

4. GRAMPIAN STREET/VEITCHES ROAD INTERSECTION - CASEBROOK INTERMEDIATE SCHOOL - SCHOOLS BUBBLE PROJECT

General Manager responsible:	General Manager City Environment
Officer responsible:	Transport and City Streets Manager
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PURPOSE OF REPORT

1. The purpose of this report is to seek the approval of the Board to proceed to final design, tender and construction of the safety improvement works at the intersection of Grampian Street and Veitches Road.

EXECUTIVE SUMMARY

2. The Council's "Schools Bubble" Programme has identified Casebrook Intermediate School as a school with a high number of children cycling to school on roads with high volumes of traffic. Survey work at the school, with school cyclists, identified safety concerns for a number of accesses and routes to the school, and in particular, the safety of cyclists and pedestrians at the main entrance to the School by the intersection of Grampian Street with Veitches Road.
3. The Casebrook project actually identified 6 locations of concern to school cyclists within 500m of the school (the "bubble" boundary). Of those, three with the most comments/concerns were identified for further investigation. Subsequently, after cost estimates, the highest priority location was selected for further development work (i.e Grampian/Veitches), and the remaining two locations were resubmitted to the cycle planning programme for reprioritising.
4. The principal aim of the overall "bubble" project is to improve the safety of cyclists and pedestrians at problem intersections, particularly for school children commuting to and from Casebrook Intermediate School. The objectives of the safety improvements to the intersection of Veitches Road and Grampian Street were to:
 - Discourage anti-social driving behaviour along Veitches Road;
 - Discourage vehicles entering Grampian Street cutting across the head of the intersection;
 - Discourage vehicles taking the intersection at inappropriate speed;
 - Improve the facilities for pedestrians and cyclists crossing Veitches Road;
 - Ensure property access near the intersection is not compromised;
 - Ensure on-road parking facilities are adequate;
 - Ensure there is adequate visibility and appropriate types of control at Grampian Street.
5. The preferred option includes the narrowing of the road from 13.5 metres to 9 metres on Veitches Road, and 12.7 metres to 10.5 metres on Grampian Street with kerb build-outs. To enable the kerb build-outs to be constructed, the existing bus stop must be relocated to the east by approximately 5 metres outside 91 Veitches Road, and an existing tree needs to be removed to allow the relocation of the bus stop.
6. "No stopping" restrictions are proposed at the intersection, and the implementation of a kea crossing on Veitches Road has been supported by the School Board of Trustees to enable a safe crossing point for students.
7. The owners and occupiers along Veitches Road, and Grampian Street, as well as the parents of students at Casebrook Intermediate were consulted via a publicity pamphlet in September 2005 and through the "Have Your Say" section of the CCC website. There were 24 responses received of which 22 were supportive of the project, and 2 were in opposition to the project.
8. The preferred option, shown in the scheme plan at Attachment 1, meets the project objectives, has a good level of Community support, and is therefore recommended for implementation.

FINANCIAL AND LEGAL CONSIDERATIONS

9. The safety improvement works at the intersection of Grampian Street and Veitches Road is programmed in the Transport and City Street's capital programme for implementation in the 2005/2006 financial year. The cost estimate for this project is \$168,500, and there is budget allocation in the 2005/2006 capital programme for this work to occur.
10. Community Board resolutions are required to approve the "No stopping" restrictions and bus stops.

STAFF RECOMMENDATIONS

It is recommended that the Board approve:

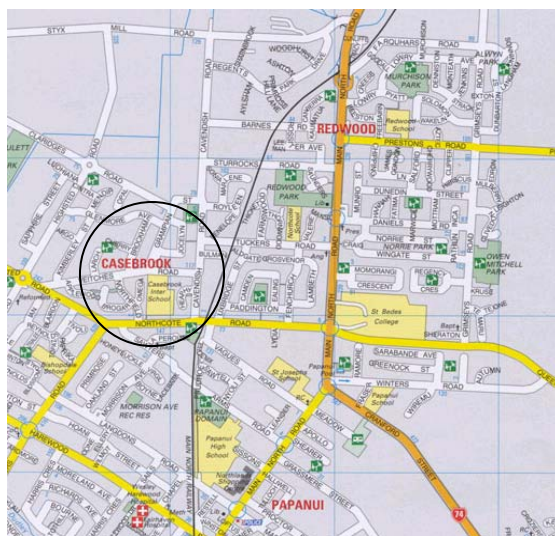
1. The safety improvement works at the intersection of Grampian Street and Veitches Road, as illustrated in Attachment 1, to proceed to final design, tender and construction.
2. The removal of the existing "no stopping" restriction:
 - (a) That the no stopping restriction on Veitches Road at the intersection with Grampian Street be removed.
3. The new "no stopping" restrictions:
 - (a) That the stopping of vehicles be prohibited at any time on the south side of Veitches Road commencing at a point 5 metres from the common boundary of 84 and 86 Veitches Road and extending in an easterly direction for a distance of 52 metres.
 - (b) That the stopping of vehicles be prohibited at any time on the north side of Veitches Road commencing at its intersection with Grampian Street and extending in a westerly direction for a distance of 17 metres.
 - (c) That the stopping of vehicles be prohibited at any time on the north side of Veitches Road commencing at its intersection with Grampian Street and extending in an easterly direction for a distance of 35 metres.
 - (d) That the stopping of vehicles be prohibited at any time on the west side of Grampian Street commencing at its intersection with Veitches Road and extending in a northerly direction for a distance of 15.5 metres.
 - (e) That the stopping of vehicles be prohibited at any time on the east side of Grampian Street commencing at its intersection with Veitches Road and extending in a northerly direction for a distance of 17 metres.
4. The new bus stops:
 - (a) That a "bus stop" be installed on the north side of Veitches Road commencing at a point 35 metres from its intersection with Grampian Street and extending in an easterly direction for a distance of 12 metres.
 - (b) That a "bus stop" be installed on the south side of Veitches Road commencing at a point 51 metres from its intersection with Grampian Street and extending in an easterly direction for a distance of 22 metres.

CHAIRPERSON'S RECOMMENDATION

That the staff recommendations be adopted.

BACKGROUND ON GRAMPIAN STREET/VEITCHES ROAD INTERSECTION - CASEBROOK INTERMEDIATE SCHOOL - SCHOOLS BUBBLE PROJECT

11. Since 2000, the Council has introduced a project that aims to make the school journey safer, and ideally more convenient, for cyclists. It is a very “grass roots” approach to cycle planning, which initiates with children completing questionnaires that identify and give details of their most worrying locations when cycling to and from school. Primarily the project focuses on engineering solutions, however, the information gained also influences school safety campaigns and promotions. The project is progressing steadily, and as at 2004, approximately 14 “bubble projects” at intermediate and secondary schools are either in planning or had been completed.
12. This project is part of the Council's capital works programme that proposed to investigate the issues that Casebrook Intermediate School students have in relation to cycling to and from school.



13. Whilst the initial study concentrated on public roads within a 500-metre radius “bubble” around the School, the locations identified by the students outside the “bubble” were also noted for further investigation. This was considered particularly relevant given the Council's current knowledge of the existing student cycling issues within close proximity to the School, and the fact that Casebrook Intermediate School has a wide student catchment. The catchment is comprised of students from around the northern part of the City and as far away as Waikari, Rangiora, Kaiapoi and Belfast. Of those students who cycle to school, they may ride up to five kilometres to get to school across many busy strategic and arterial roads.
14. Casebrook Intermediate School is located within the Papanui Ward, between Veitches Road, Cavendish Road, Northcote Road and Northfield Road. The surrounding area to the School is residential. Local shops are located at the corner of Grampian Street and Jocelyn Street. There are a number of other primary schools in the wider vicinity including Northcote Primary, St Josephs School, and Bishopdale School.
15. The initial consultation plan identified two processes to be carried out. The first process involved a survey of a cross section of students (i.e. a 10-minute survey form and maps) whereby students outlined the issues they have when cycling to and from the School. This consultation was undertaken in conjunction with the School on 17 November 2004.
16. The results of this consultation identified the following key intersections of concern within the 500-metre bubble:
 - Veitches Road / Cavendish Road intersection
 - Cavendish Road / Tuckers Road intersection
 - Veitches Road / Grampian Street intersection
 - Crossing or along Northcote Road intersection
 - Northcote Road crossing Main Trunk railway intersection
 - Grampian Street / Jocelyn Street intersection

17. The second process carried out in accordance with the initial consultation plan involved Council staff discussing potential road improvements with those landowners and occupiers in direct proximity of the intersections, which may subsequently have road works to improve their safety. This initial consultation with landowners and occupiers was undertaken in February 2005.
18. The conclusions drawn from this consultation were:
 - **Veitches Road / Cavendish Road intersection** - The main issues relate to children riding on the footpath, vehicle speed along Cavendish Road, drivers negotiating the intersection at speed, late sight visibility at the intersection, requests for changing from Give Way to Stop controls, speed humps installed further south on Cavendish Road.
 - **Cavendish Road / Tuckers Road intersection** - Mixed response, which should be monitored and consideration given to easy solutions that may assist.
 - **Veitches Road / Grampian Street intersection** - Is a problem, and requires consideration of solutions.
 - **Grampian Street / Jocelyn Street intersection** - Not a problem, but some child education required.
19. There were three intersections within the 500-metre radius, which were initially identified as part of this project for further investigation and initial concept design – Veitches Road / Cavendish Road, Cavendish Road / Tuckers Road, and Veitches Road / Grampian Street. However, due to the cost of improving all three of these intersections, priority was placed on progressing the Grampian Street / Veitches Road intersection, which is the closest intersection to Casebrook Intermediate School.
20. The two remaining intersections will be assessed and monitored for future work.
21. Grampian Street is classified as a Collector Road in the Proposed City Plan between Veitches Road and Claridges Road. It has an existing 12.7-metre wide carriageway. The adjoining land uses are residential in nature, with local shops near the intersection of Grampian Street with Jocelyn Street. The average traffic flow along Grampian Street is 1,200 vehicles per day.
22. Veitches Road is also classified as a Collector Road in the Proposed City Plan between Sawyers Arms Road and Cavendish Road. It has an existing 13.5-metre wide carriageway, and the adjoining land uses are residential in nature, with the exception of Casebrook Intermediate School. The average traffic flow along Veitches Road is 3,470 vehicles per day.
23. The Land Transport New Zealand Crash Analysis System shows that there have been three crashes (1 minor and 2 non-injury) recorded for the five-year period between 2000 and 2004 in this area.
24. A meeting was held on 24 August 2005 with the Board of Trustees of Casebrook Intermediate School to ascertain whether the School was supportive of the proposed safety improvements, and whether they wanted to pursue the option of installing a kea crossing on Veitches Road. The Board noted its support for the proposed safety improvements and were very positive about the installation of a kea crossing to ensure the health and safety of not only the students, but also the duty staff member, at this crossing point.
25. The Papanui Police have been advised of the proposed kea crossing on 5 September 2005, and have no objections to the proposal.
26. The proposal was opened up to full consultation with the local property owners and occupiers in and around the intersection, the students of the school and their parents, and local businesses in September 2005. A summary and evaluation of the responses received is attached at Attachment 2.
27. In summary, there were 24 responses received, of which 22 were in support and 2 in opposition to the proposed safety improvements. The key issues identified included:
 - Location of the proposed bus shelter;
 - Width of Grampian Street entrance;
 - Placement of cycle kerb ramps at the intersection;
 - Speed humps in Veitches Road to address traffic speed;

- Location of kea crossing;
- Rubbish bin at the bus stop;
- Traffic sign at the intersection, i.e. Give Way vs Stop sign;
- Support for pedestrian crossing point, and safer crossing for school students.

OPTIONS

28. Based on the initial consultation undertaken with the students of the school in November 2004, and local residents in February 2005, three key intersections were identified as problematic for students cycling to school. These intersections were Cavendish/Veitches, Cavendish/Tuckers and Grampian/Veitches
29. Due to the cost of upgrading all three intersections exceeding the budget for this project, the intersections were prioritised. The Grampian Street / Veitches Road intersection was deemed to have the highest priority for safety improvements due to its location immediately outside the School, and the high number of pedestrians and cyclists using this intersection. The other two projects will go back into the pool of cycle projects requiring further investigation and funding.
30. For the Grampian/Veitches intersection
 - (a) The Land Transport New Zealand Crash Analysis System shows there have been three crashes (1 minor and 2 non-injury) recorded for the five-year period between 2000 and 2004 in this area.
 - (b) Four options were developed for comparison.

Option 1- The preferred option involved the realignment of the intersection and narrowing with kerb build-outs on both sides of Veitches Road and Grampian Street.

Option 2 - Status Quo option i.e. no work conducted at the intersection.

Option 3 - This option has 2m wide flush median and a pedestrian island on Veitches Road. It was not explored further because the pedestrian island will be located away from the desired crossing point (school gate and the intersection) to allow room for turning traffic on Veitches Road to queue.

Option 4 – This option has a roundabout at the Grampian/Veitches intersection. This option was not explored further because it does not provide good crossing facilities for pedestrians and cyclists crossing Veitches Road because there may be no room for splitter islands on all approaches. It also gives the roads more of a “busy road” feel. Further, this option will exceed the project budget significantly.

PREFERRED OPTION

31. The preferred option for the intersection of Grampian Street and Veitches Road includes narrowing of the road from 13.5 metres to 9 metres on Veitches Road, and 12.7 metres to 10.5 metres on Grampian Street with kerb build-outs. The existing bus stop outside 89 Veitches Road will be relocated further east and the carriageway will be marked with bus stop markings. There is a proposed bus shelter on the south side of Veitches Road, and the bus stop will be marked with bus stop markings. There will be cut-down kerbs for pedestrians crossing Grampian Street and Veitches Road.
32. This option involves the removal of 115 metres of existing kerb and flat channel as a result of the proposed kerb build-outs on Veitches Road and Grampian Street. There will be no parking in the vicinity of the intersection, and there will be a reduction in two car parking spaces on the north side of Veitches Road. The existing bus stop outside 89 Veitches Road will be relocated away from the proposed kerb build-outs near the intersection. In addition, the existing tree will be removed at the relocated bus stop. Provision has been made in the design for the inclusion of a kea crossing, which is supported by the School's Board of Trustees.

33. These measures seek to:

- Discourage unsafe driving behaviour along Veitches Road;
- Discourage vehicles entering Grampian Street by cutting across the head of the intersection;
- Discourage vehicles taking the intersection at an inappropriate speed;
- Improve facilities for pedestrians and cyclists crossing Veitches Road, particularly for students at the entrance / exit of the School;
- Ensure property access near the intersection is not compromised;
- Ensure on-road parking facilities are adequate for parents to pick up / drop off children at the School, but do not compromise the safety of the intersection or the students crossing Veitches Road; and,
- Ensure there is adequate visibility and an appropriate type of control at Grampian Street entering Veitches Road.

34. In addition, there will be cobblestones installed at the eastern corner of the intersection to define the crossing points beside the area of the proposed kea crossing.

35. One existing tree will need to be removed to make way for the change in the position of the bus stop, as a result of the kerb build-outs.

36. The Board of Trustees at Casebrook Intermediate is very supportive of the installation of a kea crossing outside the school entrance on Veitches Road. If the kea crossing is implemented, additional road marking and school patrol signs will be required.

37. It is anticipated that construction will commence in January 2006, and it is likely that the works will take approximately 1-2 months to complete.

ASSESSMENT OF OPTIONS

Option 1 - The Preferred Option

38. The objectives for this project are met by the preferred option in that:

- The kerb build-outs on Veitches Road will deter motorists from speeding through the intersection especially when there is turning traffic on Veitches Road. The kerb build-outs on Grampian Street will deter motorists on Veitches Road from turning left into Grampian Street at speed.
- The narrowed intersections will deter motorists on Veitches Road from turning into Grampian Street at speed thus cutting across the head of the intersection.
- The narrowed intersection and reduced kerb radii at the corners will discourage motorists on Veitches Road and Grampian Street from taking the intersection at inappropriate speed.
- The crossing distances for pedestrians and cyclists are shortened by kerb build-outs on Veitches Road. The kerb build-outs on Veitches Road will slow motorists as they enter the intersection. This will also improve visibility between pedestrians and motorists on Veitches Road.
- Property access will be retained near the intersection.
- On-road parking is maintained where possible, except in the vicinity of the intersection.
- A Give Way control will be implemented on Grampian Street to provide good visibility between motorists at the intersection and oncoming traffic on Veitches Road.

39. There are no land ownership issues associated with the project, as the works are all contained within Council road reserve.

40. The following consent and legal issues have been considered:

- Trees – There are no protected or notable trees in the vicinity of the intersection of Grampian Street and Veitches Road.
- Buildings – There are no heritage or historic buildings, places or objects in the area of the proposed works.

- Road widths – The Proposed City Plan (Part 14, Appendix 5), has minimum roadway widths for different road classifications. This scheme has roadway widths of 9 metres and 10.5 metres respectively. The minimum roadway width requirement for Collector Roads is 12 metres, with the exception of Clause 4.5.1(a) in the Proposed City Plan (Part 8 Special Purpose Zone, Section 4). This clause states that the minimum roadway width does not apply to those sections of roadway which are narrowed by traffic management devices for a length of 60 metres or less, and those roads where more than one traffic management device is used and there is a minimum distance of 60 metres between the devices, except in the case of devices either side of an intersection where there shall be no minimum separation distance. Therefore, no resource consent is required.
- Bylaw Changes – Amendments and / or additions will be required to the Christchurch City Traffic and Parking Bylaw 1991 for parking restrictions.

Option 2 - Maintain The Status Quo

41. The option to maintain the status quo essentially means that no capital works will be carried out at this intersection. This would retain the road environment in its existing condition and layout.
42. This option would be inconsistent with the pedestrian, cycling and road safety strategies of the Council, and would be inconsistent with the Community Outcomes outlined in the LTCCP. Additionally, this would not address the current safety issue of duty teachers herding students across the road, whilst putting themselves and the students at risk from being hit by motorists.
43. Therefore, it is considered inappropriate to take no action and maintain the status quo because there is an opportunity to ensure an efficient, safe and sustainable transport system, whilst providing for all modes of transportation.

Option 3 & 4 – Three identified intersections for safety improvements

44. The options to install a roundabout at the Grampian/Veitches intersection, or develop a flush median along Veitches road were not explored in any great depth. While both added “discipline” to vehicle movements along Veitches Road in particular, both options failed to address key components of the project objectives, namely pedestrian and cyclist crossing. For that reason, they were not considered further. Neither option was drafted.