury, one (1) right angle involving cyclist resulting in injury and one (1) hit fixed object at Little Grenfell Street);
 - one (1) mid-block crash along Capper Street (right angle);
 - six (6) crashes at intersection of Capper Street and Dequetteville Terrace (two (2) rear ends, two (2) right angles, one (1) side swipe and one (1) right turn). One of these involved a cyclist. Of the six (6) crashes, two (2) resulted in injuries;
 - three (3) mid-block crashes along Dequetteville Terrace immediately along the school frontage (two (2) rear ends and a side swipe). One (1) of the rear ends resulted in injury; and
 - one (1) hit pedestrian crash at the intersection of Little Flinders Street and Dequetteville Terrace which resulted in injury.
 - Only four (4) of the reported collisions occurred between 8-9am and 3-4pm on a weekday.

9.4 Key issues

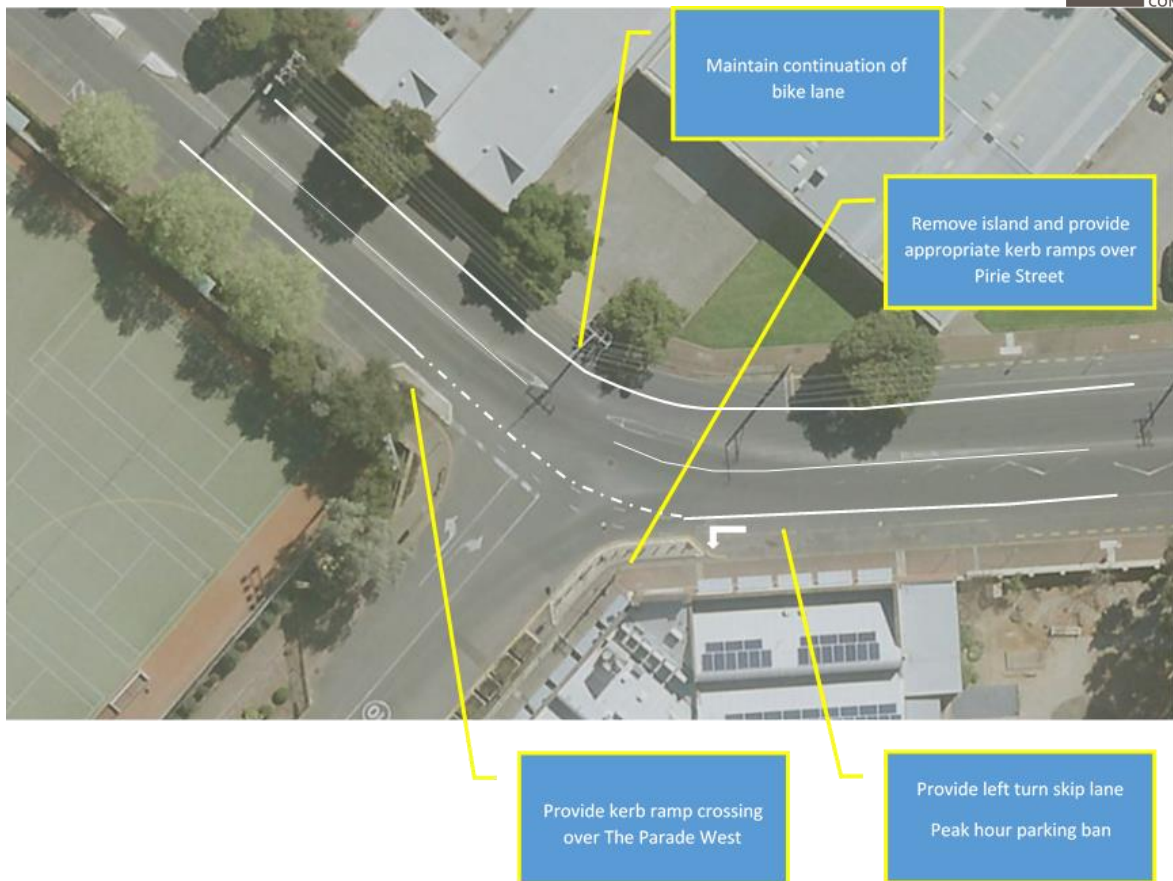
- Traffic congestion and controls at the junction of The Parade West and Pirie Street.
- Management of the kiss-n-drop zone on Dequetteville Terrace.
- Congestion and parking behaviour in Capper Street.
- Future growth of the school as identified in the School's Master Plan and consideration through the Council's DPA.

9.5 Options

- Consideration has been given to a one-way street with angle parking to better manage traffic flows and increase parking numbers. The existing width of Capper Street will only enable 30 degree parking on one side of the road. Approximately 60-65 car parks could be provided if 30 degree parking was established along the school side of the road. No parking would be permitted on the opposite side of the road. However, there are already 68 car parks provided on both sides of the road. The installation of angle parking would therefore result in a small reduction of car parks, although traffic flow would be better managed.
- Reconfiguration of the Pirie Street junction should be considered to improve queuing and pedestrian facilities. A wholesale upgrade of the junction may be needed, also recognising the potential future tram extension along The Parade West.
- There is limited scope to increase the length of the kiss-n-drop zone along Dequetteville Terrace. Nonetheless, consideration should be given to safer facilities along the arterial road, and better management/enforcement of the kiss-n-drop zone.
- There is an opportunity to better utilise parking on the southern side of The Parade West, although Council has indicated that this is one of the only areas of all day parking still available in the Kent Town area.

9.6 Draft Recommendations

- The Council develop a concept plan for the junction of The Parade West and Pirie Street with consideration to:
 - improved queuing on the eastern approach (left turn lane);
 - improved pedestrian facilities to cross The Parade West;
 - appropriate kerb ramps with disability access provisions;
 - future tram extension; and
 - define continuation of the bike lane on both sides of the Parade West.



- Enforcement of the kiss-n-drop zone along Dequetteville Terrace by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The school to undertake DPTI's Way 2 Go Program.
- The Council to formally request DPTI to trial the installation of a 40 km/hr speed limit, along Dequetteville Terrace, via Variable Message Sign (VMS), during the AM and PM peak periods.
- The Council install a section of short-term kiss-n-drop parking on the east side of Capper Street for 60 metres north of Dequetteville Terrace.
- The Council amend the existing on-street parking on the south side of The Parade West between Pirie Street and Capper Street to include a short-term kiss-n-drop zone (four (4) parking spaces) during the AM and PM peak periods and 2-Hour parking at other times, Monday to Friday.
- The Council to continue discussions with the school with regard to their Master Plan and implications of the Council's DPA review.
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

9.7 Consultation Responses

9.7.1 School

- The school was generally supportive of the recommendations.
- The school is currently developing a Master Plan for the overall upgrade of the site which may not be completed until mid-2016.
- The school reiterated the importance of the Council's DPA review undertaken at the time of the Schools Review.

9.7.2 Resident/Stakeholder

- No written correspondences or comments received.

9.8 Final Recommendations

9.1 The Council develop a concept plan for the junction of The Parade West and Pirie Street with consideration to:

- improved queuing on the eastern approach (left turn lane);
- improved pedestrian facilities to cross The Parade West;
- appropriate kerb ramps with disability access provisions;
- future tram extension; and
- define continuation of the bike lane on both sides of the Parade West.

As outlined in the plan provided above.

9.2 Enforcement of the kiss-n-drop zone along Dequetteville Terrace by school staff and the Council.

9.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.

9.4 The school to undertake DPTI's Way 2 Go Program

9.5 The Council install a section of short-term kiss-n-drop parking during the AM and PM peak periods on the east side of Capper Street for 60 metres north of Dequetteville Terrace and no restrictions at other times, Monday to Friday.

9.6 The Council amend the existing on-street parking on the south side of The Parade West between Pirie Street and Capper Street to include a short-term kiss-n-drop zone (four (4) parking spaces) just west of Pirie Street during the AM and PM peak periods and 2-Hour parking at other times, Monday to Friday.

9.7 The Council to continue discussions with the school with regard to their Master Plan and implications of the Council's DPA review.

9.8 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



10 St Ignatius Junior College

10.1 Summary of issues

- Currently 550 students and 40 staff.
- Approximately 18 off-street parking spaces are available for staff and visitors 12 of these are associated with the church and six (6) are on the school grounds.
- Some school staff and visitors car parks on-street on Queen Street, William Street and The Parade.
- Estimated existing travel modes:
 - walk – 1%;
 - cycle – 1%;
 - scoot – 0%;
 - driven – 88%; and
 - bus (public or school) – 10%.
- Road safety and other key issues/concerns raised by the school include:
 - congestion, especially at the end of school day;
 - limited parking;
 - illegally parked vehicles and overstay (including double parking);
 - parking blocking driveways (reported by school as having reduced from previous years but still an issue);
 - speeding;
 - parking in nearby tenants car parks;
 - may need 10 minute parking zone (instead of kiss-n-drop) outside the preschool as parents need to leave vehicles to collect young children;
 - some issues with vehicles not stopping for the crossing (potential to upgrade current Emu Crossing with appropriate build-outs or convert to a Koala Crossing with flashing lights);
 - concern over future increase in development and increase in traffic if no (general) public transport improvements;
 - parental safety concern of walking across intersection of The Parade and Queen Street, as some parents park on the north side of The Parade and walk down to the school; and
 - U-turns on Queen Street.
- Current constraints that discourage students from walking to school:
 - public perception of safety; and
 - distance.
- Opportunities to encourage walking to school include annual Walk to School day.
- Current constraints that discourage students from cycling/scooting to school:
 - traffic and pedestrian activity levels on Queen Street;
 - amount of traffic; and
 - distance from school for many of the students.
- Current constraints that discourage students from using public transport to school:

- directness of routes to school;
- parental concerns about safety; and
- reliability.
- Campus link bus by Torrens Transit can take up to 50 plus students, usually arrives before PM peak period. Current route links to high school campus at Athelstone. School has considered more services / routes.
- Opportunities to encourage the use of public transport to school include bus stop close to school and advertising.
- Current road safety plan involvement:
 - road crossing monitors trained by SAPOL (Year 5 and Year 6 students with teachers monitor the crossing on Queen Street); and
 - participated in Way 2 Go Program several years ago.
- In the past five (5) years there were three (3) midblock crashes on Queen Street between The Parade and William Street, with none occurring in the AM or PM peak periods, and different crash types. In the same period 20 crashes were recorded at the intersection of Queen Street and The Parade, with all occurring outside the AM and PM peak periods so unlikely to be associated with the queuing that occurs on Queen Street associated with the school.
- School grounds are used in evening and on weekends for sport and some school events.
- Occasional parking conflict with adjacent church for major funerals at pick up time
- School transport / travel related school policies:
 - kiss-n-drop;
 - Road Crossing Monitors and Training;
 - Child Protection Curriculum; and
 - Yard Duty teachers on Queen Street footpath and crossing.

10.2 Observations

- Double parking on Queen Street particularly in the PM peak period.
- Queuing on Queen Street back to The Parade, particularly in the PM peak period.
- Existing Emu Crossing on Queen Street not to Code (with crossing width).
- Crossing signs were observed left out during the school day.
- Footpath is not full width paving adjacent the kiss-n-drop zone with level differences and loose surface causing a potential tripping hazard.

10.3 Traffic and parking data

- Tube counters were placed on Queen Street just north of William Street.
- Data indicated that weekday average speeds were recorded at 31.3 km/h and 85th percentile speeds recorded a weekday average of 39.0 km/h on Queen Street immediately north of William Street. The tube counter was placed adjacent the start of a school zone, with speeds dropping around the AM and PM peak periods with averages of approximately 25 km/h recorded and 85th percentile speeds of approximately 31 km/h - 33 km/h.
- Weekday average volume of 2,412 vehicles per day was recorded on Queen Street.
- Morning parking surveys indicated that at 7:45am some parking is present, particularly on the western side of Queen Street, likely to be associated with resident parking and potentially The Parade businesses (staff and customers). At the peak drop off time (8:30am - 8:45am) Queen Street reaches and exceeds capacity.

- Afternoon parking surveys indicated that at 2:30pm there is some capacity on Queen Street and adjoining streets but generally around 70% or more of spaces are occupied, indicating high levels of all day or long term parking associated with residents, and more likely, parking associated with businesses on The Parade. At the parking peak in the afternoon (3:00pm - 3:10pm) Queen Street reaches or exceeds capacity. It was noted that significant queuing waiting to get into parks on Queen Street was observed at this time and this was not recorded as double parking due to the quantity and nature of the queue (generally queued to get into spaces not double parked to collect children).
- Pedestrian surveys indicated between 8:00am and 9:00am 126 pedestrians (98 children and 28 adults) were observed crossing Queen Street at the existing crossing and 143 pedestrians (88 children and 55 adults) between 2:45pm and 3:45pm.

10.4 Key issues

- Parking congestion.
- Double parking waiting to get into spaces.
- Signage and enforcement of parking in kiss-n-drop zone.
- Queuing on Queen Street associated with the AM and PM peak periods.
- Safety at Queen Street / The Parade intersection.
- Speed on Queen Street in school zone. The recorded data for Queen Street indicated 85th% speeds of around 32-33km/h and average speeds of around 25km/h during the 8-9am and 3-4pm periods recorded. The tube counter was placed adjacent the start of a school zone but not in the school zone, and immediately north of the William Street roundabout. As such the data cannot entirely confirm the concerns for speeds within the school zone.

10.5 Options

- Enforcement of existing kiss-n-drop zone to alleviate parking congestion and reduce double parking.
- Queen Street / The Parade intersection future considerations as part of The Parade Master Plan which was being undertaken by the Council at the time of the Schools Review.
- Extend buildouts at existing Emu Crossing on Queen Street to meet requirements of the Code (maximum 8.0 metres width for two (2) vehicle lanes required, approximately 4.0 metres kerb buildouts needed to achieve this). No loss of on-street parking with upgrade.
- The Emu Crossing upgrade could also convert to a Koala Crossing with flashing lights and 25 km/h zone instead of formal school zone.
- Install section of short-term parking restrictions (15 minute) during the AM and PM peak periods on western side of Queen Street south of crossing between 2.30pm and 3.30pm.
- Trial No Standing zone in existing kiss-n-drop from (for example) 2:30pm to 3:00pm to remind all day parkers that vehicles must be moved.
- Speed enforcement by SAPOL on Queen Street in school zone operating times.

10.6 Draft Recommendations

- Enforcement of kiss-n-drop by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council extend buildouts at existing Emu Crossing on Queen Street to meet requirements of DPTI Code.
- Upgrade the existing Emu Crossing to a Koala Crossing with flashing lights during school drop off and pick up times. Upgrade to provide extended kerb buildouts and reduced road width to further assist with speed management and awareness of the crossing location.
- The Council install section of short-term parking restrictions (15 minutes) during the AM and PM peak periods on western side of Queen Street south of crossing between 2.30pm and 3.30pm.
- The Council install No Standing zone in existing kiss-n-drop zones from 2:30pm to 3:00pm to remind all day parkers that vehicles must be moved.
- The Council formally request SAPOL to enforce the school zone speed limit on Queen Street.
- The Council provide full width footpath paving east side of Queen Street (to kerb) adjacent kiss-n-drop zone in particular.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

10.7 Consultation Responses

10.7.1 School

- The school was generally supportive of the recommendations.

10.7.2 Resident/Stakeholder

- Resident notes that kiss-n-drop zone may need to allow parents to get out of vehicle to assist children with bags etc, particularly around preschool and signage should reflect this
- Upgrade to Koala crossing with flashing lights generally supported.
- Resident thinks Council would need to increase current monitoring of parking controls in addition to current efforts.
- Resident thinks SAPOL blitz on speeding have not changed long-term problem.
- Resident suggests 40 km/h speed limit on Queen Street with vehicle calming.
- Resident thinks that our recommendations may help but they should have bus options to remove more cars from arriving at the school.
- School needs clearer school zone signage / presence.

10.8 Final Recommendations

- 10.1 Enforcement of kiss-n-drop zone by school staff and the Council.
- 10.2 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.

- 10.3 Upgrade the existing Emu Crossing to a Koala Crossing with flashing lights during school drop off and pick up times. Based on the surveys conducted there are enough children crossing the road that the warrant for a Koala crossing is met; "In two separate one hour periods of a typical school day: (a) 50 or more children actually cross the road and could reasonably be expected to use the crossing; and (b) 200 or more vehicles per hour pass the site where the children will cross during the same two hours."
- 10.4 The Council install section of short-term parking restrictions (15 minutes) during pick up time on western side of Queen Street south of crossing between 2.30pm and 3.30pm. (approximately 6 spaces). This would supplement the 2 minute pick-up on the eastern (school) side of the road anticipating that parents parking on the opposite side of the road would wish to walk in to school to collect children
- 10.5 The Council formally request SAPOL to enforce the school zone speed limit on Queen Street.
- 10.6 The Council widen the footpath east side of Queen Street to pave full width (to kerb) adjacent kiss-n-drop zone in particular.
- 10.7 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.
- 10.8 The Council installs a 15 minute parking restriction outside the preschool to reflect the need for parents to escort children in to or collect children from preschool (approximately 35m which corresponds to 5-6 spaces). Prior to implementation the time of operation (suggested between 2.30pm and 3.30pm) be confirmed with the preschool.

The final recommendations for the school are shown on the plan below.



11 St Joseph's Memorial School (Kensington)

11.1 Summary of issues

- Currently 100 students, 30 preschool students and 12 staff
- School noted that an extension to the kiss-n-drop zone on Bridge Street (east side) by two (2) spaces would appropriately cater for AM and PM peak periods.
- All students are brought to Bridge Street frontage for collection by parents in the afternoon.
- School noted the following road safety issues:
 - speeds through school zone on Bridge Street (particularly noted as young / P-plate drivers); and
 - large gum trees at entrance to school cause sight distance issues (as well as raised, uneven footpath and leaf litter clogging drainage).
- After school care is held at the Kensington campus, teachers walk to collect after school care students from the Norwood campus and walk them back to the Kensington campus for after school care programs.
- In the past five (5) years two (2) crashes have been recorded near the school with one (1) Hit Parked Vehicle crash on Bridge Street (at 12:30am on a Tuesday) and a Right Angle crash at the intersection of Bridge Street and High Street (on a Saturday)
- Current travel is almost exclusively by vehicle (above 95%) as the site only accommodates reception and Year 1 students, and few students live in the immediate vicinity of the school.

11.2 Observations

- Small school so limited impact on surrounding road network.
- Existing kiss-n-drop zone works well although up to two (2) vehicles double parked at times waiting to access zone, wide and quiet enough street that this does not cause general queuing of traffic.
- Occasional parking in No Standing zone observed, not always associated with the school.
- Few parents parked on High Street to drop off / pick up students, most use Bridge Street.
- Kerb ramps on Bridge Street at the High Street intersection north of High Street for east to west pedestrians are nearly 10 metres north of the desire line.
- Footpath is full width paving adjacent existing kiss-n-drop zone.
- Stop Lines at intersection of High Street / Bridge Street are faded, with Stop sign on the northern approach set well back from the Stop Lines.

11.3 Traffic and parking data

- Tube counters were placed outside number 44 Bridge Street and number 52 High Street.
- Data indicated that weekday average speeds were recorded at 34.8 km/h and 85th percentile speeds recorded a weekday average of 44.0 km/h on Bridge Street. The tube counter was placed in a school zone and while some drop in speeds were recorded during the school pickup and drop off time speeds were still recorded with averages over 30 km/h and 85th percentiles over 40 km/h.
- Data indicated that weekday average speeds were recorded at 31.6 km/h and 85th percentile speeds recorded a weekday average of 38.0 km/h on High Street outside number 52. The tube counter was placed in a school zone and some drop in speeds was recorded during the AM and PM peak periods.

- Weekday average volumes of 1,255 and 1,080 vehicles per day were recorded on Bridge Street and High Street respectively.
- Morning parking surveys indicated some parking on Bridge Street and High Street near the school at approximately 7:45am, potentially related to adjacent residential properties. During the morning parking peak at around 8:45am-8:55am parking generally reached capacity adjacent the school on both Bridge Street and High Street.
- Afternoon parking surveys indicated that at approximately 2:15pm some parking occurred on Bridge Street and High Street, potentially a combination of residents and school staff. At 2:55pm - 3:05pm parking reaches capacity on High Street near the school, and exceeds capacity on Bridge Street adjacent the school with double parking (queued waiting to access kiss-n-drop) on the east side, and parking on the No Standing lines on the west side.

11.4 Key issues

- Double parking waiting for kiss-n-drop space on Bridge Street.
- Speeds on High Street and Bridge Street.
- Faded school zone line marking on High Street.

11.5 Options

- Extend kiss-n-drop on Bridge Street by one (1) to two (2) spaces to alleviate double parking of parents waiting to access kiss-n-drop zone.
- Speed enforcement by SAPOL on Bridge Street and High Street.
- Upgrade line marking associated with school zones (particularly High Street).

11.6 Draft Recommendations

- The Council extend kiss-n-drop on Bridge Street by one (1) to two (2) spaces.
- With extension of kiss-n-drop zone the Council extend full width paving adjacent the new kiss-n-drop zone spaces.
- Enforcement of kiss-n-drop zone by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council formally request SAPOL to enforce the school zone speed limit on Bridge Street and High Street.
- The Council upgrade line marking associated with school zones (particularly High Street).
- The Council install kerb ramps with appropriate kerb buildouts on northern side of the Bridge Street / High Street intersection.
- In conjunction with the above the Council relocate the Stop sign closer to High Street on the northern leg of the High Street / Bridge Street intersection.
- The Council repaint stop lines at intersection of High Street / Bridge Street.
- The school to undertake DPTI's Way 2 Go Program.

- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

11.7 Consultation Responses

11.7.1 School

- School is generally supportive, school board given positive response.
- School notes potential contractual issue with teachers assisting with on-street parking management.
- School notes onsite parking not feasible at site.
- School would like a more visual reminder of school zone would be ideal, potentially flags.

11.7.2 Resident/Stakeholder

- Traffic problems with traffic queuing due to double parking observed, with regular policing required.
- Resident suggests a branded Council wide campaign to assist school principals in educating parents regarding disrespectful behaviour such as blocking driveways and walking on street planting, as well as educating parents on the benefits of walking to the school

11.8 Final Recommendations

- 11.1 The Council extend the kiss-n-drop zone on Bridge Street by one (1) to two (2) spaces.
- 11.2 With extension of kiss-n-drop zone the Council extend full width paving adjacent the new kiss-n-drop zone spaces.
- 11.3 Enforcement of kiss-n-drop by school staff and the Council.
- 11.4 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 11.5 The Council formally request SAPOL to enforce the school zone speed limit on Bridge Street and High Street.
- 11.6 The Council upgrade line marking associated with school zones (particularly High Street).
- 11.7 The Council install kerb ramps with appropriate kerb buildouts on northern side of the Bridge Street / High Street intersection.
- 11.8 In conjunction with the above the Council relocate the Stop sign closer to High Street on the northern leg of the High Street / Bridge Street intersection.
- 11.9 The Council repaint Stop Lines at intersection of High Street / Bridge Street.
- 11.10 The school to undertake DPTI's Way 2 Go Program.
- 11.11 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



12 St Joseph's Memorial School (Norwood)

12.1 Summary of issues

- Currently 150 students and 20 staff.
- Two (2) parking spaces are available on the parish grounds for staff.
- Staff and visitors generally park on street on William Street.
- Existing travel modes (student survey results):
 - walk – 10%;
 - cycle – 5% (generally parents walking with the cyclist);
 - driven – 85%; and
 - bus (public or school) – 0%.
- In the past five (5) years one (1) midblock Side Swipe crash on William Street was recorded near the school (between Queen Street and Donegal Street). Nine (9) crashes were recorded at the intersection of William Street and Portrush Road, with only one (1) during the AM and PM peak periods involving a cyclist in a Right Angle crash.
- Road safety concerns raised by the school include:
 - location and nature of school zone signage and road markings not visible enough, particularly when turning left into William Street off Portrush Road; and
 - the school noted several incidents a year where local residents have had driveways blocked by school AM and PM peak periods' traffic and parked vehicles associated with the school as well as abusive drivers / parents.
- Current constraints that discourage students from walking to school:
 - distances.
- Current constraints that discourage students from cycling/scooting to school:
 - traffic on Portrush Road; and
 - distance from school and age of students.

12.2 Observations

- Congestion on William Street with vehicles queuing waiting to access kiss-n-drop zone.
- Double parking on William Street waiting for vehicles to leave kiss-n-drop zone.
- Kiss-n-drop zone reaches capacity quickly.
- School staff line children up and manage the kiss-n-drop zone.
- William Street Emu Crossing is not to Code as the actual crossing width is 12.0 metres and should be 8.0 metres maximum and the bike lane markings are not to standard.
- Kerb ramps are not to standard on William Street at the intersection with Donegal Street and on all approaches to the Queen Street / William Street roundabout.
- Emu Crossing flags are left out all day.
- William Street footpath is not fully paved adjacent kiss-n-drop one but is adjacent the Church to the west of the school, the level difference and loose material are potential tripping hazards.

12.3 Traffic and parking data

- Tube counters were placed on William Street just east of Donegal Street.
- Data indicated that weekday average speeds were recorded at 36.1 km/h and 85th percentile speeds recorded a weekday average of 46.0 km/h on William Street. While there is a drop in speeds during the hours starting 8:00am and 3:00pm (approximate school zone operational times) speeds are still higher than the 25 km/h when children present zone signed.
- Weekday average volume of 2,779 vehicles per day was recorded on William Street.
- Morning parking surveys indicated that at approximately 7:45am there were quite a few vehicles parked on William Street adjacent the school. These vehicles are likely to be mostly related to adjacent residential uses. In the 8:30am - 8:45am parking peak William Street generally reaches or exceeds capacity adjacent the school. William Street west of Queen Street and Queen Street south of William Street also approach or reach capacity. Gertrude Street is generally not heavily occupied.
- Afternoon parking surveys at approximately 2:30pm indicated much of William Street and Queen Street was at capacity. At around 3:00pm - 3:10pm the parking demand peaked with most of William Street and Queen Street reaching or exceeding capacity, and Gertrude Street reaching capacity. This suggests that there is a significant number of all-day parkers in the area near the school, and the capacity of parking struggles at end of school time.
- Due to the proximity of The Parade some parking on William Street, Gertrude Street and Queen Street is anticipated to be associated with workers and visitors to The Parade precinct.

12.4 Key issues

- Parking congestion.
- Double parking.
- Enforcement of parking in kiss-n-drop zone.
- Queuing on William Street associated with school AM and PM peak periods.
- Safety of pedestrians crossing Portrush Road (at PAC).
- Speeds on William Street in school zone.
- Visibility to Emu Crossing of vehicles entering William Street from Portrush Road.

12.5 Options

- Enforcement of existing kiss-n-drop zone (double parking waiting to enter kiss-n-drop zone to be enforced with assistance of the Council and SAPOL).
- Extend the kiss-n-drop zone on the north side of William Street subject to agreement with school over displacement of staff on street parking. Incrementally increase zone towards Queen Street with additional two (2) spaces initially, review for further increases.
- Advocate to DPTI for Variable Message Sign (VMS) speed limits during the AM and PM peak periods on Portrush Road around crossing (40 km/h) as done in New South Wales and Victoria.
- Install PAC 'count-down timers' on Portrush Road crossing. This option was not subsequently supported by DPTI as the operational instructions for countdown timers do not permit their use on crossings close to schools.
- Speed enforcement by SAPOL on William Street in school zone operating times

12.6 Draft Recommendations

- Enforcement of kiss-n-drop zone by school staff and the Council.
- The Council extend the kiss-n-drop zone on the north side of William Street incrementally with two (2) additional spaces initially.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council formally requests DPTI to trial the installation of a 40 km/h speed limit along Portrush Road, via Variable Message Signs (VMS), to operate during the school AM and PM peak periods.
- The Council formally request SAPOL to enforce the school zone speed limit on William Street.
- The Council extend buildouts and bike lane markings at the existing Emu Crossing on William Street to meet requirements of the Code.
- The Council upgrade kerb ramps on William Street at the intersection with Donegal Street and on all approaches to the Queen Street / William Street roundabout.
- The Council fully pave William Street footpath adjacent kiss-n-drop zone.
- The school to undertake DPTI's Way 2 Go Program.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

12.7 Consultation Responses

12.7.1 School

- School generally supportive, school board given positive response.
- School notes potential contractual issue with teachers assisting with on-street parking management.
- School notes on-site parking not feasible at site.

12.7.2 Resident/Stakeholder

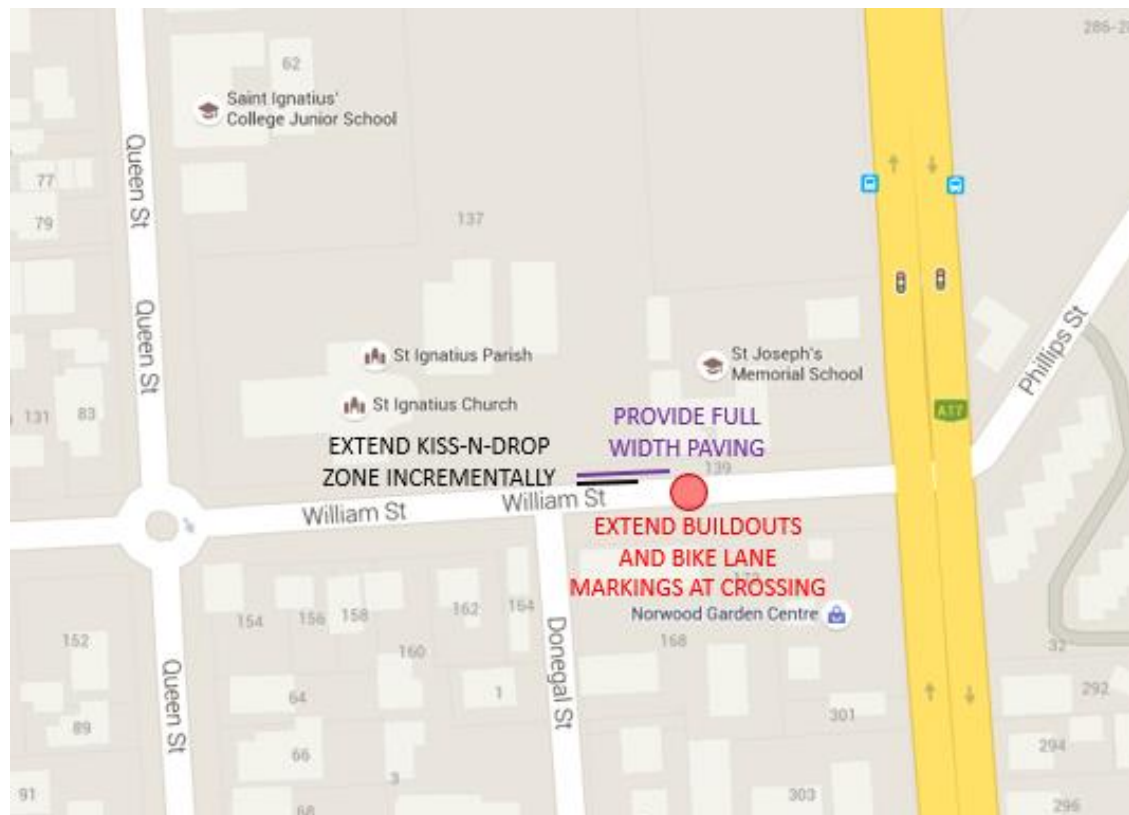
- Kiss-n-drop zone may need to allow parents to get out of vehicle to assist children.
- Need to increase monitoring of parking controls on top of current efforts.
- SAPOL blitz on speeds in past have not changed long-term problem.
- Overflow parking for workers / visitors to The Parade on William Street, as well as residents that cannot park in their properties (including overflow from Queen Street) causes issues.
- Double parking during pickup/drop off times causes queuing issues.
- Resident suggests more bus services between several schools could alleviate the volume of school traffic during the AM and PM peak periods.

12.8 Final Recommendations

- 12.1 Enforcement of kiss-n-drop zone by school staff and the Council.
- 12.2 The Council extend the kiss-n-drop zone on the north side of William Street through the provision of two additional spaces. This should then be monitored in conjunction with the school in relation to the double ranking along William Street and if necessary additional spaces added
- 12.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.

- 12.4 The Council formally request SAPOL to enforce the school zone speed limit on William Street.
- 12.5 The Council extend buildouts and bike lane markings at existing Emu Crossing on William Street to meet requirements of the Code.
- 12.6 The Council upgrade kerb ramps on William Street at the intersection with Donegal Street and on all approaches to the Queen Street / William Street roundabout.
- 12.7 The Council fully pave William Street footpath adjacent kiss-n-drop zone.
- 12.8 The school to undertake DPTI's Way 2 Go Program.
- 12.9 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



13 St Joseph's School (Payneham)

13.1 Summary of issues

- Currently 415 students and 42 staff, with opportunity to increase to around 460 students (including preschool).
- Concern over delays / congestion at the junction of Marian Road and Portrush Road.
- Congestion in the side streets leading into the school when children are being dropped off or picked up.
- Vehicles parking across residents' driveways and crossing in front of pedestrians.
- Vehicles parking in the No Standing zone.
- Vehicles blocking the intersection of Arthur Street and Marian Road.
- Vehicles speeding past the school on Marian Road and Tarcoma Avenue while children are present.
- The school is currently looking at an opportunity to buy an adjacent property for additional on-site parking including kiss-n-drop parking.
- Parking and traffic demands are also influenced by:
 - masses are held at the church on Marian Road (approximately three (3) per week);
 - occasional funeral service at the church; and
 - the gymnasium being used at least three (3) times per week.
- The vast majority of students are driven to school with only 15 families walking and 1 student catching a bus.

13.2 Observations

- The primary area of kiss-n-drop is in Marian Road, with supplementary use of Tarcoma Avenue.
- The Marian Road kiss-n-drop zone is well managed by school staff who coordinate arrivals and departures in an orderly manner. The school is a leader within the City and a very good example of how school staff can and should assist the Council with ensuring parents first and foremost are educated about the relevant issues adjacent schools and just as importantly, parents adhere to the restrictions around the school to ensure road safety.
- Delays for traffic entering Portrush Road were considered acceptable.
- Queuing in Marian Road extends beyond Arthur Street adjacent the Payneham Cemetery during the PM peak period.
- Localised congestion can occur in the afternoon peak with traffic queuing along Marian Road through the intersection with Arthur Street.
- There is a small section of permitted parking on the southern side of Marian Road between Douglas Place and Arthur Street. Vehicles parked in this area in the afternoon peak create queuing difficulties.
- A small number of students walk over Portrush Road using the pedestrian activated crossing.
- A small number of students/parents walk to the school from parks along the northern side of Marian Road, Arthur Street and Second Avenue.
- The school has a teacher car park (approximately 22 spaces) in Tarcoma Avenue. Other staff parking occurs on street (mainly Tarcoma Avenue).
- Tarcoma Avenue provides supplementary long-term parking for staff.

- Pedestrian activity in Tarcoma Avenue was generally along the road (rather than crossing) with numerous pedestrians crossing the intersection with Arthur Street to parks in Second Avenue.
- Traffic congestion and pedestrian activity at the intersection of Arthur Street and Tarcoma Avenue.
- Kerb ramps at the intersections of Arthur Street with Marian Road and Tarcoma Street are substandard.
- There are a couple of minor trip hazards caused by tree roots lifting pavers.

13.3 Traffic and parking data

- Tube counters were placed on Marian Road and Tarcoma Avenue, between Portrush Road and Arthur Street.
- Data indicates average speeds during the AM and PM peak periods are approximately 26 km/h for Marian and 27 km/h - 34 km/h for Tarcoma with 85th percentile speeds approximately 40 km/h for the former and 36 km/h - 41 km/h for the latter.
- Weekday average volumes of 860 on Marian Road and 1,000 on Tarcoma Avenue.
- Parking surveys indicated during the AM peak period that Tarcoma Avenue was at approximately 70% capacity whereas Marian Road was only approximately 40% capacity. Parking did not extend into the surrounding streets in the AM peak period. During the day (approximately 2:00pm) there were a significant number of vehicles parked in Tarcoma Avenue and Marian Road (approximately 50% and 40% capacities respectively). During the PM peak period is when Tarcoma was completely full with overflow parking spilling into Arthur Street. Similarly along Marian Road, the parking along the south side was full with queuing stretching a further 20 cars east of Arthur Street which did not occur in the AM peak period.
- The following crashes were recorded near the school in the past five (5) years:
 - four (4) crashes along Marian Road (one (1) right angle at Douglas Place resulting in injury, two (2) hit parked vehicles and one (1) side swipe);
 - two (2) crashes on Tarcoma Avenue (one (1) hit parked vehicle and one (1) right angle at intersection of Arthur Street);
 - one (1) crash at the intersection of Tarcoma Avenue and Portrush Road (right angle); and
 - three (3) crashes along Portrush Road (two (2) hit fixed objects of which one (1) resulted in serious injury and one (1) rear end).
 - None of the collisions occurred between 8-9am and 3-4pm on a weekday.

13.4 Key issues

- Ongoing management of the kiss-n-drop zone in Marian Road.
- Pedestrian movements over Arthur Street near Tarcoma Street and Second Avenue.
- Future additional on street car park to be provided by the school.

13.5 Options

- Introduce kiss-n-drop zone on the north side of Tarcoma Avenue between school gate and Arthur Street.
- Restrict parking on the south side of Marian Road between Douglas Street and Arthur Street consistent with the kiss-n-drop zone signage.
- The school has previously requested the installation of a pedestrian crossing in Tarcoma Avenue. Actual observations did not indicate a high demand for pedestrians crossing the road (as the opposite side of the road is long-term parking).

13.6 Draft Recommendations

- The Council introduce kiss-n-drop zone on the north side of Tarcoma Avenue between school gate and Arthur Street.
- The Council restrict parking on the south side of Marian Road between Douglas Street and Arthur Street consistent with the kiss-n-drop zone signage.
- The Council continue to liaise with the school in regard to the additional car park and how that can be best managed to provide additional teacher and/or kiss-n-drop one parking.
- The Council reassess parking demand and traffic issues following the (presumed) development of the additional car park.
- The Council formally requests DPTI to trial the installation of a 40 km/h speed limit along Portrush Road, via Variable Message Signs (VMS), to operate during the school AM and PM peak periods.
- The school continues to provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this
- The school to undertake DPTI's Way 2 Go Program.
- The Council formally request DPTI to install PAC 'count-down timers' on the PAC on Portrush Road.
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

13.7 Consultation Responses

13.7.1 School

- School generally supportive of the Schools Review and recommendations
- The school reiterated the need for on-going communication and working with the Council and SAPOL in particular
- The school had purchased an adjacent property but would be unlikely to develop as a car park.

13.7.2 Resident/Stakeholder

- Marian Road: queuing in narrow street where parking is allowed on northern side (although this was not a significant issue from observations).
- Mark yellow (No Stopping) lines in Arthur St near Marian Road to assist queuing near intersection (supported).
- Request for No Parking in Arthur west side between Tarcoma Avenue and Second Avenue.
- No Parking on the south side of Tarcoma Avenue (not supported).
- Concern over speeds in Tarcoma outside of school times and request for road humps. (However traffic data does not reveal this to be a significant issue with speeds and volumes typical of many local residential streets).
- Proposed kiss n drop in Tarcoma was not supported by residents or school.
- Some concerns were raised over driver behaviour near the junction of Portrush Road / Tarcoma Avenue including:
 - U-turns;
 - congestion and delays exiting; and
 - median treatment in Portrush Road.

13.8 Final Recommendations

- 13.1 The Council restrict parking on the south side of Marian Road between Douglas Street and Arthur Street consistent with the kiss-n-drop zone signage.
- 13.2 The Council mark a yellow No Stopping line in Arthur St near Marian Road to assist queuing near intersection in response to community feedback, reinforcing the existing 10m restriction.
- 13.3 The Council consider the installation of peak hour No Parking zone (School Days) on the west side of Arthur Street between Tarcoma Avenue and Second Avenue in response to community feedback. This will require further specific consultation with affected residents.
- 13.4 The school continues to provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this
- 13.5 The school to undertake DPTI's Way 2 Go Program.
- 13.6 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



14 St Peter's College

14.1 Summary of Issues

- Currently 1,390 students (Junior School 570 and Senior School 730) and 220 staff. Have room for additional 100 students and expect to fill these numbers in the coming years.
- Senior School entrances located on Hackney Road, Trinity Street, Pembroke Street and Hatswell Street. Junior School has three (3) access points on North Terrace, one (1) entry, two (2) exits.
- Total of seven (7) parking areas with a total of 381 spaces. Other spaces used for pick up and drop off with some reserved for staff and visitors. Have parking for full sized coaches.
- Travel modes usage (estimated):
 - walk 2% (students come from varied locations and distances from school);
 - cycle 2%;
 - drive 4% (students driving to school);
 - driven 78%;
 - public transport 4%;
 - Hills Bus (private) 3.5%; and
 - other 6.5 % (Boarders).
- The school believes they have a number of people parking illegally in school grounds. Would like the Council to help as they are unable to issue fines. It should be noted that for the Council to assist in this regard, a formal agreement under the Private Parking Areas Act would need to be entered into by the parties.
- Parking in surrounding streets has increased in the last couple of years. Believe it coincides with loss of car parks and cost increase in the Adelaide CBD and Botanic Gardens.
- Do not have access to a number of car parks in the Pembroke Street carpark due to a dangerous tree (blocked off due to dropping limbs). Have shifted some staff parking to Pembroke Street.
- Hackney Road access is difficult to exit in the mornings creating queues within the school.
- Lots of corner cutting at corner of Trinity Street and Rugby Street. Rugby Street often full with vehicles each side (noted that north side is now no stopping).
- Those that use Pembroke Street entrance use as pick up/drop off point. No stopping lines often ignored. Pembroke Street itself often congested.
- Hatswell Street entrance gives access to main student carpark however is currently in use as entrance to building site (no access to students or staff). Suggest that before construction speed was often an issue as students left the school.
- North Terrace entrance has a very steep grade at the footpath. Many vehicles bottom out. One of the exits has left and right turn lanes. This exit has major sightline issues when a bus stopped at the bus stop west of the exit. Have had previous discussion with Council staff however was deemed that school should pay for relocation.
- Concerned review will not factor impact of the O-Bahn City Access Project and the completion of the building off Hatswell Street. Tree issue in Pembroke Street carpark has also altered conditions along Pembroke Street.

- The school has developed a Master Plan and attention has been paid to student safety and vehicle access in and around campus. Car parking is proposed to be increased and a proposal for a kiss-n-drop zone on Pembroke Street.
- Year 2 students participate in road safety program (SAPOL Road Safety Centre).
- School regularly receives complaints about car parking and traffic management in the proximity of the school. However believe it is often not due to traffic associated with the school.
- Grounds are regularly used outside of normal hours by third parties, sports, events etc.

14.2 Observations

- No Stopping areas on Pembroke Street not obeyed by parents dropping students off. Also disobeyed during the PM< peak period by vehicles waiting to pick up students creating poor sightlines for drivers exiting Pembroke Street access.
- Students observed parking in Pembroke Street and College Street. Becomes very congested in the PM peak period due to parking on both sides, effectively creating a one way street.
- Footpaths along Pembroke Street are in poor condition and missing in sections.
- Through traffic on Pembroke Street generally not complying with school zone.
- Many vehicles entering / exiting access on Trinity Street during the AM peak period.
- Pedestrian infrastructure at intersection of Rugby Street/Pembroke Street/Baliol Street is limited (ie lack of defined crossing points and kerb ramps).
- Much of the traffic congestion occurs on-site rather than in the local street network.
- Noted no end school zone signs on Pembroke Street (heading north-west).
- Lack of proper footpath noted on Hatswell Street on west side.
- Intersection of Hatswell Street/Bertram Street dangerous due to location of hedge on south-west corner on private property.
- Minimal parking occurred on Trinity Street (most likely due to 2-hour parking restrictions).

14.3 Traffic and parking data

- Tube counters were placed on the four (4) main surrounding local roads Trinity Street, Rugby Street, Pembroke Street and Hatswell Street.
- Data indicated average speeds during the AM and PM peak periods are approximately 37 km/h - 39 km/h for Trinity Street, 28 km/h - 29 km/h for Rugby Street, 31 km/h - 32 km/h for Pembroke Street and 16 km/h - 18 km/h for Hatswell Street. The 85th percentile speeds were approximately 44 km/h - 46 km/h for Trinity Street, 34 km/h for Rugby Street, 39 km/h - 40 km/h for Pembroke Street and 21 km/h - 23 km/h for Hatswell Street.
- Weekday average volumes of 850 on Trinity Street, 1,300 on Rugby Street, 930 on Pembroke Street and 310 on Hatswell Street.
- Parking Surveys confirmed observations made during initial inspections. Pembroke Street is where the majority of on street parking occurs and was found to become full by midday. It is likely that there is less parking here in the morning peak due to Year 12 students who are not required to be at the school first thing. Rugby Street immediately adjacent the school was at or near capacity both in the AM and PM peak periods. However, this is likely due to the local house construction which was occurring in the vicinity during the Schools Review.

- There were two (2) crashes at the intersection of Rugby Street/Baliol Street/Pembroke Street. One (1) was a rear end and another a right angle, both resulting in property damage only. Both occurred between 8-9am and 3-4pm on a weekday. There were hit parked vehicle collisions on Rugby Street and Trinity Street with the former resulting in a casualty (injury). A right angle collision occurred at the intersection of Hatswell Street and Cambridge Street which resulted in property damage only.

14.4 Key issues

- Large school with many access points, traffic largely contained on site.
- Current traffic issues do not represent normal issues due to Hatswell Street entrance and carpark blocked for on-site construction.
- Intersection of Rugby Street / Baliol Street / Pembroke Street chaotic at AM and PM peak periods. Lack of defined crossing points. Historic concerns regarding manoeuvrability through slightly off-set intersection.
- Pembroke Street entrance very congested during peak times due to students parking on street (may be temporary).
- Bus shelter on North Terrace creates sightline issues for vehicles leaving junior school exit.
- Will be impacted by changes to Hackney Road due to the O-Bahn City Access Project but it is noted that the school has had various discussions regarding the project with DPTI's O-Bahn Project Team.
- Footpaths lacking / missing on Pembroke Street.
- Speeds through school zones (students and through vehicles).

14.5 Options

- Pembroke Street:
 - enforce current No Stopping restrictions (west side);
 - No Stopping area opposite entrance;
 - consider kiss-n-drop zone along Pembroke Street in line with school's Master Plan; and
 - upgrade existing infrastructure (footpaths).
- Enforcement of speeds by SAPOL.
- Rugby Street / Baliol Street / Pembroke Street intersection:
 - paint central median or centreline in Rugby Street;
 - add kerb ramps; and
 - maintain vegetation at Rugby Street/Baliol Street/Pembroke Street intersection (sightlines).
- Remove / maintain hedge at intersection of Hatswell Street and Bertram Street (sightlines).
- Consider reviewing traffic and parking once construction on site has finished and / or when the DPTI's O-Bahn City Access Project is completed.
- Relocate bus shelter on North Terrace to improve sightlines of drivers exiting school.

14.6 Draft Recommendations

- For Pembroke Street, the Council is to:
 - enforce current No Stopping restrictions (west side);
 - install No Stopping opposite school entrance;
 - install kiss-n-drop zone along Pembroke Street in line with school's Master Plan; and
 - upgrade existing footpath on west side and remediate footpath on east side for full length of street
- Enforcement of kiss-n-drop by school staff and the Council.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this
- The Council to formally request SAPOL to enforce the school zone speeds.
- For Rugby Street / Baliol Street / Pembroke Street intersection, the Council is to:
 - paint central median or centreline in Rugby Street;
 - add kerb ramps; and
 - maintain vegetation at junction to improve sightlines.
- Remove / maintain hedge at intersection of Hatswell Street and Bertram Street to improve sightlines.
- The school to undertake DPTI's Way 2 Go Program.
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

14.7 Consultation Responses

14.7.1 School

- No response provided.

14.7.2 Resident/Stakeholder

- Pembroke Street – congestion, all day parking, driveway access.
- Several residents sought 2-hour parking restrictions on the east side of Pembroke Street.
- Sight lines / vegetation at Rugby / Pembroke / Baliol (this is already addressed by the recommendations).
- Parking congestion in Rugby Street (Trinity to Baliol) – need parking restriction on southern side. Further parking restrictions are not considered warranted.

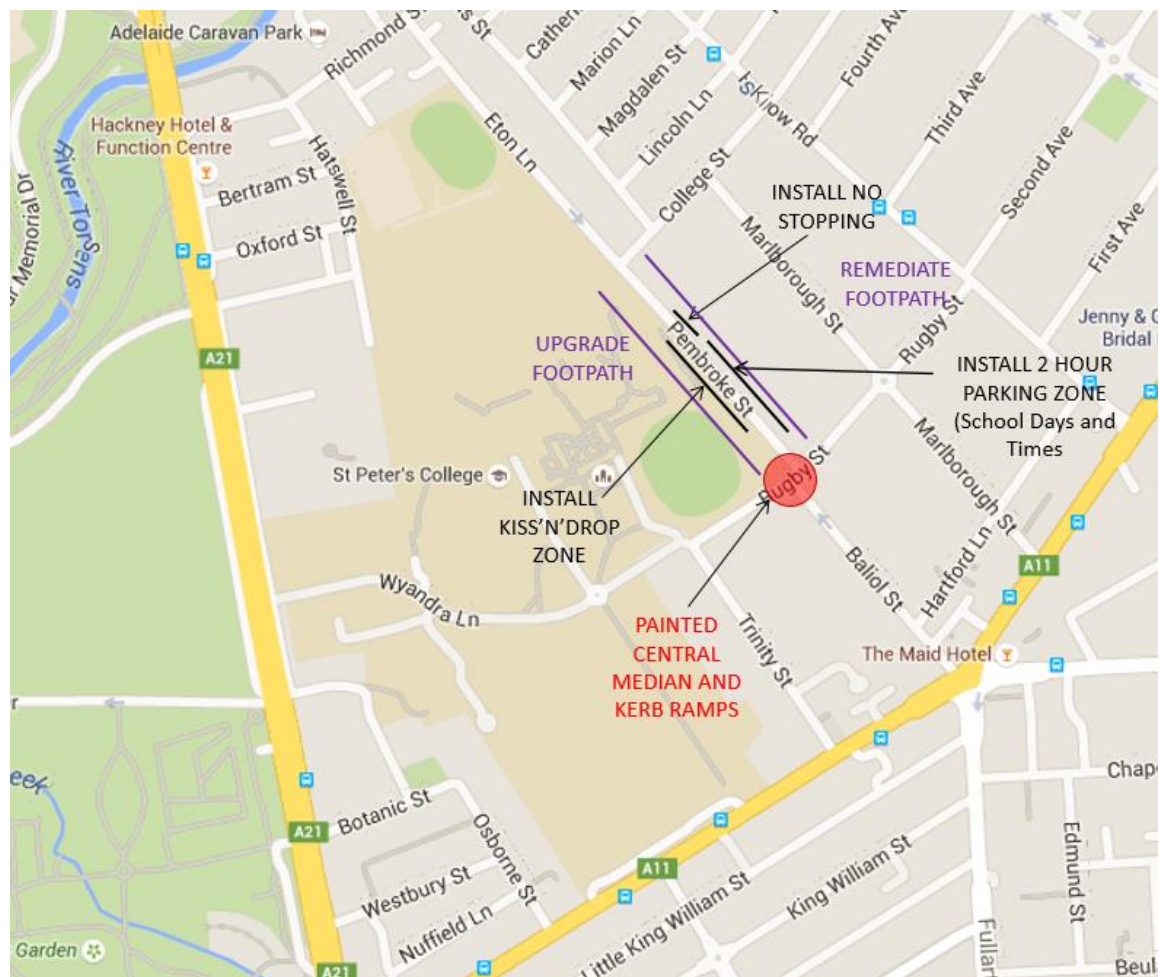
14.8 Final Recommendations

14.8.1 For Pembroke Street, the Council is to:

- enforce current No Stopping restrictions (west side);
- install No Stopping opposite school entrance;
- install kiss-n-drop zone along Pembroke Street in line with school's Master Plan; and
- upgrade existing footpath on west side and remediate footpath on east side for full length of street; and
- install a 2-hour parking limit on the east side of Pembroke Street on weekdays and school times (as requested by several respondents)

- 14.2 Enforcement of kiss-n-drop zones by school staff and the Council.
- 14.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this
- 14.4 The Council to formally request SAPOL to enforce the school zone speeds.
- 14.5 For Rugby Street / Baliol Street / Pembroke Street intersection, the Council is to:
 - paint central median or centreline in Rugby Street;
 - add kerb ramps; and
 - maintain vegetation at junction to improve sightlines.
- 14.6 Remove / maintain hedge at intersection of Hatswell Street and Bertram Street to improve sightlines.
- 14.7 The school to undertake DPTI's Way 2 Go Program.
- 14.8 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The above recommendations are shown on the figure below.



15 Trinity Gardens Primary School

15.1 Summary of issues

- Traffic congestion associated with Portrush Road, with concern over volumes and heavy transport.
- The operation of the kiss-n-drop is inefficient and there is limited on-street parking around the school during the AM and PM peak periods.
- The school has very limited staff parking which adds to the on-street parking demand.
- Currently have 680 students and approximately 85 staff. The school has seen significant growth over recent years, and is still experiencing growth in the junior school levels.
- The school has engaged in DPTI's Way 2 Go Program and has reasonable levels of active travel:
 - walk - 15%;
 - cycle - 4%;
 - driven (driver for year 12) - 75%; and
 - bus (public or school) - 1%.
- The school's 2015 sustainability theme is focused on encouraging active transport choices and physical movement.
- The school has purchased a class set of scooters to encourage this mode of transport for younger students, with approximately 30% of students residing within 1km of the school.
- DPTI's Way 2 Go Program grant has funded additional scooter and bike parking options.
- Staff on-street parking guidelines are regularly promoted to staff.

15.2 Observations

- Traffic and parking demand extends into several streets around the school including:
 - Aveland Avenue, north and south of Aberdare Avenue;
 - Aberdare Avenue, east of Aveland Avenue;
 - Annesley Avenue;
 - Devitt Avenue;
 - Amherst Avenue;
 - Clifton Street (opposite side of Portrush Road); and
 - Nora Street (opposite side of Portrush Road).
- There is no footpath along the northern side of Aberdare Avenue adjacent the school.
- The kiss-n-drop on the northern side of Jones Avenue results in numerous U-turns for traffic approaching and leaving via Portrush Road.
- During the PM peak period, the queue for the kiss-n-drop extended back into Portrush Road. This is due to the school providing the main point of student pick up off Jones Avenue and students are held back until their parent or carer arrives to the entrance.
- A high demand for the left turn out of Jones Street into Portrush Road and then an immediate right turn into Clifton Street:
 - during the AM peak period 164 drivers turned left out of Jones Street, of which 75 immediately turned right into Clifton Street;

- during the PM peak period 112 drivers turned left out of Jones Street, of which 61 immediately turned right into Clifton Street; and
- the Council is investigating whether this observation is related to a potential ‘rat-run’ of traffic along Clifton Street and Henry Street to avoid delays associated with the right turn from Portrush Road into Magill Road.
- A reasonable number of students and adults park on the opposite side of Portrush Road and use the PAC, although the crossing is not monitored.
- Old kerb ramp infrastructure at the intersection of Jones Avenue and Amherst Avenue.
- A high number of pedestrians use the intersection of Jones Avenue and Amherst Avenue.
- There is a supplementary school gate on the north side of Aberdare Avenue that is used by students, yet there no crossing facilities, parking is permitted up to the gate, and double ranking was observed in the PM peak period.
- Several concerns over adult behaviour were observed including:
 - approaching the kiss-n-drop from the wrong direction and parking (illegally) in an eastbound direction;
 - adult and child crossing Portrush Road between Clifton St and Jones Avenue without using the nearby pedestrian activated crossing; and
 - double ranking adjacent the kiss-n-drop facility noting that there’s no storage or queuing capacity in Portrush Road.
- There is a generally high demand for parking in Amherst Avenue south of Jones Avenue, probably associated with other residents/businesses in the area rather than school traffic.
- Aberdare Avenue and Jones Street are identified as a future ‘bike boulevard’ in the Council’s Bike Plan (medium priority) with an upgraded crossing of Portrush Road.

15.3 Traffic and parking data

- Tube counters were placed on Aberdare Avenue (between Annesley Ave and Aveland Ave), Devitt Avenue (between Portrush Road and Aveland Avenue) and Jones Avenue (between Portrush Road and Amherst Avenue).
- Data indicated average speeds during the AM and PM peak periods are around 35 km/h - 37 km/h for Aberdare Avenue, 29 km/h - 30 km/h for Devitt Avenue and 27 km/h - 30 km/h for Jones Avenue. The 85th percentile speeds were approximately 44 km/h - 46 km/h for Aberdare Avenue, 35 km/h - 36 km/h for Devitt Avenue and 36 km/h - 38 km/h for Jones Avenue.
- Weekday average volumes of 1,470 on Aberdare Avenue, 770 on Devitt Avenue and 1,570 on Jones Avenue.
- Parking surveys recorded around the school showed that at around 7:30am parking on the northern side of Aberdare Avenue along the school was full. Opposite the school along Jones Avenue has around 50 % capacity. During the AM peak period no streets were at capacity however many were close to or over 50% capacity with parking extending into Amherst Avenue, Annesley Avenue and Aveland Avenue. During the day (approximately 2:00pm) parking in Amherst Avenue, was near capacity, with the southern side of Jones Avenue at capacity. The school side of Aberdare Avenue was close to capacity. In the PM peak period much of the parking was either over, at or close to capacity with parking extending into the previously mentioned side streets.
- The following crashes were recorded near the school over the past five (5) years:
 - one (1) crash along Devitt Avenue (side swipe which resulted in injury);
 - one (1) crash on Aveland Avenue (hit parked vehicle);
 - one (1) crash on Aberdare Avenue (right angle at intersection of Annesley);
 - one (1) crash at the corner of Aberdare Avenue and Amherst Avenue (hit parked vehicle);

- two (2) crashes on Amherst Avenue (both hit parked vehicles);
- one (1) crash at intersection of Amherst Avenue and Jones Avenue (hit fixed object);
- one (1) crash on Jones Avenue (hit parked vehicle);
- three (3) crashes at the intersection of Jones Avenue and Portrush Road (two (2) rear ends, one (1) right turn) of which two (2) resulted in injuries. 1 crash involved a cyclist;
- nine (9) crashes along Portrush Road along the frontage of the school;
 - five (5) rear ends (one (1) resulting in injury);
 - one (1) side swipe;
 - one (1) right angle;
 - one (1) right turn; and
 - one (1) hit parked vehicle.
- two (2) collisions involved bicycles (both on Portrush Road) and there were no reported collisions involving pedestrians.
- 5 of these reported collisions occurred between 8-9am and 3-4pm on a weekday.

15.4 Key issues

- Improved management of the kiss-n-drop parking area (queuing).
- Need for additional parking.
- On-going improvement in parent traffic behaviour.
- Reduction in U-turns in Jones Avenue.
- Need for a footpath along the northern side of Amherst Avenue.
- Appropriate treatment of Portrush Road.
- Pedestrian safety at the intersection of Amherst Avenue and Jones Avenue.

15.5 Options

- Consideration has been given to a one-way system to enable traffic to loop around the school rather than U-turns in Jones Avenue. Two-way daily traffic volumes in Jones Avenue are approximately 1,570 (860 westbound and 710 eastbound). Creation of a one-way street (eastbound) would result in around 860 movements having to find an alternative exit route onto Portrush Road. However, the local road network is not conducive to this form of treatment with an indirect route via Amherst Avenue, Aberdare Avenue, Aveland Avenue and Devitt Avenue resulting in more traffic driving past all frontages of the school, or south via Amherst Avenue to Albermarle Avenue.
- An alternative treatment would be to mark a continuous centre line (supplemented with pavement bars) along Jones Avenue to prohibit U-turns, and promote this legal requirement through the school. This will technically result in a smaller redistribution of the drivers currently executing U-turns in Jones Avenue to either of the routes mentioned above.
- Aberdare Avenue could be adjusted to accommodate a footpath on the northern side of the road while retaining most of the parking on this side.
- A pedestrian crossing point consisting of a kerb buildout and ramp should be formalised adjacent the school gate in Aberdare Avenue.
- Consideration could be given to defining a broader school precinct, beyond the immediate frontages and school zone, recognising the substantial zone of influence of the school, working in collaboration with DECD, the Council and DPTI.
- The school has previously requested a pedestrian crossing in Jones Avenue, however most pedestrian activity occurred at the junction with Amherst Avenue rather than mid-block. A crossing mid-block in Jones Avenue is not considered necessary.

- The school has a good opportunity to continue to develop and promote DPTI's Way 2 Go Program, further encouraging active travel by students and teachers alike.
- DECD and the school should consider the viability of creating additional on-site parking for staff particularly in light of the potential growth expected by the school.

15.6 Draft Recommendations

- The Council to mark a continuous center line and pavement bars along Jones Avenue to prohibit U-turns and promote this restriction through the school. This plan is to accommodate the proposed bike boulevard along Aberdare Avenue and Jones Street.
- The Council in conjunction with school staff develop a program to enforce the kiss-n-drop parking area.
- The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- The Council install a pedestrian refuge / median in Jones Avenue at the junction with Amherst Avenue to address pedestrian safety at the junction.
- The Council in consultation and collaboration with the school to develop a concept plan for the provision of a footpath along the northern side of Aberdare Avenue between Amherst Avenue and Aveland Avenue, integrating existing trees, a pedestrian crossing points and on street parking restrictions at the school gate west of Annesley Avenue. This plan should integrate the proposed bike boulevard along Aberdare Avenue and Jones Street.
- The school continue its implementation of DPTI's Way 2 Go Program.
- The school consider staggering its start and finish times to balance the pressures currently placed on parking and access to and from the school.
- The Council formally request the school and DECD to consider the viability of creating additional on-site parking for staff and disability parking.
- The Council formally request SAPOL enforce the school zone speed limits in Jones Avenue, Amherst Avenue and Aberdare Avenue.
- The Council formally requests DPTI to trial the installation of a 40 km/h speed limit along Portrush Road, via Variable Message Signs (VMS), to operate during the AM and PM peak periods.
- The Council formally request DPTI to install PAC 'count-down timers' on PAC on Portrush Road.
- The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

15.7 Consultation Responses

15.7.1 School

- The school was largely supportive of the review and recommendations, although the trade-off required in removing educational space for the provision of additional off street car parking was not supported.

15.7.2 Resident/Stakeholder

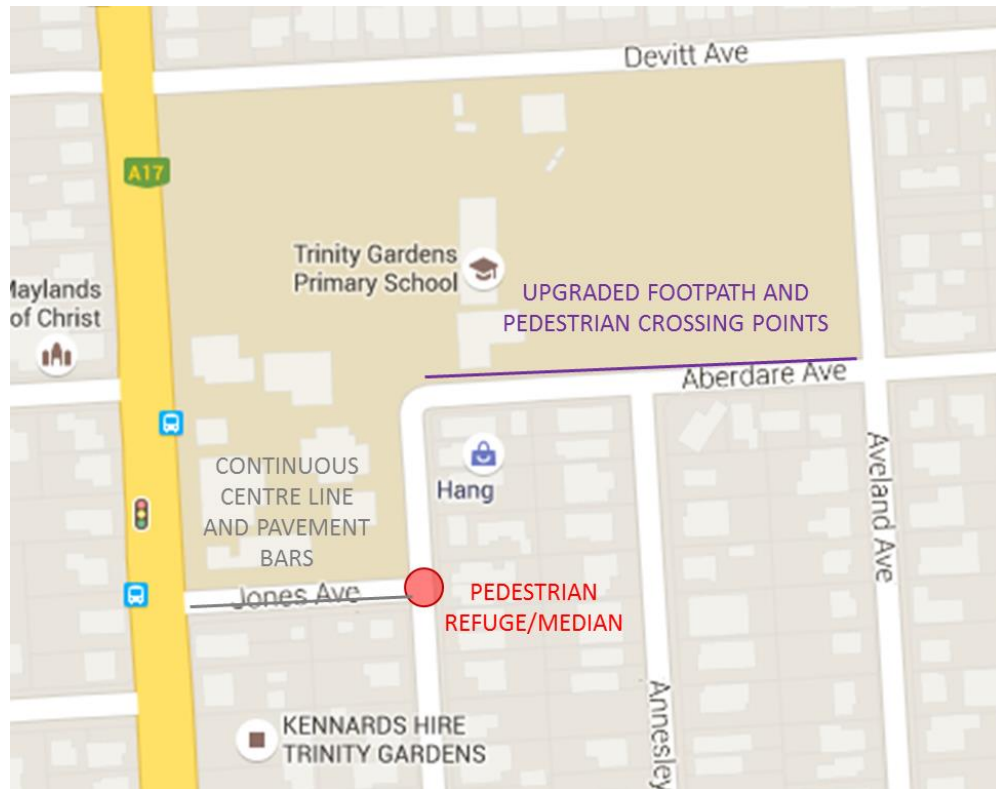
- School growth over years has increased the problem.
- Improved signage needed.
- Suggested roundabout at Aberdare Avenue / Aveland Avenue.
- More parking on-site.
- Devitt Avenue parking concerns / narrow street (restrict parking on one side).
- Parking too close to Devitt Avenue and Aveland Avenue.
- Parking congestion and driveway access in Amherst Ave (opposite Jones) – additional parking restrictions.
- No staff parking should be allowed in Jones Avenue or Amherst Avenue.
- Parking issues in Aberdare Avenue, resident access, staff parking, resident parking only on south side, time limited parking on north side (note that Council policy does not support the installation of resident parking zones).

15.8 Final Recommendations

- 15.1 The Council to mark a continuous centre line and pavement bars along Jones Avenue to prohibit U-turns and promote this restriction through the school. This plan is to accommodate the proposed bike boulevard along Aberdare Avenue and Jones Street.
- 15.2 The Council in conjunction with school staff develop a program to enforce the kiss-n-drop parking area.
- 15.3 The school provide parents with regular information in its newsletter regarding the importance of adhering to on-street parking controls and the safety issues associated with this.
- 15.4 The Council install a pedestrian refuge / median in Jones Avenue at the junction with Amherst Avenue to address pedestrian safety at the junction.
- 15.5 The Council in consultation and collaboration with the school and residents to develop a concept plan for the provision of a footpath along the northern side of Aberdare Avenue between Amherst Avenue and Aveland Avenue, integrating existing trees, a pedestrian crossing points and on street parking restrictions at the school gate west of Annesley Avenue. This plan should integrate the proposed bike boulevard along Aberdare Avenue and Jones Street.
- 15.6 The school continue its implementation of DPTI's Way 2 Go Program.
- 15.7 The school to stagger its start and finish times to balance the pressures currently placed on on-street parking and access to and from the school.
- 15.8 The Council formally request the school and DECD to consider the viability of creating additional on-site parking for staff and disability parking.
- 15.9 The Council formally request SAPOL enforce the school zone speed limits in Jones Avenue, Amherst Avenue and Aberdare Avenue.

15.10 The Council explores opportunities with DECS, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



16 Felixstow Community School

16.1 Summary of issues

- Currently 90 students (reception to year 7). Likely to expand to 128 children within two (2) years. Community school requires parents / caregivers walk children into school.
- Next to Briar Special Needs Early Learning Centre (“Early Learning Centre”) and DECD Eastern Office.
- Main gate is via Briar Road. However, have access via the southern DECD access (shared access).
- Have nine (9) on-site parking spaces reserved for staff including one (1) disability park. There are also three (3) other on-site parking spaces in the vicinity of the school. One is for the Early Learning Centre which the school has instruction not to use. Another is located opposite the school which is for the funeral director however some parents use this as overflow or when approaching from the north as it is easier to park in here then perform a U-turn (not encouraged). The last is within the Paterson Reserve which has access via Turner Street. This carpark is immediately west of the school border and vehicles which park here can access the school from the gate on the northern side.
- Travel modes (estimated):
 - walk - 0% (unzoned school therefore most families drive to school);
 - cycle - 5%;
 - driven - 90%; and
 - bus - 5% (will only use public transport if it's one journey i.e. not multiple buses etc).
- Current on-site parking provisions satisfies staff demands.
- Visitors generally park along Briar Road, or in the Paterson Reserve carpark. Some park at the Payneham Swimming Centre carpark and walk across oval and some park in the Funeral Home carpark however this is discouraged.
- Speeds along Briar Road during the AM and PM peak periods.
- Expansion of school may exacerbate current challenges (parking on street and speeds during peak times).
- Students mostly come from the eastern / northern suburbs.
- No transport / travel related school policies.

16.2 Observations

- The school is located between an Early Learning Centre and DECD Eastern Office. The former Brain Injury Rehabilitation Community and Home (BIRCH) is located opposite the school, which when redeveloped may change traffic conditions and pedestrian movements in the street.
- No Standing along full length of eastern side of Briar Road during 8:00am – 5:00pm.
- First parents arrive around 8.30am waiting for school to start at 8.55am.
- Some parents seen arriving on tandem bikes.
- High speed of through traffic very apparent.
- Some parents observed parking in wrong direction when approaching from the north.
- Parents observed using Funeral Home carpark as a U-turn point when approaching the north due to no parking on east side of Briar Road.

- Many taxis observed entering / exiting the Early Learning Centre.
- Congestion around school generally only lasts for around 10-15 minutes in the AM peak period.
- More vehicles parked in the PM peak period than the AM peak period.
- School is difficult to access from Payneham Road coming from the north-east due to no right hand turn into Briar Road.
- Reduced sightline at intersection of Briar Road and Turner Street.
- No Stopping zones in area seem excessive.

16.3 Traffic and parking data

- Tube counters were placed on Briar Road in two (2) locations, one outside the Early Learning Centre and the other north of the southern entrance to DECD.
- Data indicated average speeds during the AM And PM peak periods are approximately 34 km/h - 37 km/h for Briar Road with 85th percentile speeds approximately 44 km/h - 47 km/h.
- Weekday average volumes between 1,050 - 1,100 were recorded on Briar Road.
- Parking surveys indicated that in the AM peak period on-street parking is not fully utilised. Some on-site parking was used. In the PM peak period on-street parking was at capacity immediately south of the DECD entrance. This meant the overflow moved to the Funeral Home carpark with more vehicles were observed to be parked there in the AM peak period than the PM peak period.
- There were two (2) recorded crashes in the past five (5) years (hit fixed object and a head on) at the intersection of Briar Road and Turner Street. Both resulted in property damage only. None occurred between 8-9am and 3-4pm on a weekday. There were no midblock collisions along Briar Road.

16.4 Key issues

- Small school.
- As a community school, parents are required to walk children into / out of school (which results in longer parking and low parking turnover).
- Unofficial on-site parking available for parents opposite school (Funeral Home carpark) and via Turner Street (Patterson Reserve carpark).
- Excessive speed through school zone.
- No Stopping zones at DECD entrance too long (Briar Road).
- School request for pedestrian crossing in Briar however limited pedestrian numbers were observed.

16.5 Options

- Reduce length of No Stopping zone outside school near DECD (approximately two (2) spaces) entrance and extend all day parking.
- Speed enforcement by SAPOL.
- Remove No Stopping zone on eastern side of Briar Road.
- Assess impacts of the closure / relocation of the former 'BIRCH' site, subject to an anticipated development application.

- At intersection of Briar Road / Turner Road change paved intersection treatment to raised platform to highlight safety at intersection (unrelated to school).
- Relocate or recess bus stop into footpath on Turner Road to allow vehicles to move past bus when stopped at bus stop (unrelated to school).

16.6 Draft Recommendations

- The Council reduce the No Stopping zone outside school near DECD (by two (2) spaces) entrance and extend all day parking.
- The Council formally request SAPOL to enforce the school zone speed limit on Briar Road.
- Remove No Stopping zone on eastern side of Briar Road and convert to all day parking.
- Assess impacts of the closure/relocation of the former 'BIRCH' site, subject to an anticipated development application.
- The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

16.7 Consultation Responses

16.7.1 School

- The school was largely supportive of the Schools Review and recommendations.
- The school currently has 90 students and there is only expected minor growth in the coming years to a maximum of 120 - 125 students.
- Reiterated concerns along Briar Road.
- Would like the opportunity for a school crossing to be reconsidered subject to the proposed parking changes on the east side of the road and subject to the future development of the BIRCH site. (There are no formal warrants for the installation of a (say) Emu flag crossing, other than general demand and desire lines, which will vary subject to any future parking changes).

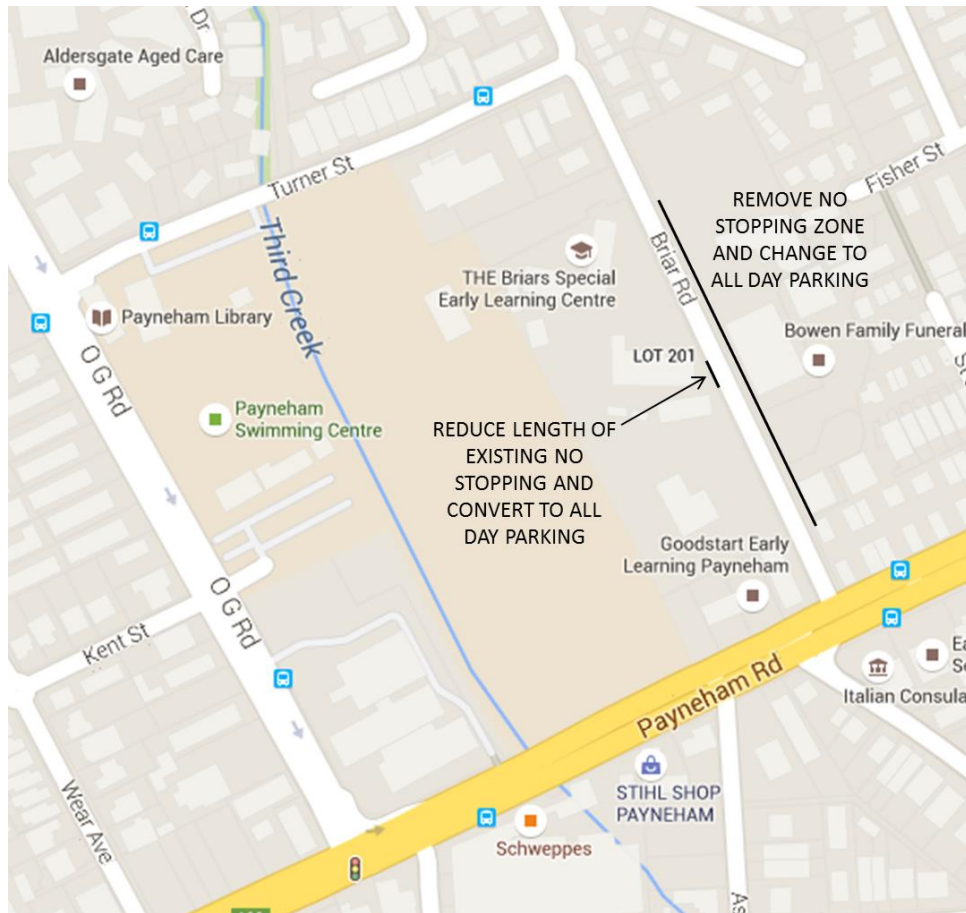
16.8 Resident/Stakeholder

- No written correspondences or comments received.

16.9 Final Recommendations

- 16.1 The Council reduce the No Stopping zone outside school near DECD (by two (2) spaces) entrance and extend all day parking.
- 16.2 The Council formally request SAPOL to enforce the school zone speed limit on Briar Road.
- 16.3 Remove No Stopping zone on eastern side of Briar Road and convert to all day parking.
- 16.4 Assess impacts of the closure/relocation of the former 'BIRCH' site, subject to an anticipated development application.
- 16.5 The Council explores opportunities with DECD, DPTI and SAPOL for the installation of specialist 'School Precinct' signage to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings.

The final recommendations for the school are shown on the map below.



Summary of Recommendations

Summary

Tonkin Consulting and GTA Consultants were engaged by the City of Norwood Payneham & St Peters to undertake the Schools Review.

The Schools Review has included comprehensive data collection, site observations and consultation with the schools, stakeholders and affected residents.

Recommendations contained in this report have been grouped as generically applicable to most (or all) schools or being specific to the individual school. Importantly the recommendations acknowledge that a shared approach and responsibility will be needed to better manage traffic, parking and safety around each school

Common Issues and Treatment Recommendations

Parking Signage

The Council clearly and consistently signpost the kiss-n-drop zones around schools, and supplement the regulatory signage with the adjacent example (already used in some locations) where locally needed.

Council consistently paint continuous yellow No Stopping lines over driveways within the streets of high parking demand around each school.



Recommended Regulatory Sign



Supplementary Fence/Property Sign

40 km/h Speed Limit Trial

The Council formally request DPTI to establish a working partnership to trial the installation of a 40 km/h speed limit adjacent schools located on main roads, via Variable Message Signs (VMS) to operate during the AM and PM peak times. The trial should include a comparison of interstate practices and review of relevant research to establish guidelines under which the use of 40 km/h speed limits might be appropriate in South Australian conditions.

It is evident through the feedback received that DPTI is not supportive of this initiative and have suggested that Osmond Terrace be trialled with feedback provided on the success or otherwise of this prior to arterial roads being considered. Ultimately, this is a 'value add' to the overall objective of road safety adjacent schools. The Council needs to consider all the feedback received on this matter and make an informed decision on whether it should pursue this matter, as the case with all other recommendations contained in this report.

Pedestrian Activated Crossings (PAC's)

The Council formally request DPTI to review the consistent installation of all appropriate technological enhancements at PAC's including extended walk times, microwave technology and safety cameras. Council and DPTI should provide appropriate information to the schools on the specific operational facilities associated with the crossings.

DPTI Way 2 Go Program

All secondary schools to participate in DPTI's Way 2 Go Program in order to encourage active travel, and for the Council to integrate outcomes from the program for each school with any recommendations which are contained in this report. The Council to work with DPTI in the preparation and potential trial of a secondary school Way 2 Go Program.

Parking Enforcement

The Council develops a roster of regular parking enforcement around each school, and liaise with the schools regarding information on parking and traffic rules.

All schools provide regular information in their newsletters distributed to parents reminding them of the need to adhere to parking controls adjacent their site and the safety issues associated with not doing so.

All schools support the Council with their enforcement activities by (for example) allocating teachers on a roster basis to manage and monitor parking adjacent their site. This information will assist the Council with refining its enforcement program and the school with indenting what information may be needed for circulation with parents.

School Zone Signage and Linemarking

The Council should inspect all sites every six (6) months to identify renewal of linemarking associated with the school zones which may be required and replace fading signs as needed. Schools are required to adhere to the appropriate use of 'Children Crossing' flags for Emu Crossings adjacent their sites.

Precinct Treatment Trial

The Council explores opportunities with DECD, DPTI and SAPOL for the installation of various 'School Precinct' treatments to assist in defining the broader precinct around schools to drivers. The signage could also be reinforced with similar pavement markings. DPIT's Way 2 Go Program is an opportunity to explore this further.

Summary of School Recommendations and Costings

A summary of the recommended specific treatments for each school and first order budget estimates follows.

City-Wide Schools Traffic, Safety & Parking Review

Summary of Recommendations & Council Capital First Order Cost Estimates

(June 2016) - (All figures quoted are GST Exclusive)

Report Ref.	Recommendation	Implementation Responsibility	First Order Cost Estimate	Council Sub-Total	Stage 1 (2016-2017)	Stage 2 (2017-2018)	Comment	Council Cost Sharing Opportunity
Common Treatments (refer to pages 6-14 in Volume I)								
P7	Provide consistent signage for kiss-n-drop zones	Council	\$ 30,000.00		\$ 30,000.00	\$ -	Implement City-wide in Stage 1.	No
P7	Mark solid yellow lines across driveways in high on-street parking demand areas	Council	\$ 5,000.00		\$ 5,000.00	\$ -	Implement City-wide in Stage 1.	No
P9	Trial arterial road 40 kph speed limit during school AM and PM peak times	DPTI/Council	\$ 30,000.00		\$ 30,000.00	\$ -	Council to hold discussions with DPTI and develop case in Stage 1.	No
P10	Review operation of arterial road Pedestrian Activated Crossings (PAC's)	DPTI/Council	\$ -		\$ -	\$ -	DPTI to review and provide findings to Council.	-
P10	Participate in and implement DPTI Way2Go Program	School	\$ -		\$ -	\$ -	All schools to participate and DPTI to develop roll-out program.	-
P11	Develop and implement on-street parking enforcement program	Council	\$ -		\$ -	\$ -	Council to implement program with schools assistance.	-
P11	Educate parents and students on on-street parking requirements via newsletters	School	\$ -		\$ -	\$ -	Schools to develop in discussions with Council.	-
P12	Maintain School Zone signage and linemarking	Council	\$ 5,000.00		\$ 5,000.00	\$ -	Remark City-wide initially in Stage 1 maintain thereafter.	No
P12	Use school Crossing Flags in accordance with relevant requirements	School	\$ -		\$ -	\$ -	Schools to ensure effectiveness of Crossings with correct flag use.	-
NA	Undertake regular School Zone speed limit enforcement in school AM and PM times	SAPOL	\$ -		\$ -	\$ -	Council to request SAPOL to develop and implement program.	-
P13	Install local road School Precinct treatment (signage and linemarking)	Council	\$ 10,000.00		\$ 5,000.00	\$ 5,000.00	Design measures in Stage 1. Implement City-wide in Stage 2.	Yes (DPTI/DECD)
				\$ 80,000.00	\$ 75,000.00	\$ 5,000.00		
East Adelaide (refer to Section 1.8 in Volume I)								
1.8	Install pedestrian refuge islands at Second Avenue and Westminster Street and Third Avenue and Westminster Street junctions	Council	\$ 25,000.00		\$ 1,000.00	\$ 24,000.00	New infrastrucutre (design in Stage 1 - implement in Stage 2).	Yes (DPTI/DECD/School)
1.8	Provide 15 minute on-street parking in Winchester Street	Council	\$ 500.00		\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
1.8	Amend kiss-n-drop zone signage for consistency	Council	\$ 500.00		\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
				\$ 26,000.00	\$ 2,000.00	\$ 24,000.00		
Kensington Centre (refer to Section 2.4 in Volume I)								
2.4	Monitor site and reassess in future if required	Council	\$ -		\$ -	\$ -	Assessment site when Pembroke College redevelops.	-
				\$ -	\$ -	\$ -		
Loreto College (refer to Section 3.8 in Volume I)								
3.8	Re-establish on-going assistance for kiss-n-drop zone management in Talbot Grove	School	\$ -		\$ -	\$ -	School to re-establish its previous commitments.	-
3.8	Establish review process	Council/School	\$ -		\$ -	\$ -	Council and school to regularly review effectiveness.	-
3.8	Relocate Kensington Road fence and upgrade bus shelter	School/Council	\$ 7,000.00		\$ 7,000.00	\$ -	School to relocate fence and Council to upgrade bus shelter.	-
3.8	Implement education program for Emu Crossing monitors to ensure appropriate and efficient use of crossing	School/SAPOL	\$ -		\$ -	\$ -	SAPOL to provide training and school to implement.	-
3.8	Adjust Kerb line in Talbot Grove adjacent Emu Crossing	Council	\$ 20,000.00		\$ 20,000.00	\$ -	Upgrade existing infrastructure (design and implement in Stage 1).	No
3.8	Provide full footpath width paving in Talbot Grove	Council	\$ 15,000.00		\$ 15,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
3.8	Remove redundant crossover in Talbot Grove	Council	\$ 3,000.00		\$ 3,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
3.8	Upgrade pram ramps in Talbot Grove	Council	\$ 5,000.00		\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
3.8	Upgrade pram ramps at Emu Crossing in Talbot Grove	Council	\$ 5,000.00		\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
				\$ 55,000.00	\$ 55,000.00	\$ -		
Marden Senior College (refer to Section 4.8 in Volume I)								
4.8	Install pedestrian refuge islands at Marden Road and Pitt Street junction	Council	\$ 15,000.00		\$ 1,000.00	\$ 14,000.00	New infrastrucutre (design in Stage 1 implement in Stage 2).	Yes (DPTI/DECD/School)
4.8	Improve safety for pedestrians crossing on OG Road	DPTI	\$ -		\$ -	\$ -	Council request DPTI improve pedestrian safety on OG Road.	-
				\$ 15,000.00	\$ 1,000.00	\$ 14,000.00		

Marryatville High School (refer to Section 5.8 in Volume I)								
5.8	Install kerb extensions at Stafford Grove / Alnwick Terrace / Dean Grove / Lesbury Street junction	Council	\$ 20,000.00	\$ 2,000.00	\$ 18,000.00	New infrastrucutre (design in Stage 1 - implement in Stage 2).	No (road safety issue)	
5.8	Install turn around and kiss-n-drop zone in school car park	School	\$ -	\$ -	\$ -	Council to request school to unertake this initiative.	-	
5.8	Install "Give Way to Pedestrian" signage along The Crescent footpath	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
5.8	Enforce No Stopping zone in The Crescent	Council	\$ -	\$ -	\$ -	Not applicable.	-	
5.8	Extend unrestricted parking on Alnwick Terrace	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
5.8	Amend No Stopping zone on Alnwick Terrace	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
5.8	Dean Grove abd The Crescent not to be used for student car parking	School	\$ -	\$ -	\$ -	School to instruct students to use school side of streets for parking.	-	
5.8	Widen footpath on Kensington Road adjacent Bus Stop 8	DPTI/Council	\$ -	\$ -	\$ -	Council to request DPTI to undertake who meets cost TBC.	-	
5.8	Upgrade pram ramps at various locations along Kensington Road and Portrush Road	Council	\$ 7,500.00	\$ 7,500.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
5.8	Install kerb extensions at Kensington Road and Bridge Street junction	Council	\$ 7,500.00	\$ 1,000.00	\$ 6,500.00	New infrastrucutre (design in Stage 1 and implement in Stage 2).	Yes (DPTI/DECD/School)	
5.8	Relocate The Crescent fence and widen footpath	School/Council	\$ 15,000.00	\$ 15,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	-	
5.8	Extend footpath on eastern side of The Crescent	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
5.8	Pave full width of footpaths on The Crescent and Alnwick Terrace	Council	\$ 10,000.00	\$ 10,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
			\$ 66,500.00	\$ 42,000.00	\$ 24,500.00			
Marryatville Primary School (refer to Section 6.8 in Volume I)								
6.8	Investigate future connection across Shipsters Road as part of City-wide Bike Plan and in conjunction with the City of Burnside	Council	\$ 5,000.00	\$ -	\$ 5,000.00	Investigation could result in new infrastructure (to be confirmed).	Yes (DPTI/DECD/School)	
6.8	Upgrade pram ramps in Shipsters Road at its Dankel Avenue and Regent Street junctions	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
6.8	Provide full footpath width paving in Dankel Avenue between the right angle bend and Shipsters Road	Council	\$ 15,000.00	\$ 15,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
6.8	Provide full width footpath paving western side of Shipsters Road along the school frontage, between Dankel Avenue and Regent Street	Council	\$ 7,500.00	\$ 7,500.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
6.8	Reinstate kerb to the west of the school crossover on Dankel Street	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No	
			\$ 37,500.00	\$ 32,500.00	\$ 5,000.00			
Mary MacKillop College (refer to Section 7.8 in Volume I)								
7.8	Install Emu Crossing in High Street		\$ 25,000.00	\$ 2,000.00	\$ 23,000.00	New infrastrucutre (design in Stage 1 - implement in Stage 2).	Yes (DPTI/DECD/School)	
7.8	Install Bus Zone in High Street	Council	\$ 1,000.00	\$ -	\$ 1,000.00	New infrastrucutre (incorporate Emu Crossing implement in Stage 2).	No	
7.8	Install one (1) disability parking space in Phillips Street west of High Street	Council	\$ 1,500.00	\$ -	\$ 1,500.00	New infrastrucutre (design not required implement Stage 2).	No	
7.8	Upgrade signage to the High Street and Thornton Street roundabout	Council	\$ 1,000.00	\$ 1,000.00	\$ -	Upgrade signage on all approaches to the roundabout.	No	
7.8	Upgrade pram ramps on High Street	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Existing infrastructure (implement in Stage 1).	No	
7.8	Upgrade the footpath in Phillips Street as part of City-Wide Bike Plan implementation	Council	\$ -	\$ -	\$ -	To be funded as part of the Council's future City-wide Bike Plan implementation.	-	
7.8	Prune and maintain vegetation at Portrush Road and High Street junction	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
7.8	Provide full fotpath width paving south side of High Street between Thornton Street and Phillips Street	Council	\$ 12,000.00	\$ 12,000.00	\$ -	Existing infrastructure (implement in Stage 1).	No	
7.8	Repaint Stop Line at Phillips Street and High Street junction	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
			\$ 46,500.00	\$ 21,000.00	\$ 25,500.00			

Norwood Primary School (refer to Section 8.8 in Volume 1)							
8.8	Install Wombat Crossing in Beulah Road (subject to Council endorsement of the Beulah Road Bike Boulevrad Project)	Council	\$ 50,000.00	\$ -	\$ -	Funding of \$25,000 (50%) from Council as part of the Bike Boulevard Project and \$25,000 (50%) from DPTI.	Yes (DPTI 50-50)
8.8	Redesign angled parking north of PAC on west side Osmond Terrace to parallel parking (15 minute zone)	Council	\$ 85,000.00	\$ 5,000.00	\$ 80,000.00	New infrastrucutre (design Stage 1 and implement Stage 2).	Yes (DPTI/DECD/School)
8.8	Install 15-minute School Peaks parking zone for four (4) spaces on south side of Beulah Road adjacent Osmond Terrace	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
8.8	Formalise agreement for Church carpark usage	School	\$ -	\$ -	\$ -	Not applicable.	-
8.8	Upgrade pram ramps at Beulah Road and Osmond Terrace junction as part of the Beulah Road Bike Boulevard Project	Council	\$ -	\$ -	\$ -	To be funded as part of the Beulah Road Bike Boulevard Project.	
8.8	Upgrade pram ramps at Osmond Terrace and Orange Lane and Beulah Road and Plane Tree Lane junctions	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Existing infrastructure (implement in Stage 1).	No
8.8	Pave full width Beulah Road footpath south side and Osmond Terrace east side adjacent parallel parking	Council	\$ 7,500.00	\$ 7,500.00	\$ -	Existing infrastructure (implement in Stage 1).	No
8.8	Reinstate kerbing adjacent Wombat Crossing in Beulah Road	Council	\$ 2,000.00	\$ 2,000.00	\$ -	Existing infrastructure (implement in Stage 1).	No
				\$ 100,500.00	\$ 20,500.00	\$ 80,000.00	
Prince Alfred College (refer to Section 9.8 in Volume I)							
9.8	Develop concept plan for The Parade West and Pirie Street junction	Council	\$ 15,000.00	\$ 1,500.00	\$ 13,500.00	New infrastrucutre (design in Stage 1 and implement in Stage 2).	Yes (DPTI/School)
9.8	Install a section of 60 metres of kiss-n-drop zone on east side of Capper Street	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
9.8	Amend existing parking on south side of The Parade West between Pirie Street and Capper Street to include a kiss-n-drop zone	Council	\$ 500.00	\$ -	\$ 500.00	Implement in Stage 2 (at earliest). Subject to School Boarding House development and DPTI Tram Concepts.	Yes (DPTI/School)
9.8	Continue discussion with school on Master Plan	Council/School	\$ -	\$ -	\$ -	Not applicable.	-
				\$ 16,000.00	\$ 2,000.00	\$ 14,000.00	
St Ignatius Junior College (refer to Section 10.8 in Volume I)							
10.8	Upgrade Emu Crossing to a Koala Crossing	Council	\$ 15,000.00	\$ -	\$ 15,000.00	New infrastrucutre (design (TBC) in Stage 1 and implement in Stage 2).	Yes
10.8	Install section of 15-minute parking during school PM time on western side of Queen Street	Council	\$ 500.00	\$ 500.00	\$ -	To be confirmed with school prior to implementation.	No
10.8	Install No Standing zone in existing Kiss-n-drop zones from 2:30-3:00pm to prevent all day parking	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
10.8	Pave full width of footpath east side of Queen Street adjacent kiss-n-drop zone	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Existing infrastructure (implement in Stage 1).	No
10.8	Amend parking provisions to take into account Preschool operating times	Council	\$ 500.00	\$ 500.00	\$ -	Not applicable.	-
				\$ 21,500.00	\$ 6,500.00	\$ 15,000.00	
St Joseph's Memorial School (Kensington) (refer to Section 11.8 in Volume I)							
11.8	Extend kiss-n-drop zone on Bridge Street by one (1) to two (2) spaces	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
11.8	Pave full width of footpath on east side of Bridge Street adjacent new kiss-n-drop zone spaces	Council	\$ 2,000.00	\$ 2,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
11.8	Install pram ramps with kerb extensions on north side of Bridge Street and High Street junction	Council	\$ 2,500.00	\$ -	\$ 2,500.00	New infrastructure (implement in Stage 2).	Yes (DPTI/DECD/School)
11.8	Relocate Stop sign closer to High Street on the north side of High Street and Bridge Street junction	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
11.8	Remark Stop lines at High Street and Bridge Street junction	Council	\$ 250.00	\$ 250.00	\$ -	Minor works (implement in Stage 1).	No
				\$ 5,750.00	\$ 3,250.00	\$ 2,500.00	
St Joseph's Memorial School (Norwood) (refer to Section 12.8 in Volume I)							
12.8	Extend kiss-n-drop zone on north side of William Street by two (2) spaces	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No
12.8	Extend kerb extensions and bike lane markings at Emu Crossing	Council	\$ 500.00	\$ 500.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
12.8	Upgrade pram ramps on William Street at Donegal Street junction and on all approaches to Queen Street and William Street junction	Council	\$ 2,500.00	\$ 2,500.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
12.8	Pave full width of footpath in William Street adjacent kiss-n-drop zone	Council	\$ 5,000.00	\$ 5,000.00	\$ -	Upgrade existing infrastructure (implement in Stage 1).	No
				\$ 8,500.00	\$ 8,500.00	#REF!	

St Josephs School (Payneham) (refer to Section 13.8 in Volume I)								
13.8	Extend existing kiss-n-drop zone on south side of Marian Road between Douglas Street and Arthur Street	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
13.8	Mark yellow No Stopping line in Arthur Street near Marian Road to assist with addressing queuing near intersection	Council	\$ 200.00	\$ 200.00	\$ -	Minor works (implement in Stage 1).	No	
13.8	Install peak hour No Parking zone on west side of Arthur Street between Tarcoma Avenue and Second Avenue	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
				\$ 1,200.00	\$ 1,200.00	#REF!		
St Peters College (refer to Section 14.8 in Volume I)								
14.8	Install No Stopping parking restrictions along Pembroke Street opposite school	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
14.8	Undertake minor works at Rugby Street/Baliol Street/Pembroke Street junction	Council	\$ 3,000.00	\$ -	\$ 3,000.00	New infrastrucutre (design not required implement in Stage 2).	No (minor works)	
14.8	Remove/maintain hedge at Hatswell Street and Bertram Street junction	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
				\$ 4,000.00	\$ 1,000.00	\$ 3,000.00		
Trinity Gardens Primary School (refer to Section 15.8 in Volume I)								
15.8	Mark a continuous centre line and install pavement bars along Jones Avenue to prohibit U-turns and provide education and awareness through school	Council/School	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
15.8	Install a pedestrian refuge island in Jones Avenue at the Amherst Avenue junction	Council	\$ 5,500.00	\$ 500.00	\$ 5,000.00	New infrastrucutre (design in Stage 1 implement in Stage 2).	Yes (DPTI/DECD/School)	
15.8	Develop and implement a concept plan for the provision of a footpath along north side of Aberdare Avenue between Amherst Avenue and Aveland Avenue	Council	\$ 70,000.00	\$ 10,000.00	\$ 60,000.00	New infrastrucutre (design in Stage 1 implement in Stage 2).	Yes (DPTI/DECD/School)	
15.8	Consider staggered start and finish school times	School	\$ -	\$ -	\$ -	Not applicable.	-	
15.8	Formally request the school and DECD to consider the viability of creating additional on-site parking for staff and disability parking	DECD/School	\$ -	\$ -	\$ -	Not applicable.	-	
				\$ 76,000.00	\$ 11,000.00	\$ 65,000.00		
Felixstow Community (refer to Section 16.8 in Volume I)								
16.8	Reduce No Stopping zone outside school near DECD (by two (2) spaces) entrance and extend all day parking	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
16.8	Remove No Stopping zone on east side of Briar Road and convert to all day parking	Council	\$ 500.00	\$ 500.00	\$ -	Minor works (implement in Stage 1).	No	
16.8	Assess impacts of the closure/relocation of the former ‘BIRCH’ site, subject to an anticipated development application	Council/School	\$ -	\$ -	\$ -	Not applicable.	-	
				\$ 1,000.00	\$ 1,000.00	\$ -		
				\$ 560,950.00	\$ 283,450.00	\$ 277,500.00		
				\$ 560,950.00		Not including Beulah Road crossing (refer to Section 8.8 in Volume I).		

Notes:
(1) Cost estimates are preliminary first order estimates only. Cost estimates for upgrade of existing infrastructure and/or new infrastructure is subject to change based on designs required.
(2) Stage 1 recommendations propose upgrade of existing signage, linemarking and infrastructure and designs for Stage 2. It is assumed that Council owns and maintains existing signage, linemarking and infrastructure and as such, it is assumed that there are no cost sharing opportunities (subject to Council approval).
(3) Stage 2 implementations are subject to outcome of cost sharing arrangements and further considerations by the Council.