

attachment 7

Loop Road Proposal and Analysis

Analysis of loop road option for access to Hornsby Aquatic Centre

The local press recently presented an option for access to Hornsby Aquatic Centre (HAC). The proposed vehicle access comprised of a one way system with access into the site from the existing northern driveway and exiting the site via a road swinging around the CWA building and joining the Pacific Highway north of the Coronation Street intersection.

This option has similarities to Options 2 and 3 discussed in Council Report WK59/11, presented to Council at the Ordinary Meeting on 21 September 2011, except the reported options are for two way roads. Option 2 shows an access road at the southern end of Hornsby Park but clear of the CWA building. Option 3 uses a widened version of the existing northern access road.

Many of the points made in report WK59/11 are still valid for this new option and are included in the following comments about the alternate ingress and egress. Several assumptions have to be made in relation to the proposed new one way access option, namely:

1. The road is designed for a heavy rigid vehicle (HRV) in accordance with AS 2890.2-2002 with a minimum lane width of 3.5m and a clearance requirement of 4.5m
2. A minimum footpath width of 2.0 metres in front of the CWA building to allow for safe pedestrian access to and from the building.

The comments below consider the entry and exit sections of the new one way access option separately.

Entrance via existing access at northern end of Hornsby Park

1. Vehicles can enter carpark from all directions. HRVs can only access site by a right turn unless one of the sandstone entry walls is removed or relocated to allow for the truck turning path.
2. Poor sight distance turning right with central garden light posts and palm trees in centre median restricting sight of oncoming vehicles. This would require modification and a heritage assessment. A dedicated right turn bay on the highway would be required in order to prevent blocking of through movements when vehicles are waiting to

turn right into the site. Right turn bay will be used for TAFE access as well as HAC access - considerable risk of "rear enders" especially as HAC users will be less familiar with the area and not expecting vehicles to stop prematurely for TAFE driveway.

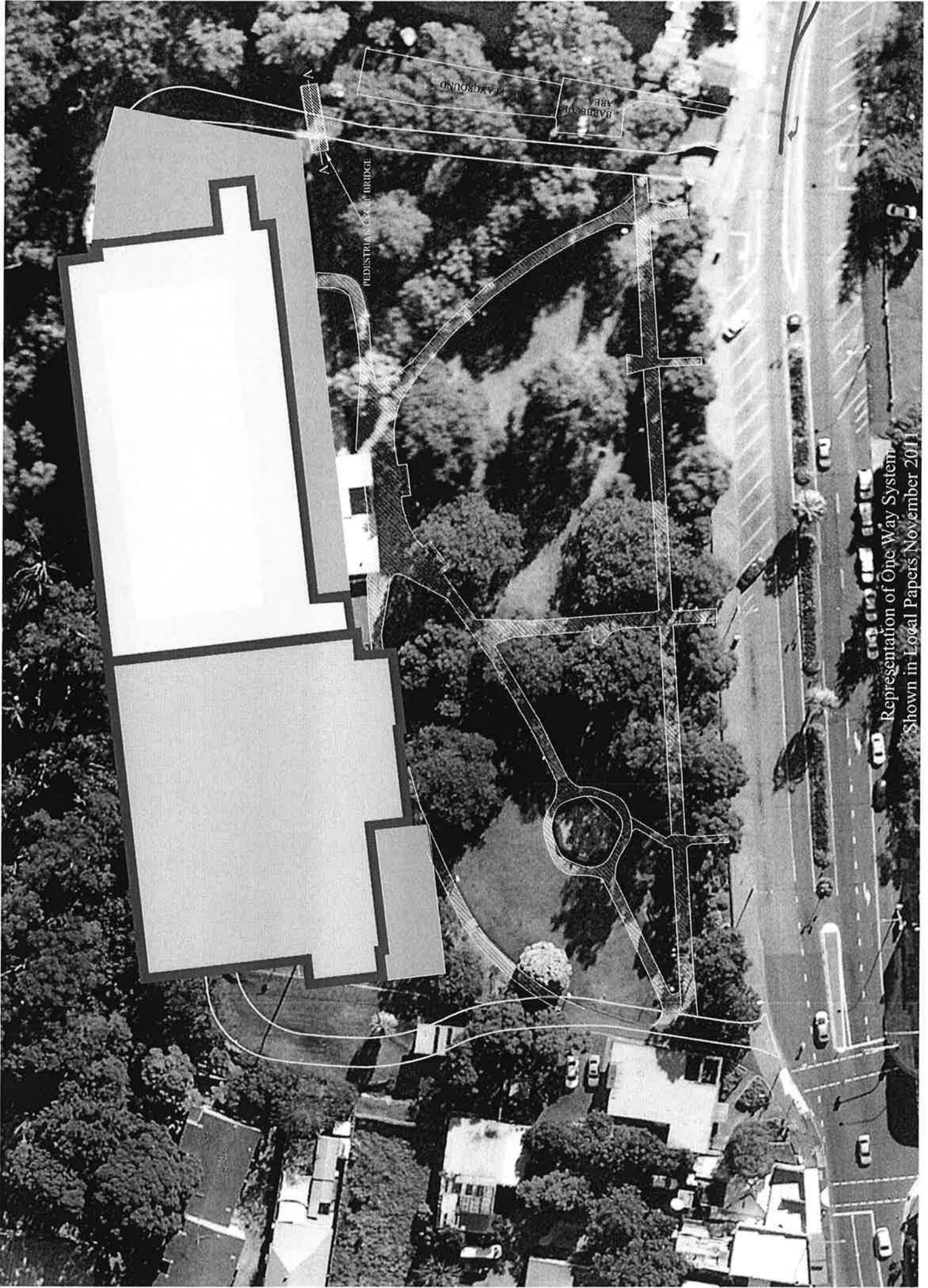
3. Due to traffic conditions, vehicles turning right into the site would experience delays as they have to give way to northbound traffic on the Pacific Highway. Should more than 3 vehicles queue waiting to turn right, the southbound through lane will become blocked, causing traffic delays.
4. Does not take into account the full extent of the new Hornsby Aquatic Centre. The Development Application plans (DA05) show an area labelled "*new grass area (future aquatic features)*" at a level of RL182.50, 1.2 metres higher than the pool concourse. This is also shown on section d on plan DA08. This area is for future expansion of the facility to allow for such things as a larger water slide or a wave rider. This area for future expansion was requested by members of the Deliberative Forums held in April this year. In attachment 3 of the abovementioned Council report the section for Option 3 shows that 4 metres of excavation is required at this point. This was required to allow vehicles to enter the carpark and also to provide a pedestrian and bicycle bridge over the roadway for access to the northern section of the park and Old Mans Valley.
5. The proposed carpark has to be lowered by 1.6 metres to allow HRV's which includes garbage trucks under the pool. Council determined a car park height of 3.5 metres which was based on the height of the largest piece of plant that will need replacement during the life of the pool with the garbage truck and other HRV's provided with a turning area on the driveway clear of the carpark. Further the carpark under the deep end of the 50m pool (1.8m) has a clearance of 2.8 metres which is suitable for cars. The cost for lowering the carpark has been estimated in excess of \$1.4M.
6. No loss of on street parking, however, loss of overflow carpark to north of existing pool due to lower road levels.
7. Grades for a HRV cannot be achieved without major impact on the park. Road entry level at the highway is approximately 2.3 metres higher than southern end of park. An access road would start to go below existing surface level approximately 15 metres into park and approximately 4m below existing level approximately 65 metres into park, requiring safety fences and significant retaining walls.
8. Entrance road located away from residential area, reducing the noise impact on Dural Street properties adjoining Hornsby Park.

9. Difficult access for construction traffic and impact on significant trees which would potentially impact on the heritage of the park. As a minimum, some heritage trees will require branch removal to allow for clearance.
10. A two way roadway needs to be constructed during demolition and construction of the new HAC.
11. On Crown Land for which Council is the Reserve Trust, therefore this option does not require property acquisition.
12. Significant impact on the heritage values of Hornsby Park with existing entry wall and gardens requiring partial demolition, two (2) mature Turpentine (heritage trees) requiring removal and potential impact to the root system of many others. Impact on existing sandstone retaining walls and isolation of playground and BBQ area. Play area may need to be relocated elsewhere in park. Would be difficult to optimise the use of this area of the park. Access to heritage stairs to Old Man Valley compromised, and would require a bridge from the park over the proposed access road. Significant visual impact of road through park requiring fencing.
13. Other issues include possible impact on utility services.

Exit north of CWA building

14. Not possible to connect exit road to Coronation Street traffic lights as the signal cycle time allowed for an expanded intersection would significantly increase delays through the intersection. Would not receive RTA approval.
15. Exit therefore only to the north.
16. Exit alignment does not conform with AS2890.1 Parking Facilities Part 1 – Off Street Car Parking which requires the driveway to be set back 6 metres from end of the central median. If the location is adjusted to conform it will result in poor alignment at driveway crossing and encroach on open space within the park.
17. Without traffic signals, vehicles would exit via a driveway. Vehicles waiting to exit the driveway will block the footpath along the Pacific Highway.
18. Patrons wanting to head south would either make U turn at northern end of median or travel north on Pacific Highway and turn right at Bridge Road. This is a poor design that results in poor traffic circulation.

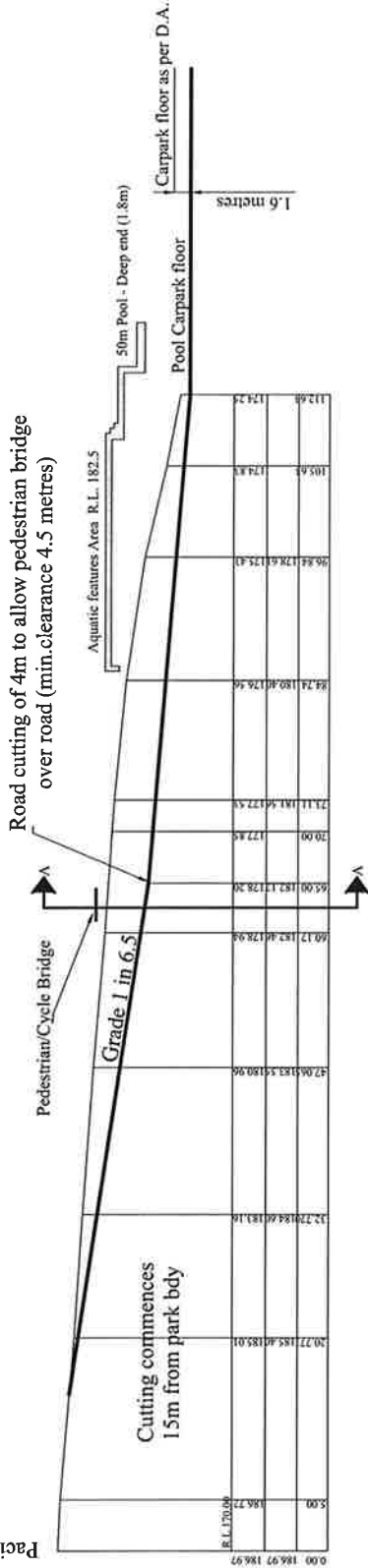
19. Conflict with median separation provided for police vehicles on the Pacific Highway opposite this entry/exit.
20. Grades and turning path for HRV achievable.
21. Minimises available space for proposed site compound area in southern section of Hornsby Park. Other land not available in close proximity
22. Significant impact on heritage values of Hornsby Park with greater intrusion into the park, removal of curved pathway and alienation of CWA building.
23. CWA amenity compromised with close proximity of access road, and the demolition of the main public toilets in the park, however, the accessible toilet near the Pacific Highway is to remain, and if not considered sufficient, additional toilet facilities will be constructed at the northern end of Hornsby Park
24. Total Cost – Approximately \$3M, which is \$2.2M more than option 1 shown in Council Report WK59/11 on which the DA is based upon.



Representation of One Way System
Shown in Local Papers November 2011

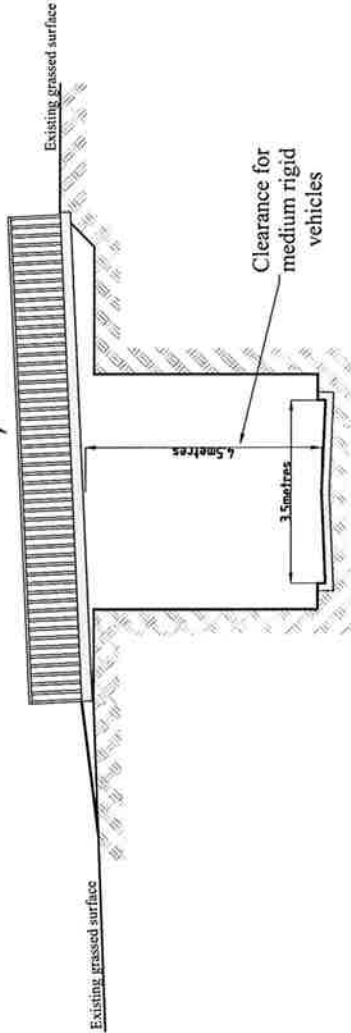
Pacific Highway Bdy

Road @ maximum grade of 1:6.5 to meet Australian Standards.



One way entrance at Northern end of Hornsby Park

Pedestrian /Cyclist bridge to northern end of Hornsby park



SECTION A-A

Long and Cross sections of northern Access Road