



**Australian Government**

**Department of Defence**

Defence Support Group

**BASE INFRASTRUCTURE WORKS (BIW) PROJECT**

**Under The Base Security Improvement Program (BSIP)**

**NORTHERN NEW SOUTH WALES, SYDNEY CENTRAL,  
SYDNEY WEST, AUSTRALIAN CAPITAL TERRITORY,  
VICTORIA & QUEENSLAND**

**Supplementary Submission**

**to the**

**Parliamentary Standing Committee**

**on Public Works**

Department of Defence

Canberra, Australian Capital Territory

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## INTRODUCTION

1. On Friday 10 August 2012, the Parliamentary Standing Committee on Public Works (PWC) held a Public Hearing as part of its review of the Department of Defence's Base Infrastructure Works (BIW) Project under the Department's Base Security Improvement Program (BSIP).
2. At this Hearing the following concerns were raised by Members of the PWC:
  - a. **Victoria Barracks Sydney.** The design of the new main entrance on Moore Park Road requires further explanation, with specific reference to potential traffic safety concerns relating to the proposed entry lane from Moore Park Road.
  - b. **Simpson Barracks.** That the selection of the new main entrance location has led to concerns from a local resident, resulting in a formal Submission.
3. This submission addresses both of these concerns.

### Background

4. The BIW Project is delivering a series of Enhanced Reception Facilities across 16 sites to provide a capability that enables security access staff to establish and record the security credentials of persons accessing a Defence site. The delivery of new or revised Access Control Points (ACPs) are an important component of this capability. The new ACP at Victoria Barracks Sydney and at Simpson Barracks have been designed to provide an improved security benefit and maintain best practice in traffic flow and site access. An essential security requirement is that an ACP should enable vehicles to be rejected without proceeding on to the site to turn around. Ideally this should occur as far away from concentrations of personnel as is feasible. To meet this requirement, there needs to be sufficient area between the boom gates where the vehicle is checked (at the Guardhouse) and the active vehicle barriers (that prevent unauthorized vehicle access on to the site) so as to allow vehicles to turn around and / or depart the ACP safely.

### VICTORIA BARRACKS SYDNEY

5. In designing the proposed site entry and ACP at Victoria Barracks Sydney extensive investigations, analysis and assessments were undertaken in consultation with authorities, site users, traffic, heritage and environmental experts. The guiding design principles included legislative and Defence policy requirements, supported by existing data and reports obtained from the site. As part

of the process a Historic Heritage Impact Assessment was undertaken to ensure heritage values were protected and preserved.

### **Options Considered by the Project**

6. There were two options considered feasible for the new site entry ACP:
  - a. the existing main entry point on Oxford Street, and
  - b. the existing secondary entry point on Moore Park Road.
7. These two options were analysed, with concepts prepared and presented to all relevant stakeholders at key project milestones including the 5% Master Plan Review held on 9 November 2011 and Site Selection Board (SSB) held on 16 November 2011.

### **Option 1 – Oxford Street Entry**

8. This option would involve expanding the use of the existing main entry on Oxford Street with control and rejection of vehicles managed within the site.
9. During planning discussions, the site stakeholders noted that during morning peak periods, vehicles entering the base were queuing back on to Oxford Street creating congestion. From a safety perspective, this was a significant consideration in developing an acceptable solution.
10. The existing Heritage Management Plan identifies the external wall in this location as having exceptional heritage significance. Due to the significant heritage values the possible security improvement measures were restricted to low level walls, kerbs, bollards and active barriers. These constraints limit the ability to implement and achieve the required security objectives.
11. To manage, control and reject vehicles the area just inside the existing entry gate, it would need to be reshaped to allow for processing and rejecting vehicle access. Due to lack of available land at this entry point the ability to achieve the security objectives would be highly compromised at this location.
12. For these reasons, the re-use and development of this ACP was not favoured as it has existing traffic problems and is unlikely to adequately achieve the required Defence security principles.

## **Option 2 –Moore Park Road Entry**

13. This option would include development of the area adjacent to the existing alternate entry on Moore Park Road with control and rejection of vehicles managed prior to entering the site via the gate in the heritage listed perimeter wall.
14. Traffic and heritage experts advise that this location is the least restrictive in terms of heritage impacts and provides additional scope to improve the security arrangement for the ACP including an allowance for off site rejection and for parking spaces.
15. The proposed design does not require any changes to the Moore Park Road alignment. The design was reviewed by the Project’s traffic experts who confirmed that the proposed designs findings were in compliance with the New South Wales (NSW) Roads and Maritime Services (RMS) and City of Sydney Council requirements.
16. The design is an improvement on the current situation at the existing Oxford Street ACP as it provides for considerably more queuing space off Moore Park Road as well as off site parking.
17. The area to be developed is constrained by the location of the existing Rifle Range Stop Butt Wall and Stormwater Retention Basin, which have heritage significance. The location of the entry lane off Moore Park Road is influenced by this constraint. The proposed design does not impact on the Wall or Basin.
18. In consideration of the above, the Moore Park Road option was preferred by all key stakeholders including Defence, RMS and Council.

## **Preferred Design**

19. The proposed works at the Moore Park Road entry include the following enhancements:
  - a. a new entry-only lane off Moore Park Road to the west of the existing entry / exit lane;
  - b. vehicle parking and rejection arrangements to improve access control and physical security including the conversion of the existing entry / exit lane to be an exit-only lane onto Moore Park Road; and
  - c. a new Pass Office and Guardhouse.
20. The following design aspects have been developed as safety measures at the proposed ACP:

- a. The new entry lane from Moore Park Road is unable to be accessed from the Eastern Distributor due to a 150 mm (high) x 150 mm (wide) concrete kerb and line marking. Any vehicle attempting to turn into the Moore Park Road ACP across another lane of traffic will be performing an illegal and unsafe act. The existing entry / exit lane (further east of the proposed entry) is more prone to this action, however, this entry will be provided with a boom gate, a 'no entry' sign and tyre spikes to ensure that access is not possible.
- b. The through traffic speed limit of 50 km/h along Moore Park Road at this location should ensure that through-traffic vehicles are not travelling at excessive speed.
- c. The geometry of the Moore Park Road entry lane facilitates a moderate entry speed of 25km/h from Moore Park Road, which is higher than if the entry lane was designed as a conventional (90 degrees) driveway crossing or 'T' intersection'. This reduces the risk of 'rear end' accidents as the cars turning into the entry lane do not need to slow down as much in relation to the Moore Park Road traffic flow as they would if they were negotiating a 90 degree entry.
- d. Authorised vehicular access into the site is via the existing gate in the Barrack's wall which is listed as having 'Exceptional Heritage Significance' and as such any modification to this wall has not been considered. The width of the gate is approximately five metres which will accommodate all vehicles either entering or exiting, however will not permit two vehicles at the same time. Accordingly, the following traffic management procedures / devices have been incorporated in the proposed design:
  - i. Vehicles authorised to enter the site will have priority over vehicle exiting. This will minimise queuing within the ACP.
  - ii. A traffic signal will be located on the inside of the Barrack's wall to warn when a vehicle is entering. This signal will be activated when the boom gate at the Guardhouse is opened.
  - iii. Stop lines will be marked on the roadway inside the site to identify where vehicles are to stop and give way to vehicles entering the site.

- iv. A pedestrian exclusion zone will be marked on the roadway at the gate in the Barrack's wall. All pedestrian access to the site is through one of the dedicated pedestrian entry gates.
- e. There is queuing available for approximately 12 vehicles, as well as parking for a further 13 cars (including handicapped parking) and one large vehicle in the proposed design. At the existing Oxford Street and Moore Park Road ACPs there is queuing for approximately three cars (and no parking) before the queue of vehicles starts to impact on traffic flows on Oxford Street and Moore Park Road respectively. The location of the proposed entry lane from Moore Park Road is key to enabling this queuing capacity and thereby reducing the likelihood of an impact onto Moore Park Road.

21. Following safety concerns raised at the Public Hearing, there has been further consideration of this design and the following opportunities have been identified to improve safety for this ACP:

- a. A safety mirror will be provided at the gate in the Barrack's wall to minimise blind spots and to assist vision between vehicles entering or exiting through the narrow opening.
- b. Directional signage has been proposed to be erected on Moore Park Road in advance of the new ACP entry lane identifying the new entry point and to warn motorists of impending exits. An example of this sign is included at Attachment 1.

### **Slip Lane Considerations**

24. At the PWC Briefing at Victoria Barracks prior to the Public Hearing, some questions were raised by Members of the PWC about why a slip lane was not included in the design of the Moore Park Road ACP. The following issues were considered by the Project during design development, and contributed to the decision that a slip lane was not required as part of the entry lane to the proposed ACP.

- a. Peak traffic turning into the site occurs in the morning. At this time the peak traffic volume on Moore Park Road is in the west-bound lanes, which are on the opposite side of the road to the proposed ACP. During the afternoon peak traffic flow, the number of vehicles access the site is greatly reduced.



- b. The combined effect of the relatively low traffic numbers moving into the ACP, the speed limit on Moore Park Road of 50 km/h, the ACP entry speed off Moore Park Road of 25 km/h (indicated by signage) and the oblique (45 degree) entry lane results in an entry situation that is well within the acceptable safe limits as prescribed by RMS and traffic design standards. As such the Project's traffic experts and the agencies consulted advise that there is no technical requirement for a slip lane or a deceleration area due to traffic flows or speeds.
- c. The inclusion of a slip lane to the east of the proposed entry lane would require the following:
  - i. The relocation of the existing footpath adjacent to Moore Park Road onto the area that is occupied by the heritage listed Stormwater Retention Basin and Stop Butt Wall. This action would result in additional project cost and would most likely require considerable heritage and environment assessments.
  - ii. Approximately five mature trees would need to be removed resulting in further Council approvals and commensurate planning. It is preferable that the works has no impact on flora.
  - iii. The elevation (ground level) of the proposed ACP, including the Pass Office and the entry lane would potentially have to be lowered . This would result in a significant cost increase due to existing geotechnical conditions (rock) and existing site contamination issues associated with the Retention Basin. This action may also require considerable heritage and environment assessments as the setting of the ACP against the listed Barrack's wall would be altered.

### **Consultation with Authorities**

23. The City of Sydney Council was consulted on Friday 3 February 2012. The members of Council in attendance included Mr Chris Corradi, Mr Tony Smith and Mr John Poulton. The Council advised they had no concerns with the proposed design, provided RMS guidelines were followed.

24. RMS was consulted on Wednesday 15 February 2012. The members of the RMS in attendance included Mr Chris Goudanas and Ms Stella Qu. Discussions were held around the issue of the location of the proposed entry lane relative to the Eastern Distributor and the line marking at

this location. RMS was more satisfied with the proposed entry location than the current entry / exit lane which is at 90 degrees to Moore Park Road. RMS advised that they had no issues with the proposed design and, providing that the design maintained the same intent as it progressed, then no further consultation would be required.

25. The Project's and the Department's heritage experts have confirmed that the design of this ACP does not impact the heritage value for this site.

### **Summary**

26. The BIW Project Team has analysed two ACP options in detail, and assessed these against their ability to meet the required security objectives, and to satisfy the site's, RMS's and Council's requirements. The existing Oxford Street ACP has been found to be constrained by spatial and heritage requirements and to have existing safety concerns, and results in an unsatisfactory security outcome.

27. The existing ACP at Moore Park Road was identified as having issues with rejection of vehicles and potential congestion. However this location was assessed as being able to house a new design that could mitigate these issues while achieving the security requirements.

28. The new design takes into account the traffic volume and speed on Moore Park Road, provides space for queuing and parking, and enables the inspection and rejection of vehicles before they enter the site.

### **SIMPSON BARRACKS**

29. In considering the best solution for the location of the main and secondary ACPs for Simpson Barracks Watsonia, numerous investigations, analysis and assessments were undertaken in consultation with the community, site users, traffic and environmental experts. The guiding design principles considered included legislative and Defence policy requirements, supported by existing data and reports obtained from the site.

30. The rationale for selecting Yallambie Road West as the preferred main ACP is detailed herein.

### **Options considered by the Project**

31. There were multiple options considered feasible for the new site entry ACP:

- a. the existing Crew Street ACP;

- b. the existing Greensborough Highway ACP;
- c. the existing Yallambie Street gate at the intersection of Yallambie Road and Herring Avenue, referred to as Yallambie Street East;
- d. the existing Yallambie Street gate at the intersection of Yallambie Road and Mackay Road, referred to as Yallambie Street Central; and
- e. a new ACP on Yallambie Street at the intersection of Yallambie Road and Watson Street, referred to as Yallambie Street East.

32. These options were analysed, with concepts prepared and presented to all relevant stakeholders at key project milestones including the 5% Master Plan Review held on 7 November 2011 and SSB held on 14 November 2011.

### **Option 1 – Crew Street Entrance**

33. This is an existing entry to the site, through a residential precinct. It is approximately 700m before its connection to Lower Plenty Road (the nearest arterial road). There is an existing roundabout which is not suitably designed to cater for the additional heavy vehicle traffic flows that would be required for the main ACP. Traffic lights and intersection arrangements on Lower Plenty Road are not able to accommodate the required traffic volumes without modification. The Crew Street ACP is currently used at peak times and is suitable for pass holders only where vehicle rejection is not required and queuing will be minimal.

### **Option 2 – Greensborough Highway Entrance**

34. The existing entry off Greensborough Highway is not suitable as a main ACP to the site primarily for safety reasons. The speed limit on Greensborough Highway is 80 km/h and the entry / exit lane is on the downward slope of a significant crest, leading to an extremely unsafe situation. As a result, the site restricts the use of this ACP to entry only during the majority of the time so as to limit the number of vehicles attempting to enter Greensborough Highway. There are no traffic signals at this location and VicRoads will not allow the construction of traffic lights due to the unsafe location and close proximity to other traffic lights. Victoria Police have also advised that they would prefer this entry not to be used as a main ACP.

### **Option 3 – Yallambie Road East**

35. This is an existing entry at the intersection of Herring Avenue.

36. The spatial limitations at this site results in an inability to design an ACP that would meet the security requirements. The surrounding buildings also mean that there is a population density in close proximity, which represents a higher security risk and is therefore not preferred.

37. It is proposed that Yallambie Road East will be closed off as a means of general access to the site, and will be used as emergency or special event access only.

#### **Option 4 – Yallambie Road Central**

38. This is an existing entry at the intersection of Mackay Road.

39. The spatial limitations and ground elevations at this site results in an inability to design an ACP that would meet the security requirements. The surrounding buildings (including the medical centre and transit accommodation) also mean that there is a population density in close proximity, which represents a higher security risk and is therefore not preferred.

40. It is proposed that Yallambie Road Central will be closed off as a means of general access to the site, and will be used as emergency or special event access only.

#### **Option 5 – Yallambie Road West**

41. This would be a new entry, and would be at the intersection of Watson Street.

42. This option has been considered in detail, with traffic studies undertaken. The location is in close proximity to the intersection with Greensborough Highway which is considered beneficial as it reduces the dispersal of traffic into the local road network and instead directing traffic towards main arterial roads.

43. Yallambie Road is a busy road, taking a proportion of the daily traffic on to and off the site through existing gates (predominantly Yallambie Road Central). The proposed ACP would result in site traffic using a reduced section of Yallambie Road, compared to the distance from Yallambie Road Central gate to the intersection with Greensborough Highway. This option is also the site's preferred ACP due to its close proximity to the Greensborough Highway and its improved security outcome.

#### **Concerns raised by a Member of the Public**

44. The PWC has received a submission from Mr Philip Pyros (Submission 03, dated 30 July 2012) regarding the proposed location of the new ACP at Simpson Barracks and proposing a number of alternative sites for the ACP.

45. Mr Pyros attended a BIW public consultation session on 13 June 2012, where draft plans of the proposed works (including the location of the proposed new ACP) were presented. In his submission to the PWC, Mr Pyros proposed the following alternative sites for the ACP:

- a. The use of the existing gate at Yallambie Road East. This is the same as the Project's Option 3 discussed above, and was discounted due to spatial and security requirements.
- b. The use of the existing gate at Yallambie Road Central. This is the same as the Project's Option 4 above, and was discounted due to spatial and security requirements.
- c. The construction of a new entry on Greensborough Highway at the Erskine Road intersection. This proposal would include a new ACP on Greensborough Highway linking the existing Crew Street ACP. The BIW Project team has considered this option, and it is not considered to be viable for the following reasons:
  - i. The civil works associated with constructing a new roadway between Greensborough Highway and Crew Street would incur significant costs due to the distance and complex (vegetation and relief) terrain.
  - ii. There would be a significant environmental impact on both flora and fauna. This option would require detailed studies associated with swift parrots, eastern dwarf galahs and the grassy plains woodlands.

### **Preferred Design**

46. The Yallambie Road West ACP (Option 5) is the Project's preferred solution. Traffic counts have been undertaken to understand the existing traffic flow paths and volumes. The proposed alterations to the traffic arrangements have been modeled (using peak one hour volumes) to understand the impacts of these changes. In this analysis the traffic from the existing Greensborough Highway ACP was redistributed equally to the Crew Street ACP and to the Yallambie Road West ACP. The impact of such traffic redistribution amounted to a 19% increase in traffic in the morning peak and a 5% increase in the afternoon peak on Yallambie Road. The peak one hour morning traffic volume using the Yallambie Road West ACP would be approximately 161 vehicles (an increase of 65 vehicles per hour).

47. A roundabout has been proposed at this location to aid traffic flows; reducing traffic queuing and thus reducing the potential impact on traffic flows on Yallambie Road. This roundabout is the same as others along Yallambie Road which are undertaking the same function. The provision of a roundabout also removes the need for designated turning lanes which would have a greater impact on the surrounding residential properties.

48. The Project contacted with Mr Pyros on 17 August to arrange further discussions of the proposed works and to better understand his concerns.

### **Consultation with Authorities**

49. The Project has consulted with Banyule City Council on a regular basis throughout design process. Three meetings were held between Banyule City Council and the Project to ensure that the proposed ACP at Yallambie Road West satisfied their requirements, including any traffic mitigation strategies for the surrounding areas.

50. As a result of these meetings, the Project's traffic engineers produced a detailed traffic analysis which covered the following key elements:

- a. the origin and destination figures for base personnel,
- b. a Traffic Impact Assessment on Yallambie Road,
- c. intersection analysis of the Greensborough Highway and Yallambie Road intersection, and
- d. mitigation strategies.

51. Banyule City Council has accepted the proposed roundabout option, subject to detail design being undertaken in accordance with their standards.

52. Discussions have also been held with VicRoads regarding this preferred scheme. This roundabout location is not within their jurisdiction; however they have been consulted due to the potential impact on the Greensborough Highway intersection.

53. On 1 June 2012 VicRoads issued their approval for the creation of the new ACP and has considered that the location of the proposed ACP will not impact future planning for the North East Link.

54. On 29 June 2012, Banyule City Council confirmed they had no objection to the proposed ACP subject to a suitable detailed design to be undertaken. This decision took into account the

resident consultation conducted by Department of Defence, the Banyule City Council review of the detailed traffic analysis and the advice from VicRoads.

### **Summary**

55. The Project has analysed multiple ACP options in detail. These options have been assessed against their ability to meet the required security objectives and to satisfy Council and VicRoads traffic and safety requirements, while also considering site and community views.

56. The Project's traffic expert has reviewed the design and has consulted with Banyule City Council throughout the development of the preferred option, and is satisfied that a combination of adequate signage and an inherently safe geometric design including the installation of a roundabout, will improve safety at this location.

57. Locating the site's main ACP at Yallambie Road West has been found to be the most appropriate solution when taking into account security functionality, traffic flows and the potential impact on the community.

### **ATTACHMENT**

1. Proposed directional signage for Victoria Barracks Sydney

