Information on the release of the Oval 4 pavilion location study

Bayside City Council is releasing the *Elsternwick Park Southern End Oval No 4 and Proposed Pavilion Locations Review* report, prepared by Michael Smith and Associates and sub-consultants, to provide greater clarity to the community on the independent report that informed Council’s decision to locate the pavilion that will service Oval 4 in the north-east corner of the oval.

**Report context**

In 2018, extensive consultation was undertaken to consider the reactivation of Ovals 3 and 4 at Elsternwick Park, including sportsground lighting, oval reconstruction and a pavilion to service both ovals. The 2018 Croxon Ramsay proposed site plan, which was included as a reference document for the consultation, was indicative of Council’s intent, with a balanced approach subsequently adopted by Council in resolving to leave Oval 3 unchanged and reactivate Oval 4 for winter sport.

Council’s September 2018 resolution did not specify a location for the construction of a sports pavilion. Since this resolution, the most appropriate location has been determined through rigorous site assessments, including soil and contamination testing, access and egress investigations, determining the location of existing utility infrastructure, consideration of the flood overlay at this site, and consideration of financial impacts.

These investigations have identified that intrusive and expensive infrastructure would be required to locate the sports pavilion in the centre of the reserve, and that this would pose a risk through the use of shared paths for vehicular and pedestrian movement, among other considerations listed within this report. Therefore, the proposed north-east location has been determined as the most feasible location for a pavilion to service the reactivation of Oval 4.

Further investigations are currently underway to finalise the exact pavilion and access road locations within the indicative north-east area provided within this report (Option 2).
Report redactions
Council would like to draw attention to two elements of this report that have been removed or amended prior to this report’s release.

1) ‘Appendix 1: Cost estimates’ has been removed from this report. The total cost plans for infrastructure figures are referenced throughout the report i.e. $515,000 excluding GST for Option 1 and $147,000 excluding GST for Option 2.

Appendix 1 itemises these total figures. Releasing this information would put Council at a disadvantage during forthcoming tender and contract negotiations.

2) The site plans for Options 1 and 2 have been amended for the purposes of public distribution. This report has recommended the general locations for the oval, sportsground lighting, pavilion and required, supporting access road.

As Council continue to investigate service connections, flood levels and traffic impacts, some of the proposed solutions for the mentioned design impacts are subject to change. For this reason, some specific elements and annotations of the design plans have been excluded from this report for distribution.

Further information
Project updates and associated technical information is available for public review via Council’s Elsternwick Park Oval 4 project page at bayside.vic.gov.au/elsternwick-park-oval-no4-upgrade

Any queries regarding the contents of this report should be directed to Damien Van Trier Bayside City Council’s Open Space, Recreation & Wellbeing Manager by phone (03) 9599 4699 or email dvantrier@bayside.vic.gov.au
1. Executive Summary – 22nd April 2020

Following the preparation of the assessment of the physical and visual impact and infrastructure costs, Bayside City Council has selected Option 2, which is the pavilion located to the northeast side of oval 4.

2. Assessment

Bayside City Council engaged Michael Smith and Associates and subconsultant team of Quantum Traffic, TD and C Consulting Engineers and David Harlock and Associates to review the feasibility of two potential locations of a proposed sports pavilion at oval No. 4 to the south east corner of Elsternwick Park. The proposed pavilion development is in conjunction with the reconstruction of the sports ground No. 4. The proposal for the oval redevelopment is to re-profile the playing surface and provide irrigation and drainage to support the new grassed surface. A perimeter gravel pedestrian path will assist to define the oval. As part of the oval’s redevelopment, new sports ground lighting will be provided.

The area falls within a defined Melbourne Water Flood Zone. The Melbourne Water Flood Certificate obtained by the Consultant Team during the study process MWA 1168204 dated 12th March 2020, nominates the flood zone of 3.53 metres. The south east corner of the park is bounded by New Street to the east and Head Street to the south. Both streets are council owned and managed streets. Both have residential properties to their lengths opposite the park. There are three Planning Overlays within the site DDO 2 (Design Development Overlay), SBO (Special Building Overlay), DCPO 1(Development Contributions Plan Overlay).

The proposal is to construct a 300 square metre sports pavilion to service the needs of sporting clubs using the upgraded and reconstructed sports field No. 4.

The upgrading of the sports field No. 4 will include removal of the existing grass thatch and topsoil, installation of agricultural drainage and irrigation pipework below the top soil layer. A new soil profile will be prepared to support the growth of Santa Ana Couch grass. There is a restriction not to increase the current level of oval No. 4, so as to retain the current flood retarding capacity.

Council has engaged an external consultant to conduct a Traffic Impact Assessment to understand the existing and future parking demands required in line with Council’s Planning Scheme (52.06).

Two options for the location of the pavilion have been suggested by Council. The first Option 1, has the proposed pavilion to the south-west section of the playing field close to an existing
picnic shelter and rebound wall. For Option 2, the proposed pavilion is located to the north-east section of the playing field, close to New Street.

Two possibilities present themselves for access to the proposed location of the pavilion at Option 1, that is an access roadway from New Street to the east side of oval No. 4 and skirt around the south side of oval No. 4. The second is an access roadway from Head Street. Access from Head Street could use part of a 3 metre wide existing asphalt pedestrian path, then divert across the top of the retarding basin mounding to then connect to the pavilion near the existing rebound wall. This option was dismissed as there are visual impacts to the amenity of the park and an access road would seriously compromise the use and function of the existing internal shared pathway.

Vehicular access from New Street is a more acceptable alternative, to take a mainly curvilinear access road around the south side of oval No. 4 and to join the proposed pavilion north of the rebound wall. The approximate length of the access road from New Street is in the order of 180 metres. Investigation of the New Street nature strip and park interface revealed that access could be gained approximately 15 metres north of a power pole near a *Eucalyptus salignus* to lead at right angles to then skirt the southern side of the oval No. 4. The asphalt access road is in the order of 3.7 metres wide and will have a passing bay midway along its length.

There are two alternatives to skirt around the south side of the oval, both with minimal tree loss of one *Eucalyptus camaldulensis* (River Red Gum) tree. There are a substantial number of mainly River Red Gum trees with some other mixed natives and several exotic tree species within the grassed corridor between New Street and the oval.

Option 2, has the pavilion located close to New Street on the north east side of oval No. 4. In contrast to Option 1, the length of access road into the park is reduced to approximately 25 metres, with the loss of one recently planted Eucalyptus tree close to the toe of the grassed embankment along New Street.

Both Options 1 and 2, are subject to the construction of the proposed pavilion on a raised pad in accordance with Melbourne Water’s flood level requirements and the Planning Scheme Overlays. During the course of the feasibility study, the consultant team obtained the Flood Certificate from the south section of Elsternwick Park from Melbourne Water (see attached Appendix). The designated flood level is 3.53 metres to AHD. The flood level has an Annual Exceedance Probability AEP, which is a 1% probability of being equalled or exceeded in any one year.

Further discussion in late March 2020, with Melbourne Water’s Customer Service Centre, confirmed that a 300mm freeboard above the 3.53 metre mark was required for any building within the flood zone, the floor slab there 3.83. Melbourne Water advised a licensed surveyor should be engaged to determine the exact effect of the applicable flood level on the oval area.

In terms of functionally and user convenience, Option 2 has less visual impact within the park and offers convenient access for pavilion users from New Street. As the pavilion is close to New Street, visiting teams will readily identify the pavilion with the oval.
An advantage of the Option 1 location is the pavilion and spectator viewing are more sheltered from cold south-west and north-west winds than that of the exposed spectator viewing area of Option 2. A disadvantage of option 2 is that spectator viewing could be very trying with late afternoon sunshine streaming to spectators eyes, particularly during the November to March period.

Option 2, with only a minimal length of asphalt access road has less infrastructure to construct with less length of access roadway and therefore less cost than Option 1. Further investigation will be made by the consultant team in terms of existing sewer, water and electricity connections relative to each pavilion location.

Quantum Traffic, as a subconsultant to Michael Smith and Associates, prepared a traffic engineering report, documenting access requirements in terms of garbage and delivery trucks, access road width and functionality of truck manoeuvring at the pavilion. They prepared swept path curves to both options including Sub Option b of Option 1 for the alternative route of the access road to the south side of oval 4. Swept path curves are based on waste pick-up trucks gaining access to the pavilion and their ingress and egress at New Street.

TD and C Civil Engineers, as subconsultants to Michael Smith and Associates, prepared a report on the access road construction and requirements to maintain Melbourne Water’s floodway management requirements. Consideration are in the height of the access road, the need for box culvert pipe drains to allow unimpeded water flow beneath the access roadway in both Options 1 and 2, the pedestrian access pathways and costs of construction.

TD and C Civil Engineers provided indicative locations of five side entry drainage pits to the north side of the proposed access road to Option 1 and a drainage junction pit to the northeast corner of the pavilion’s apron pad to collect stormwater from the access road to then discharge via a 225mm diameter underground drainage pipe to the existing wetland located approximately 80 metres northwest of the junction pit and pavilion. For Option 2, there is one side entry pit to the proposed access road and a junction pit to the northeast corner of the pavilion with a 225mm drainage pipe to discharge to the existing wetland to the northwest side of the oval with a length of approximately 170 metres.

The Consultant Team considered the discharge of stormwater to the existing wetland from the pavilion roof and access road in both Options 1 and 2 is a far more satisfactory solution than draining the access road stormwater to rain garden beside the access roadway.

There is a 15 metre wide Melbourne Water Easement that runs from near the corner of Bent Avenue and New Street in then a south westerly direction through Elsternwick Park. As the intended stormwater drainage discharge for both Options 1 and 2 would require the proposed 225mm diameter drainage pipe to cross the easement, Melbourne Water’s approval would be required.

Melbourne Water’s Customer Service Centre advised at the Consultant Team’s enquiry of the height above the flood level, that Council should make a pre-development application to gain approval of both options in principle. The Consultant Team’s recommendation is for
Bayside City Council to make this application to Melbourne Water based on the flooding issues and the need to cross the easement.

The cost plans prepared for both Options 1 and 2 took into account the locations of particularly existing drainage and sewerage infrastructure within the park and the surrounding neighbourhood.

Sewer and Drainage pit plans were provided by Bayside City Council. While the cost plan for Option 1 calls up sewer connections of $27,000 as opposed to $6,000 of Option 2, it was noted that Horton Close which runs north of Head Street to the southwest corner of the park, has a sewer pit at the head of the court bowl. This would be close to the pavilion location of Option 1. The consultant team reviewed sewer, water and electricity connections to each pavilion location and prepared the cost plan.

The two cost plans prepared assisted in the preparation of the assessment of the pros and cons for the two Options 1 and 2. The cost plan for infrastructure of Option 1 (excluding the pavilion design and construction) is in the order of $515,000 excluding GST and the cost plan for Option 2 is in the order of $147,000 excluding GST. It is noted that Option 1’s two sub options are virtually identical, the differences being a slightly different route of the access road through the group of River Red Gums near New Street.

On the basis of the attached pros and cons table, the overall assessment is Option 2 is the preferred location for the proposed pavilion with main parameters of less infrastructure cost and less visual and physical impact to the park’s environs.

Attachments:

- Quantum Traffic Report
- Report from TD and C Engineers
- Comparative Assessment
- Melbourne Water’s Flood Certificate
30th July 2020

Michael Smith and Associates
First Floor, 407 Whitehorse Road
BALWYN VIC 3103

Attention: Mike Smith

Proposal: New Pavilion Feasibility Assessment
Site: Elsternwick Park, Brighton – Oval #4

Introduction

Please find following our traffic engineering assessment of the vehicle access arrangements for two (2) pavilion options for Elsternwick Park Oval #4 in Brighton.

Proposal

Council has developed two (2) options for the provision of a new pavilion at Elsternwick Park Oval #4, as follows:

- **Option 1** – Pavilion on the western side of the oval with a 200m access road to access New Street
- **Option 2** – Pavilion on the north-east side of the oval with a short 50m access road to new Street.

The current proposal is for a small amount of disabled parking provided adjacent to the proposed pavilion (i.e. 1-2 spaces). All parking demands associated with the sporting activity are proposed to be accommodated on-street in the surrounding road network, with the justification of this approach subject to a separate traffic impact assessment by others.

The vehicle access to the pavilion will also accommodate waste collection and loading vehicles.

Existing Conditions

Oval #4 is located in the southern portion of Elsternwick Park, along the eastern frontage of the park to New Street. Other key uses in this section of the park include a playground, BBQ area and rebound wall to the south-west of the oval.

A locality plan and aerial photograph of the site are provided in Figure 1 and Figure 2 below.
Proposal: Elsternwick Park, Brighton – Oval #4
Traffic Engineering Assessment: Pavilion Access Arrangements

Figure 1: Location Map (Source: Melway Online)

Figure 2: Aerial Photograph (source: Nearmap)


**Road Network**

New Street is classified as a secondary arterial road (Road Zone Category 2), managed by Council. New Street extends between Nepean Highway in the north and Beach Road in the south.

In the vicinity of the subject site, New Street provides for a single traffic lane and bicycle lane in each direction. A parallel parking lane is provided on the west side of the road, whilst indented 90 degree parking is provided on the east side of the road.

Bus Route 603 (both directions) and Route 630 (northbound only) operate on New Street past Elsternwick Park. A formal bus stop including hardstand and shelter is located in the vicinity of Head Street. A bus stop flag (no route information) is located approximately 100m south of Rusden Street on the reserve frontage.

New Street is subject to a posted speed limit of 60km/h.

![Figure 3: New Street (view north) - Figure 4: New Street (view south)](image)

**Expected Traffic Volumes**

The proposed pavilion access roads will accommodate a small disabled parking provision and allow for service vehicle access.

We would expect the peak activity for the disabled spaces to be associated with the future sporting activity on weekends. The duration of stay of these spaces is likely to be longer than 1 hour, however, a conservative estimate of traffic volumes would be 4 movements/hour (assuming 2 spaces changes over once in an hour).

Waste collection and service deliveries would be expected to be scheduled outside of the oval peak times (i.e. during the week). A pavilion would be expected to generate 1 or 2 truck movements per week.

In view of the above, the proposed pavilion is expected to generate very low volumes, with a peak of 4 vehicles/hour on weekend.

**Design Vehicles**

Vehicles utilising the disabled parking spaces will be typical car, up to the size of a B99 design vehicle.

Waste collection and service vehicles would be expected to be approximate the 8.8m MRV.
New Street Access

Vehicle access to the two (2) pavilion options is proposed to occur to New Street, directly east of the two pavilion locations.

A summary of the key engineering conditions for vehicle access to New Street are discussed below:

- **Sight Distance** – The subject length of New Street is straight and flat. There are no geometric impediments to sight distance along the length and vehicle access can be comfortably accommodated. It is noted that on-street parking will need to be restricted in the vicinity of the future access point to maintain sight lines, however, this can readily be introduced by Council.

- **Turn lane Provision** – As indicated above, the traffic volume associated with the proposed pavilion access is expected to be very low. On this basis, formal turn lanes are not considered to be warranted. It is noted that the property access without the provision of turn lanes is common along the length of New Street. Given that Council is the Responsible Authority for New Street, VicRoads approval is not required for the proposed access arrangements.

- **Bus Stop (Option 2 Access)** – A bus stop flag is located in the vicinity of the proposed access for Option 2. However, no route information is provided on the flag and no hardstand or shelter is provided. The stop is not shown on the PTV website indicating that the stop is likely redundant. This stop would need to be removed / relocated to accommodate the proposed vehicle access and approval of PTV is required. However, we note that if the stop was required to be retained, it could be readily be shifted north or south of the proposed access point (again subject to PTV approval).

The vehicle crossover for Option 1 should be conservatively designed to accommodate simultaneous movements of a car existing and truck entering the site, given the length of the accessway.

Accessway Design

Given the very low traffic volumes expected, the internal vehicle accessway can operate under a single lane arrangement.

The width of the accessway has been designed based on the requirements of the 8.8m MRV identified in AS2890.2-2002 as follows:

- On Straights – 3.5m wide.
- On Curves – 3.9m wide (minimum curve radii of 40-69m).

Given the length of the Option 1 access road, a ‘passing area’ has been included at the midpoint to accommodate any potential situations where vehicles meet in opposing directions. The width of the passing area has been set at 6.5m, allowing a 3.5m operating envelope for a truck and a 3m operating envelope for a car. This passing area is in addition to the crossover widening discussed above for Option 1.
**Turn-Around Facilities**

All vehicle movements in and out of the reserve should occur in a forwards arrangement. On this basis, the hardstand area at the pavilion locations needs to accommodate the turnaround movements for an 8.8m MRV.

The exact design / configuration of the carpark area will need to be developed at the later design stages to accommodate the waste collection vehicle.

**Summary**

From a traffic engineering perspective, a pavilion could be located in either position (Option 1 or Option 2) with similar low traffic impact.

The biggest difference for the two options is the capital cost of construction, with Option 1 requiring a significantly longer access road (200m to compared to 50m).

Furthermore, Option 1 has greater potential for vehicles to meet in opposing directions, although this is unlikely with the low traffic volumes and the design developed has conservatively allowed for two (2) passing opportunities.

If you have any questions/concerns or require any further information, please do not hesitate to contact me by phone (0411 745 934) or email (brent@quantumtraffic.com.au)

Brent Hodges

SENIOR ASSOCIATE – Quantum Traffic
TD&C Report – Elsternwick Park

Based on advised site flood level of 3.53m the required pavilion, floor level would be 3.83m. From the existing contours and features plan the existing ground levels appear to be approximately 3.4m at the option 1 location and 3.0m at the option 2 location, giving heights above ground level of 430mm and 830mm respectively.

Melbourne Water may require a flow path to be maintained below the floor.

It is not possible to nominate access road levels without knowledge of New Street road levels. Our site observation was that New Street is approximately one metre above the park level.

The access road would need to enter the park at the road level, although it would be able to ramp down within the park. At a grade of 1 in 20 it would take 20 metres to fall one metre. This is approximately the distance from the road to the existing mound at the option 1 access location, and the distance from the road to the pavilion at the option 2 access location.

These elevated sections of road would block the flood flow between New Street and the mound at the option 1 location, and the flow between New Street and the pavilion at the option 2 location. It may be possible to overcome this with extensive culverts under the access roads providing a flow path.

As the area is subject to flooding the access road should be a ‘water resistant’ construction such as sealed asphalt or concrete pavement. A ‘hard’ drainage system such as kerb and channel collection to pits and outfall drains would be preferable to an agricultural drain collection with raingarden filters and outfall drainage which would become swamped and not provide efficient drainage from a flood event.

In conclusion option 1 permits pavilion construction closer to the existing ground level, however, the access road creates a blockage to flood flow around the existing mound unless culverts are incorporated.

The option 2 pavilion floor level and access road level would create a significant block to both flood flow and path flow between New Street and the oval.
## ELSTERNWICK PARK COMPARATIVE ASSESSMENT OF OPTION 1 AND 2 PAVILION LOCATIONS  
9\textsuperscript{th} April 2020

### OPTION 1  Circuit path to south side of the oval

**Pros:**
- Pavilion clustered with other facilities and nearby activities i.e. rebound wall and nearby picnic shelter
- Protection for spectators from cold south-west and north-west winter winds
- Sunshine not in spectators eyes during sporting events

**Cons:**
- Considerable cost of infrastructure to provide the sealed access road from New Street to the pavilion as a visually sympathetic road skirting the south side of Oval No. 4. Approximately $368,000 additional cost than Option 2
- The pavilion could be considered as visual / physical intrusion to the openness and visual permeability within the park
- The pavilion is not readily identifiable from New Street for visiting sporting teams, not familiar with the park
- As there is no parking on the access road or at the pavilion, other than a vehicle turn around area beside the pavilion, it is a long way of 160-180 metres to walk from New Street parking areas to the pavilion. This is particularly so for cricketers carry bags of cricket gear.
- Significant issue of grade change from the pavilion to the existing asphalt shared trail
- Immediate grade transition from 3.83 floor level of the pavilion to approximate level of the oval of 3.0 metres (common to both options)
- The underground drainage line taking stormwater from the pavilion and access road crosses the existing Melbourne Water easement to the north to discharge into the wetland (common to both options)
- As some of the park is on contaminated soil, Option 1 has considerably more infrastructure earthworks, therefore a higher OH+S Risk than Option 2

### OPTION 2  With the pavilion close to New Street

**Pros:**
- Less in infrastructure costs of roadway access and associated drainage. Approximately $368,000 less cost than Option 1
- Close proximity to car parking along New Street both kerbside and within the centre isle of the Street, therefore convenient to sport participants
- The pavilion is more readily identifiable to visiting teams
- Less visual intrusion within the core area of the park

**Cons:**
- Minor visual impact to the residential area to the east side of New Street although approximately 65 metres between the pavilion and envelope of houses
- Considerable exposure to winter south-west and north-west winds
- Particularly for viewing cricket Nov – Feb late afternoon 4pm – 7pm sunshine in spectators eyes
- Immediate grade transition from 3.83 floor level of the pavilion to approximate level of the oval of 3.0 metres (common to both options)
- The underground drainage line taking stormwater from the pavilion and access road crosses the existing Melbourne Water easement to the north to discharge into the wetland (common to both options)
30 March 2020

Michael Smith
Michael Smith and Associates
1st Floor, 407 Whitehorse Road
Balwyn VIC 3103

Dear Michael,

Proposal: Flood level certificates
Site location: Elsternwick Park

Melbourne Water reference: MWA-1168204
Date referred: 12/03/2020

Applicable Flood Level:

The estimated flood level for this property is 3.53 metres to Australian Height Datum (AHD), that has an Annual Exceedance Probability AEP, that is, a 1% probability of being equalled or exceeded in any one year.

A licensed surveyor should be engaged to determine the exact effect of the applicable flood level on the property.

Please note that whilst the above level is based on a storm event, the property may be affected by more frequent flooding. To determine whether the property is affected by flooding from the local drainage system, please consult your local Council.

Important to note:

Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.

This letter does not constitute approval for any proposed development for planning or building.

To obtain flow rate velocity information or Melbourne Water’s requirements for any proposed development, please contact our Customer Service Centre on 131 722 or make an application here.

The flood level advice provided is based on the most accurate information currently available. This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Disclaimer

This letter does not constitute approval for any proposed development for planning or building. Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.
This certificate provides information as a general reference source only and has taken all reasonable measures to ensure that the material in this letter is as accurate as possible at the time of publication. However, Melbourne Water makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, Melbourne Water disclaims all liability, (including liability in negligence), for losses and damages, (including indirect and consequential loss and damage), caused by or arising from anyone using or relying on the information for any purpose whatsoever.

The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Advice

For more information in relation to flooding or additional services that Melbourne Water can provide please visit our website.

For general development enquiries contact our Customer Service Centre on 131722.

Regards,

Tristan Aldridge
CSR