



Ordinary Meeting of Council Agenda

**to be held on Tuesday 27 August 2019 at 7.00pm
Richmond Town Hall**

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Order of business

- 1. Statement of recognition of Wurundjeri Land**
- 2. Attendance, apologies and requests for leave of absence**
- 3. Declarations of conflict of interest (Councillors and staff)**
- 4. Confidential business reports**
- 5. Confirmation of minutes**
- 6. Petitions and joint letters**
- 7. Public question time**
- 8. Delegates' reports**
- 9. General business**
- 10. Questions without notice**
- 11. Council business reports**
- 12. Notices of motion**
- 13. Urgent business**

1. Statement of Recognition of Wurundjeri Land

“Welcome to the City of Yarra.”

“Yarra City Council acknowledges the Wurundjeri as the Traditional Owners of this country, pays tribute to all Aboriginal and Torres Strait Islander people in Yarra and gives respect to the Elders past and present.”

2. Attendance, apologies and requests for leave of absence

Anticipated attendees:

Councillors

- Cr Danae Bosler (Mayor)
- Cr Misha Coleman (Deputy Mayor)
- Cr Stephen Jolly
- Cr Daniel Nguyen
- Cr Bridgid O’Brien
- Cr James Searle

Council officers

- Vijaya Vaidyanath (Chief Executive Officer)
- Ivan Gilbert (Group Manager Chief Executive’s Office)
- Lucas Gosling (Director Community Wellbeing)
- Gracie Karabinis (Group Manager People, Culture and Community)
- Chris Leivers (Director City Works and Assets)
- Diarmuid McAlary (Director Corporate, Business and Finance)
- Bruce Phillips (Director Planning and Place Making)
- Mel Nikou (Governance Officer)

On leave of absence

- Cr Mi-Lin Chen Yi Mei
- Cr Jackie Fristacky
- Cr Amanda Stone

3. Declarations of conflict of interest (Councillors and staff)

4. Confidential business reports

Item

- 4.1 Matters prejudicial to Council and/or any person
- 4.2 Matters prejudicial to Council and/or any person

Confidential business reports

The following items were deemed by the Chief Executive Officer to be suitable for consideration in closed session in accordance with section 89 (2) of the *Local Government Act* 1989. In accordance with that Act, Council may resolve to consider these issues in open or closed session.

RECOMMENDATION

1. That the meeting be closed to members of the public, in accordance with section 89 (2) of the *Local Government Act* 1989, to allow consideration of matters prejudicial to Council and/or any person.
2. That all information contained within the Confidential Business Reports section of this agenda and reproduced as Council Minutes be treated as being and remaining strictly confidential in accordance with the provisions of sections 77 and 89 of the *Local Government Act* 1989 until Council resolves otherwise.

5. Confirmation of minutes

RECOMMENDATION

That the minutes of the Ordinary Council Meeting held on Tuesday 13 August 2019 be confirmed.

6. Petitions and joint letters

7. Public question time

Yarra City Council welcomes questions from members of the community.

Public question time procedure

Ideally, questions should be submitted to Council in writing by midday on the day of the meeting via the form available on our website. Submitting your question in advance helps us to provide a more comprehensive answer. Questions that have been submitted in advance will be answered first.

Public question time is an opportunity to ask questions about issues for which you have not been able to gain a satisfactory response on a matter. As such, public question time is not:

- a time to make statements or engage in debate with Councillors;
- a forum to be used in relation to planning application matters which are required to be submitted and considered as part of the formal planning submission;
- a forum for initially raising operational matters, which should be directed to the administration in the first instance;

If you wish to raise matters in relation to an item on this meeting agenda, Council will consider submissions on these items in conjunction with and prior to debate on that agenda item.

When you are invited by the meeting chairperson to ask your question, please come forward and take a seat at the microphone and:

- state your name clearly for the record;
- direct your questions to the chairperson;
- ask a maximum of two questions;
- speak for a maximum of five minutes;
- refrain from repeating questions that have been asked previously by yourself or others; and
- remain silent following your question unless called upon by the chairperson to make further comment or to clarify any aspects.

8. Delegate's reports

9. General business

10. Questions without notice

11. Council business reports

Item		Page	Rec. Page	Report Presenter
11.1	Yarra Bend Tree Collapse and River Bank Slump - Stage 1 Interim Alluvium Report	7	13	Vijaya Vaidyanath – Chief Executive Officer
11.2	Brunswick Street Oval Precinct Plan	106	112	Graham Davis - Manager Building and Asset Manager
11.3	Management of Plane Trees	255	265	Bruce Phillips – Director Planning and Place Making
11.4	Proposed Discontinuance of Road adjacent to 25 Balmain Street, Cremorne	281	284	Bill Graham – Coordinator Valuations
11.5	Proposed Discontinuance of Road abutting 75-119 Cubitt Street, Cremorne	309	312	Bill Graham – Coordinator Valuations
11.6	Draft Heritage Strategy 2019-2030	331	336	Richa Swarup – Senior Advisor City Heritage

The public submission period is an opportunity to provide information to Council, not to ask questions or engage in debate.

Public submissions procedure

When you are invited by the meeting chairperson to make your submission, please come forward and take a seat at the microphone and:

- state your name clearly for the record;
- direct your submission to the chairperson;
- speak for a maximum of five minutes;
- confine your remarks to the matter under consideration;
- refrain from repeating information already provided by previous submitters; and
- remain silent following your submission unless called upon by the chairperson to make further comment.

12. Notices of motion

Nil

13. Urgent business

Nil

11.1 Yarra Bend Tree Collapse and River Bank Slump - Stage 1 Interim Alluvium Report

Reference: D19/143920

Authoriser: Director City Works and Assets

Purpose

1. To provide Council with a progressive update to the investigations undertaken by Council's appointed independent consultant Alluvium, in regards to the causes of the slumping along the Yarra river bank abutting the Yarra Bend development site, and to identify any short term actions that should be undertaken.

Background

2. The 16 ha Yarra Bend development site (also known as the former AMCOR site) in Alphington is currently being re-developed. The site abuts Heidelberg Road and the Chandler Highway and extends to the Yarra River. There is a 30 metre strip of land along the river bank that is owned by the lead developer (Glenvill), and is highly valued by the community for the amenity it provides, and the access it provides to the river. The intent is that this strip of land will vest in a public authority in future to enable ongoing public access to the land.
3. In January of 2019, it was reported that a section of the river bank had slumped, causing a tree to fall into the river; this tree was subsequently removed.
4. In May 2019 a second section of river bank slumped with a second tree falling into the river. Subsequent to this, two other trees were identified as being at risk due to being within the affected slump zone. One of these trees (T1 in previous reports) was felled on Friday 16 August 2019, following the Council resolution of 13 August 2019 which was based on formal advice from Alluvium about the risk of it falling and further damaging the river bank, and approval of Melbourne Water. The tree was removed by contractors operating on behalf of Glenvill, retaining the root ball as a means of retaining soil integrity in the riverbank. The tree trunk will be placed in the river bank to become instream habitat.
5. The other tree (T2 in previous reports) remains stable on the river bank and is subject to regular monitoring and photo capture according to the Council resolution of 30 July 2019.
6. There has been considerable community interest in the AMCOR development, and most recently in relation to the slumping of the river bank, the loss of one mature tree and the potential loss of more mature trees in the slump area.
7. Council officers have engaged an independent consultancy Alluvium to investigate the cause of the river bank slumping and its impact on river bank trees.
8. Alluvium has convened an expert panel specialising in the fields of:
 - (a) Hydrology and fluvial geomorphology;
 - (b) Geotechnical bank stability;
 - (c) Ground water processes;
 - (d) Surface Water management and
 - (e) Riparian Ecology.
9. The investigations and subsequent reports will be staged. The purpose of the investigations is to:
 - (a) Identify the causes of the bank slump and tree collapse;
 - (b) Identify any short term actions that should be undertaken; and

- (c) Identify long term remediation measures for the site.
10. The investigations are to be undertaken in stages:
- (a) Preliminary memo dated 29 July 2019 based on site inspection and review of risks of further tree collapse;
 - (b) Subsequent memo dated 12 August that provided additional information and recommendations for the management of tree T1;
 - (c) Report 3 interim report (attached draft report) A qualitative assessment based on a field inspection and review of readily available information and
 - (d) Report 4 detailed assessment based on additional data collection and analysis.
11. The first Council report considered the stability of two trees within the bank slump zone and was presented to Council on 30 July 2019 recommending that a planning permit would be required in order to remove tree T1.
12. A second Council report was presented to Council on 13 August 2019 providing Alluvium's assessment for an alternative that would enable preservation of tree T1 and Glenvill's consideration of alternative continuous access for the community along the river front. Council resolved to:
- (a) note the advice from Glenvill that the condition of the existing track is not safe to keep the current path open to the public, as such it has been closed;
 - (b) note that Glenvill are open to reviewing this position in the future should site conditions change;
 - (c) note that following the ultimate rehabilitation of the riverfront there will be an upper path and a lower path in accordance with the approved Development Plan and Section 173 Agreement registered on the land that will provide public accessibility;
 - (d) note the assessment on Tree 1 and the options presented by Alluvium to preserve the tree;
 - (e) note that due to further slumping of the river bank, the likelihood that the tree will fall in the coming days or weeks, and the immediate risk to the property (river bank) should the tree fall, the advice from Alluvium is that Tree 1 should now be removed without the need for a planning permit;
 - (f) endorse the removal of the tree, retaining the root ball for bank protection, and in conjunction with Melbourne Water, locate the trunk in the river to act as instream habitat and in addition consider the same treatment for the already fallen tree at this location;
 - (g) instruct officers to liaise with Glenvill and Melbourne Water to inform them of this resolution and to work with them to give it effect as soon as practicable; and
 - (h) note the options provided within the report by Alluvium to stabilise the riverbank, and further note that Alluvium will provide a future report on both the cause and the options to address further river bank slumping as part of a report to the next Council Meeting.

Alluvium's interim findings in relation to river bank slumping and potential mitigation

13. Alluvium's third report (attached, dated 19 August 2019) discusses the potential mechanisms causing the river bank slumping. The Alluvium report has indicated:
- (a) River erosion – the expert panel's discussions with Melbourne Water suggest that the bank slumping is concentrated at the subject site. A review of the existing hydraulic model for the Yarra River revealed the forces on the subject bank to be not dissimilar to other sections of riverbank and below the thresholds for scour of the river bank material. However the recent slump material will be vulnerable to loss by erosion processes. Further tree collapse will result in the loss of further bank material, and further investigation will be required to confirm this assessment;

- (b) There is no evidence tree collapse is driving the bank instability;
 - (c) The expert panel is of the opinion that the bank slumping and tree collapse are most likely the result of increased soil moisture in and on the lower terrace of the riverbank;
 - (d) The site inspection and review of the available information suggests that the cause of changes to groundwater at the site is linked to the changed land and water management of the site. The panel has found no evidence that changes in groundwater and any subsequent bank slump and tree collapse were the result of any deliberate intent. There is substantive evidence to suggest that the changes to groundwater levels in the lower terrace could be the result of increased surface water infiltration at the site;
 - (e) The environmental management plan for the site provides for surface water to be delivered to the sedimentation ponds to be stored and reused and any surplus water to be managed through evaporation and infiltration;
 - (f) A car park area is located at the top of the steep embankment on the east side of the subject site. The car park was covered by a concrete hardstand area until May 2014, which was then converted to a gravel area. The expert panel noted the presence of eucalypts in the car park, and estimate that these trees have grown at a rate of approximately 1 metre per year. This rate of growth is consistent with loose, well drained soils;
 - (g) Weathered/fractured basalt exists between 3-8 metres below the land surface. Multiple paths will exist for any elevated ground water movement under the site to move through the fractured basalt, toward the Yarra River and lower terrace;
 - (h) The expert panel did not find any compelling evidence to suggest that the rise in groundwater is associated with natural processes such as increased groundwater associated with increased rainfall. Current information suggests that the issues are isolated to the subject site and have occurred over the period of recent changes at the site;
 - (i) A sewer main close to the subject site has been recently decommissioned (by Melbourne Water) and filled with grout. This sewer main, prior to decommissioning, may have intercepted local groundwater and created a local drawdown in groundwater levels. The grouting of the sewer main may have resulted in the loss of this drainage path and created an increase in groundwater levels. This potential mechanism should be investigated in Stage 2 investigations; and
 - (j) A newly constructed stormwater drainage system has been installed on the east side of the development site. While a failure of this system could lead to increased groundwater levels, this is unlikely to be the cause of the issues at hand.
14. Based on the information available, the expert panel is of the opinion that the most likely source of the elevated groundwater is a change to the rate of surface water infiltration at the subject site. Ongoing bank collapse (instability) will continue to occur at the site until groundwater issues are addressed and bank stability threatens trees on the river bank.
15. Alluvium's advice on short term risk mitigation without pre-empting the outcomes of the more detailed investigations:
- (a) Seal existing abandoned and new sediment control ponds;
 - (b) Reduce ground water infiltration from the existing gravel car park adjacent to the steep embankment and at the east side of the subject site;
 - (c) Review and implement an interim site surface water management plan, including management of surplus site stormwater runoff including approvals for any off site water disposal; and

- (d) Subject to work health and safety constraints, infilling of the slump tension cracks on the lower terrace with a suitable material to reduce direct water entry to cracks and slumped material.
- 16. Dewatering of ground water (to lower the ground water table level) may be an appropriate strategy for the site, however Alluvium is of the opinion that such pumping will require a more lengthy assessment, design approval and implementation and may not be achievable within the short term scale of the interim site surface water management plan.
- 17. The panel does not support the short term use of large equipment on the lower terrace to install bank protection works for the lower terrace while the terrace has high ground water levels as the accompanying surcharge and vibration could increase the likelihood of collapse and may pose a safety risk to operators. The suitability of bank protection such as rock beaching should be the subject of more detailed Stage 2 investigations.
- 18. Further tree collapse poses risks to public safety and to the existing walking track and streambank. Tree 1 has now been felled. The expert panel proposes that Tree 2 be the subject of regular (weekly minimum) monitoring.
- 19. Monitoring of Trees:
 - (a) Photograph existing trees as record of current riparian vegetation for the site. This record can inform the future vision of the site and ultimate landscape plan;
 - (b) Dilapidation survey of existing bank slumps, soaks and trees on the river bank including installation of bench marks to monitor movement over time;
 - (c) Tree tilt monitoring;
 - (d) Tree health condition and assessment of all trees greater than 200 mm girth; and
 - (e) Weekly monitoring (minimum) of slump area and trees to determine if conditions change and increase the likelihood of tree collapse.
- 20. The issue of tree collapse and management is confounded by the potential presence of contamination from the development site on the lower bank. It is important to note that the remainder of the development site has been decontaminated by Glenvill in accordance with EPA approved processes, but the river bank area has yet to be decontaminated. The techniques and processes to achieve a 'fit for purpose' area of land for passive parkland area, as per the approved Development Plan, are still to be finally determined.
- 21. Alluvium recommend undertaking detailed investigations that will inform long term remediation measures (Stage 2 report). The investigation and accompanying report will include:
 - (a) Topographic survey of subject site;
 - (b) Survey of river cross-section (Bathymetric survey) of river adjacent to subject stream bank to determine whether stream erosion is a factor;
 - (c) Stream stability assessment;
 - (d) Identify water source and ground water profile changes;
 - (i) Gather data from remaining existing bores;
 - (ii) Install additional groundwater bores;
 - (iii) Assess age and origin of groundwater;
 - (iv) Geochemical testing of ground water;
 - (e) Check feasibility of ground water pumping. Initiate EPA approval process if and as required;
 - (f) Undertake soil permeability testing;
 - (g) Undertake slope stability analysis of embankment;

- (h) Identify mid to long term surface water management strategy reflecting outcomes of groundwater and geotechnical assessments;
- (i) Riparian vegetation assessment and management based on outcomes of groundwater and geotechnical assessments; and
- (j) Integrated solutions, mid to long term, reflecting the outcomes of geotechnical, groundwater, surface water, riparian and waterway management assessments.

External Consultation

- 22. External consultants have been engaged by Council to provide independent advice on the trees, river bank slump and remediation actions.
- 23. Melbourne Water have been engaged at all stages of these investigations. They provided advice and approval in relation to the felling of T1 and its placement in the river as instream habitat. They have also advised that they are planning to organise a crew to clear up the litter trapped by the tree that fell into the river in May 2019.
- 24. Melbourne Water's position is that remediation works to the bank of the Yarra River should only occur once the cause of the bank slump is identified and mitigated. Works to protect the bank from further erosion and slumping will be required in the future and this could involve rock armouring. This would require more detailed engineering drawings and separate approval from Melbourne Water; noting that alternative methods may be considered, and would equally require Melbourne Waters involvement and approval.
- 25. The Environment Protection Agency (EPA) has also been engaged and have been provided a copy of the two Alluvium reports, as well as other background reports and material.
- 26. Senior officers at DELWP have also been briefed on these matters.

Internal Consultation (One Yarra)

- 27. Relevant internal units have been engaged as part of these matters.

Financial Implications

- 28. There has been a cost to Council to commission independent expert advice. There may be some ability to recover costs once the cause of the river bank slumping is determined.

Economic Implications

- 29. Not applicable

Sustainability Implications

- 30. There are potentially local sustainability implications.

Social Implications

- 31. There are potentially local social implications.

Human Rights Implications

- 32. Not applicable

Communications with CALD Communities Implications

- 33. Not applicable.

Council Plan, Strategy and Policy Implications

- 34. Sustainability and bio-diversity outcomes are important to Council and the Community, and officers' efforts are to achieve the best outcomes possible.

Legal Implications

- 35. There may be legal implications should there be further river bank movement or if more trees fall. There may also be legal implications once the cause of the river bank slumping is known.

Other Issues

36. A further report will be presented to Council outlining Alluvium's detailed assessment and recommendations. This may take some months as significant investigation will be required in order to reach a definitive conclusion.
37. Where possible, the findings of these investigations will be shared with Glenvill as they become known, to enable appropriate action to mitigate further damage to the river bank and associated impacts resulting from the increase in ground water.

Options

38. This report outlines short term risk mitigation measures that can be taken without pre-empting the outcomes of the more detailed investigations to be undertaken by Alluvium.

Conclusion

39. Alluvium's assessment of slumping of the river bank is based on available reports and site inspections.
40. Short term mitigation measures as identified by Alluvium include, sealing of sedimentation ponds, reduce ground water infiltration from the existing gravel car park adjacent to the steep embankment and at the east side of the subject site, and implementation of a revised stormwater management plan.
41. Alluvium also identified that, subject to work health and safety constraints, infilling of the slump tension cracks on the lower terrace with a suitable material to reduce direct water entry to cracks and slumped material should be undertaken.
42. Long term mitigation measures are to be determined and reported by Alluvium following a detailed investigation as outlined in paragraph 21 above. The outcomes and recommendations will be reported to Council.

RECOMMENDATION

1. That Council:
 - (a) notes the attached report dated 19 August 2019 from Council's appointed consultants Alluvium;
 - (b) notes Alluvium's advice in regards to potential short term mitigation measures:
 - (i) seal existing abandoned and new sediment control ponds;
 - (ii) reduce ground water infiltration from the existing gravel car park adjacent to the steep embankment and at the east side of the subject site;
 - (iii) review and implement the surface water management plan that should form part of an updated environmental management plan, including management of surplus site stormwater runoff including approvals for any off site water disposal; and
 - (iv) subject to work health and safety constraints, infilling of the slump tension cracks on the lower terrace with a suitable material to reduce direct water entry to cracks and slumped material.
 - (c) notes Alluvium's advice in regards to further investigations to determine long term mitigation measures;
 - (d) direct Council officers to share Alluvium's report dated 19 August 2019 with Glenvill, Melbourne Water, DELWP, the Environmental Protection Agency and other relevant bodies, and to seek that Glenvill take appropriate action, in liaison with the appropriate authorities where necessary; and
 - (e) note that appointed consultant Alluvium will be undertaking a detailed investigation that will identify long term mitigation measures reflecting the outcomes of geotechnical, groundwater, surface water, riparian and waterway management assessments, and that the findings of this report will be reported back to Council as soon as practicable.

CONTACT OFFICER: Dennis Cheng
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TEL: 9205 5712

Attachments

- 1 [!\[\]\(511a36c244659513b679df9c639945de_img.jpg\)](#) Alluvium Stage 1 Interim Report 20 August 2019

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



INTERIM REPORT:

Tree collapse and bank slump investigation on Yarra River adjacent to former Amcor site at Alphington

August 2019



Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019

Document history

Revision:

Revision no.	03
Author/s	Ross Hardie David Carew Jonathon McLean Advait Madav Jon Fawcett Tim Holt

Checked	Ross Hardie
Approved	David Carew

Distribution:

Revision no.	01
Issue date	05 August 2019
Issued to	John Ghasperidis (City of Yarra)

Description:	Preliminary draft Interim report
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Revision no.	02
Issue date	16 August 2019
Issued to	John Ghasperidis (City of Yarra)

Description:	Draft interim report
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Revision no.	03
Issue date	20 August 2019
Issued to	John Ghasperidis (City of Yarra)

Description:	Final Interim report
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Citation:

Alluvium (2019). Tree collapse and bank slump investigation on Yarra River adjacent to former Amcor site at Alphington, Report by Alluvium Consulting Australia for City of Yarra

Ref:

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Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019

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Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019

1 Introduction

The City of Yarra has engaged Alluvium Consulting Australia Pty Ltd (Alluvium) to investigate recent tree collapse and bank slumping events on the Yarra River adjacent to the former Amcor paper mill site in Alphington. The subject site adjoins the right bank of the Yarra River and is the subject of an urban renewal / development project by Glenwill.

The investigation is being undertaken through an expert panel process. The expert panel convened by Alluvium comprises specialists in the fields of hydrology and fluvial geomorphology (Ross Hardie, Alluvium), geotechnical bank stability (Tim Holt, A.S. James), groundwater processes (Jon Fawcett, C.D.M. Smith), surface water management (Jonathon McLean, Alluvium) and riparian ecology (David Carew, Alluvium).

The purpose of the investigation is to:

1. Identify the causes of the bank slump and tree collapse
2. Identify any short-term actions that should be undertaken
3. Identify long term remediation measures for the site

The investigation is being undertaken in two stages:

- Stage 1 interim report (this report): A qualitative assessment based on a field inspection and review of readily available existing information
- Stage 2: A detailed investigation based on additional data collection and analysis

This stage 1 interim report comprises a summary of the qualitative assessments undertaken by an expert panel convened by Alluvium on behalf of the City of Yarra. This stage 1 interim report includes the outcomes of the five assessments:

- Groundwater investigation
- Geotechnical assessment
- Surface water management
- Riparian ecology
- Stream stability

2 Background

The subject site is located on the right bank of the Yarra River upstream of Dights Falls, immediately upstream of the Chandler Highway and adjacent to the former Amcor paper mill. The riverbank at the subject site is located within freehold land. It is understood that a 30 metre-wide riparian corridor will be secured for public access and used as a component of the proposed redevelopment project.

The riverbank at the subject site comprises a lower terrace (including walking path) adjacent to the Yarra River's water edge and a steep embankment up to the former industrial and proposed residential lands. The steep embankment was established during the period of site occupation by Amcor, to the 1% AEP (approx.) flood elevation, to prevent flood inundation of the site.

The lower terrace and steep embankment have been revegetated with non-indigenous native trees. However, the edge of the riverbank comprises indigenous river red gums, likely to be from natural regeneration.

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019

The riverbank on the lower terrace has been subject to recent slumping. Three large river red gum trees occur within and adjacent to a recent bank slump. One of these trees has fallen into the river and is currently lying across the Yarra River. Two other trees (T1 and T2) have been identified as at risk of collapse.

Members of the local community have raised many issues with the City of Yarra concerning the bank slump and tree collapse. These issues are set out in Appendix A to this report. Appendix A sets out the extent to which this report has addressed each of the issues raised by the community and the City of Yarra.

3 Investigation methodology

This stage 1 interim report has been based on a site visit, review of available reports and surveys, and an expert panel workshop to discuss the preliminary findings, identify an agreed most likely cause of the bank slump and tree collapse, and to agree on next steps in terms of both immediate risk mitigation measures and detailed investigations.

3.1 Site visit

The expert panel conducted a 2-hour site visit including locations of sediment pond, inceptor swale drains, retention dam connections, existing outfall drains, groundwater bores, and riverbank on the morning of 25 July 2019. The site inspection was undertaken to familiarise the expert panel with the site and review the bank morphology, existing slump areas, and condition of trees along the riverbank.



Figure 1. Location of trees assessed at bank slump zone

The issue of the tree collapse and management implications is confounded by the potential presence of asbestos on the lower bank in the vicinity of the subject trees. The expert panel were advised by Glenvill that the trees at risk of collapse may need to be removed as a component of the site remediation works. However, the panel was also advised that investigations into the presence of the asbestos or otherwise was nearing completion and the final program of asbestos remediation had not been finalised.

The two trees at risk of collapse are shown in Figure 2 and figure 3.

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



Figure 2. *Tree (T1) and bank slump site visit by Alluvium*



Figure 3. *Tree collapse (T2) at the edge of bank slump*

3.2 Data review

The expert panel has undertaken a review of available information and that information and the site inspection have formed the basis of this interim report.

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019

Table 1. List of reports reviewed for interim report

Name of the report	Author	Year
Yarra River Northern Bank Slump / Erosion and Tree Toppling Instance	Douglas Partners	July 2019
Arboriculture assessment, Yarra Bend riverbank trees	Trees Department Pty. Ltd.	July 2019
Assessment of River Red Gums along the Yarra River, Alphington: Risk Assessment	Ryder Arboriculture and Environment	July 2019
Memo Yarra River bank subsidence – Amcor site	City of Yarra	June 2019
Arboriculture Report: APM Site - Heidelberg Road Alphington	Tree Radar Australia Pty Ltd	June 2019
Construction Management Plan	Glenville	October 2017
Integrated Quality, Health & Safety and Environmental Plan <ul style="list-style-type: none"> Environmental Management Plan <ul style="list-style-type: none"> Stormwater design drawings Drain drawings 	CSC Civil Constructions	October 2017
Yarra River Flood Mapping Hydrological and Hydraulic Study	S P Goh and Associates	June 2016
HECRAS 1 Dimensional Hydraulic Model	Melbourne Water	Not dated
Geotechnical Investigation: Civil Works	Douglas Partners	June 2016
Groundwater Beneficial Use Impact Assessment	GHD	May 2016

3.3 Preliminary memo and Council meeting

Alluvium prepared and submitted a preliminary memo to City of Yarra (dated 29 July 2019), providing a preliminary site overview, site specific comments, and short-term management implications. The memo was based on the site inspection and review of risks of further tree collapse. The expert panel was of the opinion that:

- The bank collapse is most likely associated with an increase in groundwater levels and lubrication (of soils) at the site
- There are limited practical management interventions that can be applied, that will have an immediate impact on the groundwater that is causing the bank collapse (note that this wording has been refined by the Expert Panel to reflect the intent of that set out in the memo dated 29 July 2019)
- Ongoing bank collapse (instability) will continue to occur at the site until groundwater issues are addressed
- The bank instability threatens large trees on the riverbank. Two of these trees have been the subject of four recent arborist reports and were the main focus of that memo.

Two trees, referred to as T1 and T2 were identified at imminent risk of collapse. The outcome of the arborists reports on those two trees is set out in Table 2 below.

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Table 2. Summary of Arborist report recommendations and updated Alluvium recommendation

Arborist report	Company	T1	T2
#1	Tree Department Pty Ltd (11 th July)	Removal recommended Unacceptable risk to cause harm and costs	Removal recommended Tolerable risk to cause harm – unacceptable risk due to costs post failure
#2	Ryder Arboriculture and Environment (12 th July)	Tree is likely to fail in short term (Weeks to months) Permit required for removal Assessed as Low risk to cause harm <i>Note: shown as T2 in report</i>	Tree is stable unless ground moves. Permit required for removal Assessed as Low risk to cause harm <i>Note: shown as T1 in report</i>
#3	Tree Radar Australia (2 nd June)	Removal recommended Safety risk and reduce further damage	Removal recommended Safety risk and reduce further damage
#4	City of Yarra (3 rd June)	Retain if possible. Monitor for movement. (Note: the arborist was not qualified to comment on the stability or otherwise of the tree)	Retain if possible. Monitor for movement. (Note: the arborist was not qualified to comment on the stability or otherwise of the tree)
	Alluvium summary	Remove tree Tree is on unstable ground within an active slump zone. This tree is likely to fall and cause further damage to the bank.	Retain tree and monitor ground stability. Tree is outside the active slump zone and is not imminently likely to fall unless further slumping occurs.

Following development of that memo, Ross Hardie (convenor of the Alluvium expert panel) attended a City of Yarra councillor briefing on 29 July and a City of Yarra Council meeting on the evening of 30 July 2019.

This memo was followed by a subsequent memo from Alluvium to City of Yarra dated 12 August 2019 that provided additional information and recommendations for the management of T1. This memo recommended urgent attention to fell T1. A copy of the memo is appended to this report. Tree T1 was felled on Friday 16 August 2019.

3.4 Expert panel workshop

On 1 August, Alluvium convened an expert panel workshop to discuss initial findings and strategies to finalise interim report. John Ghasperidis from City of Yarra also attended the workshop. During workshop, each expert presented their findings for 10 minutes followed by 5 minutes discussion. During the last session, the panel concentrated on following three key areas:

- Causes of the bank slump and tree collapse
- Short-term actions that should be undertaken
- Detailed investigations required to confirm the cause of the bank slump and to identify appropriate management measures

The findings of the expert panel members are set out in the appendices to this interim report have been summarised and discussed in section 4 of this interim report.

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4 Discussion: Potential mechanism causing the bank slump

The expert panel considered a range of potential causes of the bank slump and tree collapse ranging from surface water, ground water, stream erosion, geotechnical issues, and riparian ecology.

4.1 River erosion

Discussions with Melbourne Water suggest that the bank slumping is concentrated at the subject site. A review of the existing hydraulic model for the Yarra River revealed the forces on the subject bank to be not dissimilar to other sections of riverbank and below the thresholds for scour of the bank material at the subject site, comprising clayey material with a matting of root material from the riparian vegetation .

Based on the information available for this assessment, we are of the opinion that the subject reach of stream in the vicinity of the proposed site is not likely to be undergoing accelerated rates of channel erosion that would have led to the bank collapse. However;

- The recently slumped bank material will be vulnerable to loss by erosion processes
- Further tree collapse will result in the loss of further bank material
- Further investigations will be required to confirm this assessment

The detailed analysis is presented in Appendix F to this report.

4.2 Tree collapse as a cause of bank failure

The site inspection revealed slumped material around the base of the existing tree collapsed across the Yarra River. Further T1 at risk of collapse is also in slumped material. T2 lies in intact material. There is no evidence tree collapse is driving the bank instability.

However, as set out above, it is likely that any further collapse of trees (arising as a result of other processes at work) will result in the further loss of bank material.

4.3 Increased soil moisture

Based on the site inspection and review of available information, the expert panel is of the opinion that the bank slumping and tree collapse are most likely the result of increased soil moisture in and on the lower terrace of the riverbank. The opinion is based on a number of factors including:

Presence of surface expression of soil moisture on the lower terrace

The site inspection revealed considerable surface expression of water in and on the lower terrace. Water was found in two soaks and was observed in recently slumped material adjacent to the water edge.

Vegetation on and adjacent to the lower terrace

The expert panel noted the poor condition (and death) of some of the introduced vegetation on the lower terrace and lower levels of the steep embankment. While a decline in vegetation condition could be the result of many factors, it is consistent with the elevated groundwater levels.

Further the panel noted the absence of wetland dependent vegetation in the areas of groundwater surface expression. The absence of wetland dependent vegetation suggests that the presence of water is unusual and out of character for the site.

Colour of soil

A preliminary review of the colour of the soil in the lower terrace suggest that the presence of water is a recent phenomenon and not consistent with long term presence of water in the soil material (refer Appendix B).

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4.4 Cause of changes in groundwater

The site inspection and review of the available information suggests that the cause of changes to groundwater at the site is linked to the changed land and water management at the site. The panel has found no evidence that changes in groundwater and any subsequent bank slump and tree collapse were the result of any deliberate intent.

There is substantive evidence to suggest that the changes to groundwater levels in the lower terrace could be the result of increased surface water infiltration at the site. The evidence includes:

- **Sedimentation ponds**

The environmental management plan for the site provides for the diversion of runoff via swale drains and the containment of sediment laden runoff into sediment ponds. The environmental management plan provides for site surface runoff to be delivered to the sediment ponds to be stored and reused and any surplus water to be managed through evaporation and infiltration.

The expert panel noted the presence of water contained in the first two of a series of sediment ponds, following a rainfall event. However, the panel noted the absence of water in the third and final sedimentation pond located closest to the river. The absence of water in the sediment pond closest to the river suggests that water arriving at this pond is infiltrating into groundwater. The panel is aware that this series of sedimentation ponds are no longer in use and that stormwater is now diverted to an alternate sedimentation pond to the west of this series of ponds.

- **Health of trees in car park**

The expert panel also noted the presence of eucalypts within the existing gravel car park located at the top of the steep embankment on the east side of the subject site. Review of aerial photography reveals the subject carpark to be covered by a concrete hardstand up until 15 May 2014. This hardstand has been converted to a gravel area. These eucalypts were observed to be approximately 5 metres in height. We estimate that these trees have grown at a rate of approximately 1 metre per year. This rate of growth is consistent with loose, well drained soils.

- **Weathered / fractured basalt**

The proposed development is underlain by basalt. The Yarra River lies at the edge of the basalt. Geotechnical investigations (Attachment B: Geotechnical Investigation) have found this basalt to lie between 3-8 metres below the land surface. The geotechnical investigations for the site found the upper layers of the basalt to be weathered and fractured. Multiple paths will exist for any elevated groundwater under the site to move through the fractured basalt, toward the Yarra River and lower terrace.

Other factors that could have led to changes in the groundwater levels include, natural processes, changes to sewer mains and the installation of stormwater drainage systems.

- **Natural processes:** We have not found any compelling evidence to suggest that the rise in groundwater is associated with natural process such as an increase in regional groundwater levels associated with any increased rainfall. The information currently available to the expert panel suggests that the issues are isolated to the subject site and has occurred over the period of recent changes at the site. The last 4 years have not been unusually wet (refer Figure 4) and it would be highly unusual for such a localised groundwater issue to be linked to broader scale natural processes.

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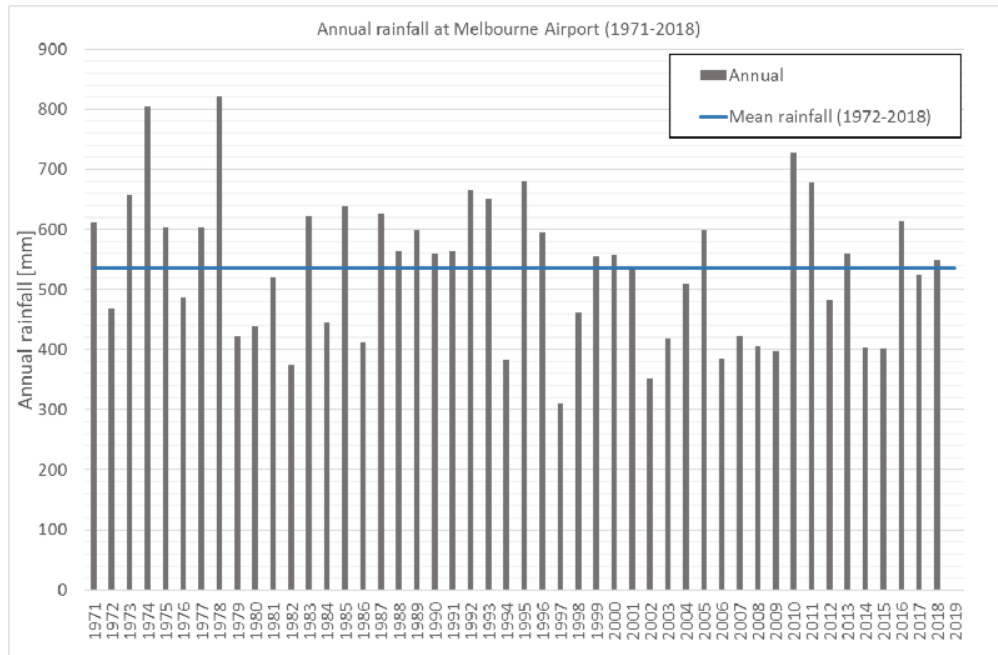


Figure 4 Rainfall records for Melbourne Airport 1971-2018

- Sewer main decommissioning:** We understand that a sewer main, close to the subject bank, has been recently decommissioned and infilled with grout. The location of the sewer main is shown in Figure 5.

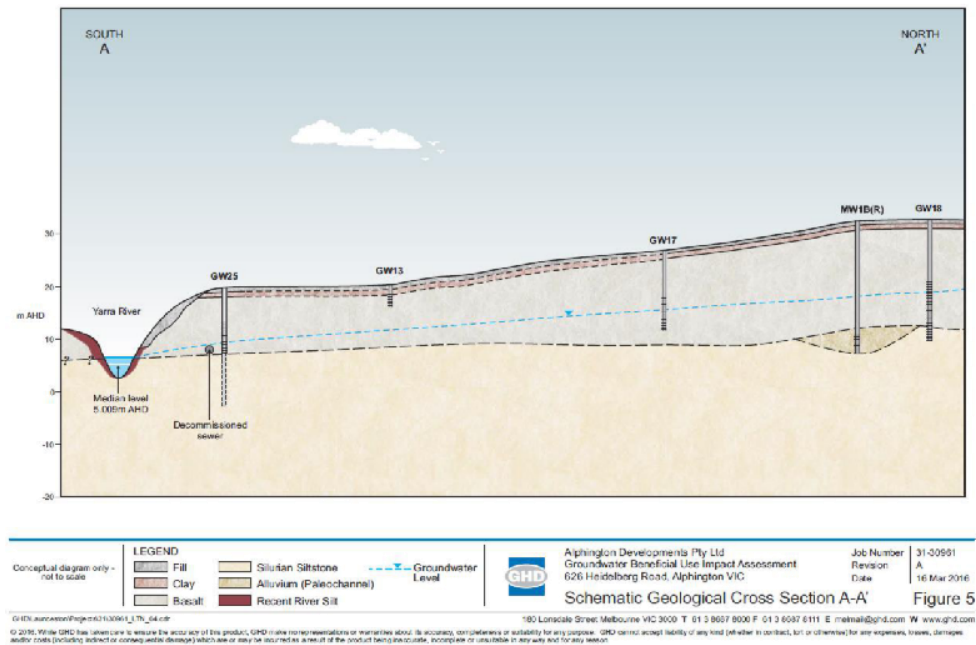


Figure 5 Cross section of the subject site including location of decommissioned sewer main (source GHD 2016)

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Old sewer mains can be 'leaky' and can intercept and collect groundwater. It possible that;

- this sewer main, prior to its decommissioning, may have intercepted local groundwater and created a local drawdown in groundwater levels'
- the grouting of the sewer main have resulted in the loss of this drainage path and created a resultant rebound and increase in groundwater levels.

We understand that the grouting of the sewer main occurred over a wider extent than the subject site. While we cannot completely discount this pathway, the mechanism does not accord with the observed groundwater impacts being limited to the subject site. This potential mechanism should be investigated in the more detailed stage 2 investigations.

- **Stormwater drainage system:** A newly constructed stormwater drainage system has been installed on the east side of the development site. The underground pipe system would be typically installed within a trench with a sand or crushed rock base and partial or full backfill material. This bedding and partial backfill material would typically assist to drain and lower groundwater levels rather than contribute to an increase in groundwater levels. While a failure of a new stormwater drainage system, such as a breakage of the pipe network could lead to increased groundwater levels, this is unlikely to be the cause of the issues at hand.

In the absence of more detailed assessments, the expert panel has not been able to:

- confirm the extent of changes in groundwater levels and the source of such groundwater, or
- estimate the rate of groundwater movement through the site. The expert panel estimates that the movement of water from the surface (or any other source) through to exposure in the lower terrace could take weeks, months or years.

However, based on the information available, the expert panel is of the opinion, that the most likely source of the elevated groundwater is a change to the rate of surface water infiltration at the subject site. This process is illustrated in Figure 6.

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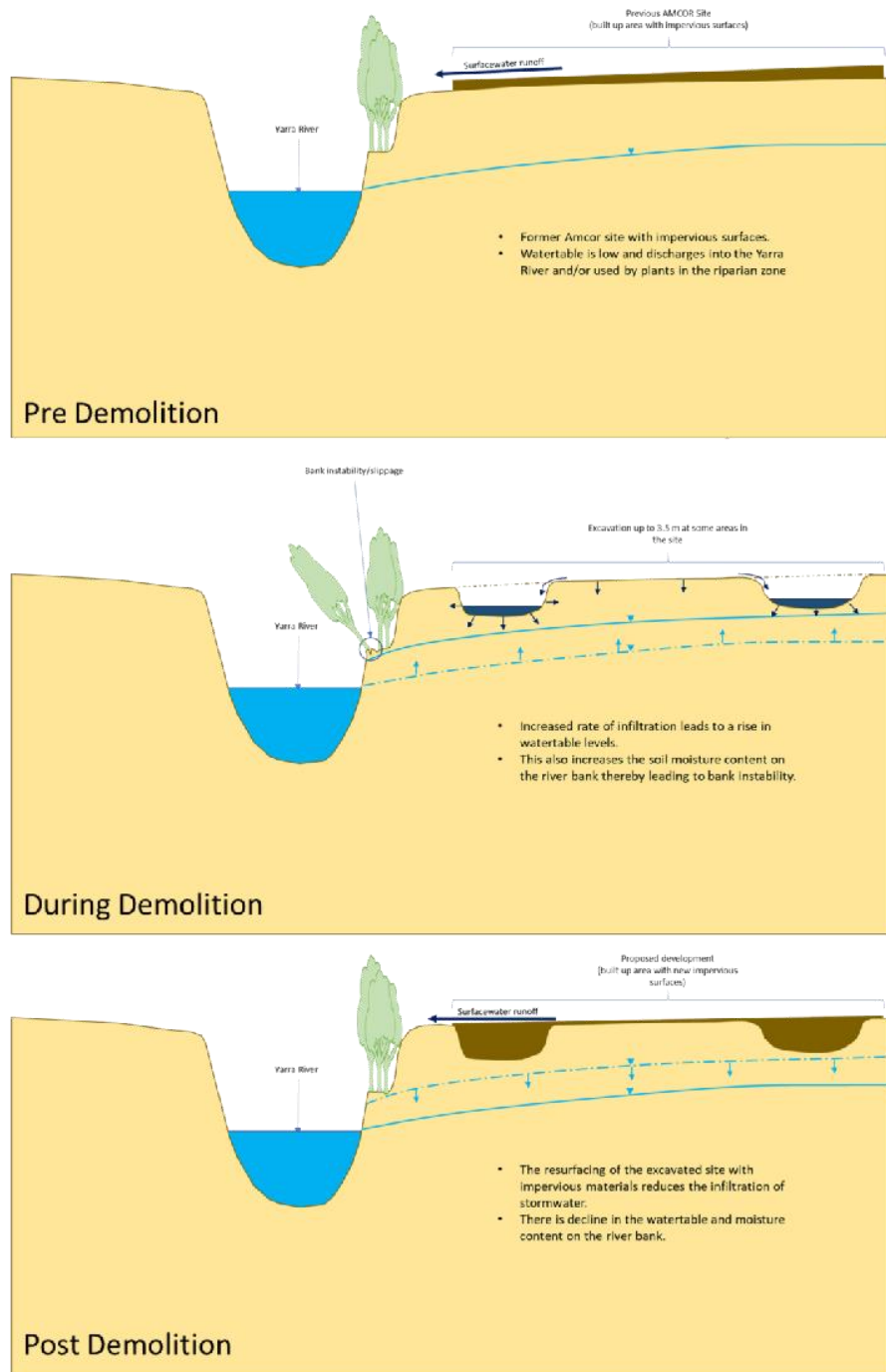


Figure 6 Conceptual model of possible changes to groundwater levels at the subject site (source CDM Smith refer appendix B)

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5 Management implications

Based on the site inspection, advice from Glenvill, preliminary review of information, and expert panel assessment, the expert panel has developed a set of short term (interim) measures to manage the risks associated with bank slump and tree collapse. In addition, the expert panel has developed a set of further detailed investigations to confirm and or dismiss the opinions set out in this interim report and to form a basis for longer term management of the bank slump and tree collapse.

5.1 Short term risk mitigation

While the expert panel cannot be certain on the causes of the bank slump and tree collapse there are short term measures that can be undertaken that would not adversely impact on the bank stability and vegetation and may reduce the risks of these events.

High groundwater levels and bank slumping

Likelihood: As set out in this report there are limited mechanisms that can reduce the immediate risk of further groundwater induced bank slumping. None the less, and without pre-empting the outcomes of more detailed investigations, immediate efforts should be put in place to reduce surface water infiltration at the site. This should include

- sealing of existing abandoned and new sediment control ponds and
- reduction in groundwater infiltration from the existing gravel carpark adjacent to the steep embankment at the east of the subject site.

These works should be undertaken within the context of an interim site surface water management plan for the site. Issues that will need to be addressed include management of surplus site stormwater runoff including approvals for any off-site water disposal if and as required. The development and implementation of an interim surface water management plan for the site should be undertaken as a matter of priority.

In addition, and subject to work health and safety constraints, we propose the infilling of the slump tension cracks on the lower terrace with a suitable material to reduce direct water entry to cracks and slumped material.

Dewatering of groundwater may be an appropriate strategy for the site. However, the panel is of the opinion that such pumping will require more lengthy assessment, design approval and implementation and may not be achievable within the short-term scale of the interim site surface water management plan.

The development of an active groundwater pumping program will require investigations into:

- the quality of such groundwater and the mechanisms for disposal and
- the most appropriate locations for the installation of bores and pumps for the subsurface dewatering (refer detailed) investigations

The expert panel is of the opinion that the development and implementation of an interim surface water management plan should **not** be held in abeyance pending the outcome of investigations into and approval of a groundwater pumping program.

The panel has also considered alternate means to reduce the likelihood of bank collapse through structural reinforcement. We are concerned with the use of large equipment on the lower terrace to install bank protection works while the site is at risk of further slumping. The use of large machinery, with accompanying surcharge and vibration could increase the likelihood of collapse and may pose a work health and safety risk for operators. It may be possible to install bank protection works from the river by barge. However, such works including sheet piling and or rock beaching may not be successful and may have unintended longer-term

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consequences. While we don't support the use of sheet piling at the site, there may be some benefit in the use of rock beaching to protect against the erosion of recently slumped material. Such rock beaching may also assist to prevent further bank slumping. The suitability of rock beaching at the site should be the subject of more detailed stage 2 investigations.

Consequence: The consequence of bank slumping includes the loss of further trees at the site and the further loss of the lower terrace and walking path. There are limited practical measures that can be put in place to reduce the short-term consequence of further bank collapse. However, the panel does recommend that the bank be photographed and surveyed as a record of condition, to enable repair and management into the future.

Tree collapse

Further tree collapse poses risks to public safety and to the existing walking track and streambank.

Likelihood: The likelihood of tree collapse can be reduced by reducing the groundwater levels and risks of bank slumping.

The likelihood of tree collapse can also be reduced by

- removal of trees at risk. Tree T1 has now been felled. We propose that Tree T2 be the subject of a regular (weekly minimum) monitoring program.
- Reducing access of air to the root zone of remaining trees. This can be achieved by infilling tension cracks.

Consequence: The expert panel supports the continued closure of riverbank pathway to public access as a means to reduce risks to the public. Additional warnings may also be required on the existing fencing and at the site of the existing bank slumps. In addition, the expert panel recommends the installation of safety signs to warn river users of dangers and the installation of buoys to guide boat traffic away from the subject bank and toward the opposite side of the river. The installation of such signs and buoys should be undertaken as a matter of priority. These warning and safety measures should be retained until such time as the bank slump and tree collapse issues are resolved.

Summary immediate and short-term management actions

Recommended immediate and short-term actions set out in the memo dated 29 July 2019 have been updated and are set out below:

- Public safety
 - Continue to restrict public access to the site including installation of additional signage.
 - the installation of safety signs to warn river users of dangers and the installation of buoys to guide boat traffic away from the subject bank and toward the opposite side of the river.
- Tree removal
 - T1: The fallen tree T1, be considered for installation as instream large wood habitat at the subject site
 - Tree T2: This tree has not received majority support by Arborists for removal. The tree appears to be outside the zone of the existing tension cracks. We suggest that the tree not be removed until;
 - such time as it is observed to lie within tension cracks, and or
 - results of contamination land assessment are complete, a remediation plan approved and the necessity for the removal of the tree as part of any such remediation plan is confirmed.
- Monitoring

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- Photography:
 - Installation of photo monitoring sites
 - Photography of the existing trees at the site as a record of the current riparian vegetation for the site. This record can form a component of the dilapidation survey and can inform the future vision for the site and ultimate landscape plan.
- Dilapidation survey: We recommend that a dilapidation survey be undertaken immediately. The survey should include
 - Feature survey by a qualified surveyor to locate the extent of existing bank slumps, soaks and trees on the riverbank, lower terrace and steep embankment. This survey should be tied to the Australian Height Datum and GDA 2020. This survey could be combined with a wider topographic survey for the site (refer detailed investigations)
 - Site photography as set above and as required to assess changes to the extent and scale of bank slumping
 - Tree health and condition assessment. This should include all trees with a diameter at breast height greater than 200mm within 30 meters of the riverbanks.
 - Tree tilt monitoring.
- Installation of temporary benchmarks to monitor bank movement.
- Weekly monitoring (minimum) of the slump area and trees to determine if the conditions change and increase the likelihood of the trees collapse.
- Surface water management: The development, approval and implementation of an interim site surface water management plan for the former Amcor site that reduces surface water infiltration. Short term actions included in that plan should be focussed on reducing surface water infiltration including
 - the sealing of existing and proposed sedimentation ponds and
 - the management of surface water infiltration (and/ or interception of infiltrated water) from the gravel carpark adjacent to the steep river embankment at the eastern side of the site.

The plan should include consideration of alternate disposal mechanisms including water quality assessments and any necessary approvals.
- Infilling of tension cracks: Subject to work health and safety constraints, infill the tension cracks on the lower terrace with suitable material to prevent direct access of water to the cracks and air to the root zone.
- Groundwater pumping: Assess feasibility of groundwater extraction to reduce groundwater impacts on the lower terrace and riverbank. (refer detailed investigations below).

5.2 Detailed investigations into the causes and remediation of the site

The expert panel has proposed a set of detailed investigation to determine the cause of any elevated groundwater, the bank slump and tree collapse. The scope of investigations is concentrated on the issues of surface water ground water interactions and the geotechnical stability of the embankments at the site. The proposed investigations are set out in Table 3.

The investigations include some further bank stability assessment to confirm (or otherwise) the anecdotal evidence provided by Melbourne Water that the subject slumping is limited to and or concentrated at the subject site.

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In addition, the investigations should include riparian ecology, surface water, and waterway management assessments to inform and assist development of an integrated long plan of management for the site.

Table 3: Proposed detailed investigations

Item	Proposed detailed investigations
Site survey	<ul style="list-style-type: none"> Topographic survey of the subject site Bathymetric survey of the Yarra River adjacent to the subject streambank
Groundwater management	<ul style="list-style-type: none"> Identify source of water <ul style="list-style-type: none"> Install up to 12 groundwater bores to assess soil material, water elevations, water quality and geochemistry, comprising <ul style="list-style-type: none"> 4 x lower terrace (may be possible to use 2 x existing bores) 4 x upper terrace adjacent to steep embankment (30m approx. from riverbank) 4 x sites 100 metres (approx.) from riverbank as close as possible and practicable to the location of previous bores Assess age and origin of groundwater expression in lower terrace by geochemical testing of <ul style="list-style-type: none"> Surface water Groundwater through existing and proposed bores. Develop preliminary groundwater model Check feasibility of groundwater pumping. <ul style="list-style-type: none"> Confirm sources and age of water Design groundwater pumping if and as appropriate Initiate EPA approval process if and as required.
Geotechnical stability assessment	<ul style="list-style-type: none"> Undertake soil permeability testing Undertaken slope stability analysis Identify alternate management arrangements based on alternate groundwater and river management options
Stream stability assessment	<ul style="list-style-type: none"> Reach scale bank stability assessment Hydrologic assessment Hydraulic assessment Identify complementary river management options
Surface water management	<ul style="list-style-type: none"> Identify mid to longer term surface water management strategy reflecting outcomes of groundwater and geotechnical assessments
Riparian vegetation assessment	<p>Undertake assessment of trees and vegetation in the proposed waterway reserve to gain baseline data on condition of the riparian vegetation.</p> <p>Tree assessment – all trees >200mm DBH to be mapped and assessed:</p> <ul style="list-style-type: none"> <i>Botanical name</i> <i>Estimate age, measure size (BDH and height)</i> <i>Health - vigour</i> <i>Structural assessment of trunk and branches</i>

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- Visible surface roots
- Ground stability observation (soil cracking and heaving)
- Location in reserve (e.g. river bank, terrace, embankment)
- Tree significance
- Origin of tree (planted, natural germination)
- Age class and estimated life expectancy
- Comments

Vegetation assessment within proposed reserve.

- Reference EVC comparison
- Number of trees and % cover
- Shrub layer % cover
- Native vs exotic cover
- Ground flora % cover
- Native vs exotic cover
- Areas impacted by waterlogging.

Different vegetation groups to be mapped:

- Indigenous trees (E.g. *Eucalyptus camaldulensis* - River Red Gum.
- Native non-indigenous trees (e.g. *Casuarina cunninghamii*, *Eucalyptus* sp, *Grevillea robusta*)
- Indigenous shrubs and ground covers – (e.g. *Melicytus dentatus*, *Poa*, *Lomandra*)
- Exotic trees with amenity value – (e.g. *Quercus* sp - Oaks)
- Exotic trees
- Exotic ground cover

Riparian management	<ul style="list-style-type: none"> • Identify mid to longer term riparian management options based on outcomes of vegetation, groundwater and geotechnical assessments
Integrated solutions	<ul style="list-style-type: none"> • Development of integrated mid to long term management options and arrangements for the site reflecting the outcomes of geotechnical, groundwater, surface water, riparian and waterway management assessments

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6 References

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Trees Department Pty. Ltd. (2019). Arboriculture assessment, Yarra Bend riverbank trees

Ryder Arboriculture and Environment (2019). Assessment of River Red Gums along the Yarra River, Alphington: Risk Assessment

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GHD (2016). Groundwater Beneficial Use Impact Assessment

Douglas Partners (2016). Geotechnical Investigation: Civil Works

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Appendix A: Issues raised by the community

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Item.	Comments	Alluvium Response
1.	Investigate & address the water source seeping from the ground & running over the pathway	Interim report has addressed the most likely causes based on review of vegetation, surface water, groundwater, geotechnical, and stream stability.
2.	Test the water to confirm it is not contaminated	While the quality of groundwater is an important issue to address, this is not the primary issue to be resolved for the management of groundwater. None the less, issues of groundwater quality will need to be resolved to manage any groundwater discharges arising from interventions to manage the site. The proposed scope for the detailed Stage 2 investigations includes some water testing to determine the age of groundwater and hence likely sources of groundwater impacting on the lower terrace.
3.	Test for contamination the water in the storm water catchment ponds just above the area where the riverbank has collapsed	Quality of water to be assessed by others for the purpose of surface water disposal. However, the quality of groundwater is not the focus of the site stability assessment.
4.	Confirm the stormwater catchment pond design is sufficient for the application & not the cause of the problem.	Interim report recommends urgent development and implementation of an interim Surface Water Management Plan to manage surface water including the quality of stormwater discharges from the site.
5.	Confirm the stormwater runoff & pond design meets with the requirements of the Environmental Statement, given the site was full of asbestos material	Interim report recommends urgent development and implementation of an interim Surface Water Management Plan to manage surface water including the quality of stormwater discharges from the site.
6.	Investigate (independent) & report on what can be done to save the remaining trees from falling in the river	The issue of the existing trees has been covered in two separate memos dated 29 July and 12 August. Further works to protect the existing trees have been included in the recommendations of this report and in the outcomes of detailed investigations
7.	Report back on a timeline to action this plan	Proposed that this timeline be developed by City of Yarra following review of this report
8.	Provide timeline on how long the path will be closed to the public	The pathway will need to remain closed until such time as safe public access can be provided. This may not be possible until the groundwater levels are returned to pre-existing conditions and the health and safety of the trees confirmed by an arborist.
9.	Proved feedback on an alternative path bypassing this area but allow public access to the Chandler Highway & Coates Park	Alternative access to be explored by Council in conjunction with Glenvill. Interim access issues are not addressed by the investigation into the stability of the bank.

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10.	<p>The memo states that the bank slumping is due to higher groundwater levels but does not state the cause. I think it is important to investigate this further. Groundwater typically rises and falls with the seasons so you can sometimes get above average groundwater for short periods of time during heavy rainfall however it is quite obvious that the groundwater is now constantly at a higher elevation due to the storage ponds within the AMCOR site that have been constructed as part of the temporary works. This needs to be rectified irrespective of whether the tree is retained – otherwise more trees may be at risk. I don't understand why none of the reports are commenting on these storage ponds?</p> <p>They do mention under Section 6.1 that an investigation into soil moisture should be done – I think this should definitely be done and in the meantime I think there is sufficient evidence to make AMCOR empty those storage ponds.</p>	<p>These causes have been investigated in the Stage 1 Interim Report. Recommendations have been made regarding management of stormwater treatment facilities and other measures to limit surface water infiltration at the site</p>
11.	<p>Section 4.4. states that the root ball can still provide some stability to the bank even if the tree is removed. I am not sure about this because if the tree is removed, all the roots will die, creating 'gaps' where the dead roots use to be in the batter – this will create voids and loose material and is unlikely to provide additional support.</p>	<p>While it is acknowledged that the tree roots will die. They will continue to serve, albeit declining, benefit into the future</p>
12.	<p>Section 5.2 states that the bank is active and movement is continuing – why are they not making the developer empty the storage ponds! This would lower the groundwater and reduce the risk of further slumping!</p>	<p>This issue has been addressed in the Stage 1 Interim report,</p>
13.	<p>I think they should explore rock armouring further. They mention that rock slumping can still occur because the material can fall between the rocks but you can design against this. You can layer small rock adjacent to the bank and then progressively enlarge the rock to provide a well graded protection layer. You can also include layers of geofabrics, gabion baskets etc which can all be placed from the barge above and below water levels.</p>	<p>The use of rock beaching has been discounted as a short-term solution. This intervention will be explored as a component of the detailed Stage 2 investigations.</p> <p>Note: Rock beaching can impact on available instream near bank / undercut bank habitat. This issue can be mitigated to some extent with the provision of alternate near bank aquatic habitat. The issue will be considered in the development of options for the site within the detailed stage 2 investigations</p>
14.	<p>I think sheet piling is also a good option that they shouldn't discount without further investigation. They comment that it is not attractive but you could drill the sheet piles within the batter, providing structural support below the surface so it is not visible. Alternatively you could construct the sheet piling only along the lower portion of the bank (where the slip circle is located for the slumping) so that it is all below the water level (and would only be visible under very dry summer periods when the river level is extremely low). The other benefit of sheet piling is that it can be a very fast process, is often done via a barge so could be a quick solution for us.</p>	<p>The use of sheet piling has been discounted as a short-term solution. This intervention will be explored as a component of the detailed Stage 2 investigations</p> <p>Note: Sheet piling impacts on available instream near bank / undercut bank habitat including burrowing habitat for platypus. This issue will be considered in the development of options for the site within the detailed stage 2 investigations</p>
15.	<p>The three options they propose have the primary focus on the tree itself. All the appurtenant works surrounding this tree are a bit vague which is concerning because I think that they really need to start some rectification works to the batter ASAP</p>	<p>The interim report addresses the most likely cause of the issue and provides recommendations to reduce risks and for detailed investigations to confirm processes and identify preferred management responses.</p>

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16.	Chemical analysis of water infiltration to determine source	Scope of work for stage 2 detailed investigation includes water testing to identify source of the groundwater.
17.	An assessment be conducted by Alluvium for an alternative solution that will enable preservation of the tree	A separate memo has been developed and submitted to council on 12 th August that addresses Tree T1.
18.	Weekly monitoring of the slump area and trees occurs to determine if conditions change and increase the likelihood of trees falling; (please clarify method - photographs and/or sensors?)	A recommended monitoring program has been recommended and submitted to Council. That monitoring program is described in the interim report.
19.	Remediation works that could be considered to prevent further deterioration of the riverbank and/or further loss of trees in this area	The interim report includes recommendations to prevent further bank slump and loss of trees.
20.	Have the swale drains and settlement ponds been built to standard <ul style="list-style-type: none"> Are they located where they will not cause detriment in future once filled in? Is the current permeability adequate/appropriate? Consideration of consequences of infiltration to riverbank stability and possible migration of contaminants Capacity to cater for annual anticipated rainfall What is required of the developer in regard to constructing to standard, and what is Council's obligation to ensure that this is done. 	Interim report recommends urgent development and implementation of an interim 'Surface Water Management Plan' to manage surface water runoff, water quality treatment and infiltration at the site.
21.	Is Glenvill's environmental management plan adequate? What are the gaps.	Appendix D of the Interim report identifies shortcomings of the stormwater management arrangements developed under 'Environment management plan'.
22.	Are the newly constructed stormwater drains contributing to the problem	The interim report identifies the most likely sources of water than are contributing the groundwater issues on the lower terrace. While the new stormwater drains may be a factor, the broad extent of the slumping suggests that broader processes are at work
23.	Remediation measures for all of above.	Stage 1: Interim report provides recommendations for short term interventions to reduce site risks and the scope of work for detailed Stage 2 investigations to develop a more comprehensive management approach for the issues.
24.	What were/are the sampled AHD of GW24 and GW25 through 2018 and 2019.	Information is currently not available; we will seek further information from GHD if and as available
25.	Both audits were carried out in summer, what are the levels in winter or after rain? (The two trees fall events were preceded by heavy rains in the previous month)	Information is currently not available; we will seek further information from GHD if and as available
26.	Other groundwater wells to the north of Area 6A show reductions in levels between 2016 and 2017. Does this suggest there are bypass channels?	We don't recommend use of single borehole information without the context of a wider assessment of the processes at work. We currently only have information to 2016 and will seek to access more recent information for the purpose of the detailed Stage 2 investigations

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27.	In the report Appendices GHD Figure 5 Schematic Geological Cross Section A-A. shows a clay layer above the Basalt layer through which the groundwater flows. With the remediation works clearing the site is there now greater seepage and subsequent salutation of the Basalt layer?	The removal of the clay cover over the fractured basalt is a potential pathway for increased surface water infiltration at the site. The extent to which this is the cause of the elevated groundwater levels in the lower terrace can only be resolved with the detailed stage 2 investigations as set out in the interim report
28.	Has having sedimentation ponds (uphill of groundwater flow direction) north of area 6A through which water seeps out contribute to the increase of the groundwater level in Area 6A?	The installation of infiltration ponds as part of the construction phase stormwater management is a likely pathway for increased surface water infiltration at the site. The extent to which this is the cause of the elevated groundwater levels in the lower terrace can only be resolved with the detailed stage 2 investigations as set out in the interim report
29.	Post development completion will the groundwater levels be at or below the pre-development levels? (On basalt aquifers elevated above the river back there should be no stormwater storage in porous basins relying on ground seepage to remove the stormwater.)	This can only be determined following the completion of the detailed stage 2 investigations. However, it is expected that the establishment of a stable lower terrace will rely on the return of groundwater levels to pre urban development levels.

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Appendix B: Groundwater assessment

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Subject Groundwater
Distribution Alluvium Consulting (Internal)
Date 15 August 2019
Author CDM Smith. Dr Jon Fawcett
Project number 1000515
Project Yarra River Riverbank Tree Collapse Review and Investigation, Alphington

Introduction

This memo provides an independent, initial assessment of the role groundwater may play in several riverbank collapses that are occurring along the Yarra river, directly adjacent the former Amcor Paper Mill. The former Amcor Paper Mill site is located on the corner of Heidelberg Road and Chandler Highway in Alphington. It covers about 16.5 hectares of land. The site was acquired by Alphington Developments Pty Ltd for redevelopment (referred to as Glenvill hereafter). As part of the redevelopment process, the facilities used by Amcor were demolished between 2014 and 2016. After the demolition and other earthworks, at least two subsidence and tree toppling events have occurred on the Yarra River bank between the Yarra River and the former Amcor site (now Glenvill site).

The outcomes of this memo will be used as expert advice for the Yarra City Council, in regard to describing the technical objectives/outcomes intended for future works. This memo provides additional context to better understand:

- 1) The role groundwater plays in the initiation and ongoing movement of the landslides, and
- 2) Groundwater aspects of potential future management actions.

The underlying assumption that is been tested in this memo is that works undertaken at the site have, to some degree, altered groundwater conditions and thus contributed to the cause of the landslides. In order to assess this assumption, this memo outlines a brief summary of the chain of events, based on different stakeholders' perspectives, a summary of available groundwater data, and an initial hypothesis of groundwater processes in relation to the landslides and additional works required to clarify and quantify these processes.

Site inspection and data review

An important first step in understanding the role of groundwater is to gain an appreciation of the timeline of events since the site re-development began. The following provides a summary of different stakeholder's interpretation of the sequence of events and cause of the riverbank collapse.

- 1) **(based on Travers Nuttall email exchange with Yarra City Council - TN email to BP 190123.pdf in the City of Yarra Folder)**
 - Pre-1 January 2019: A tree toppled over into the Yarra River when there was "subsidence" on the riverbank.
 - 4 January 2019: Yarra City Council notifies Glenvill of seepages and cracks occurring on the riverbank.
Glenvill considered it is to be a result of natural water seepage due to the highly modified site conditions within the past two years.
 - 7 January 2019: Civil engineering firm (CSC Civil, engaged by Glenvill) visited the site. CSC Civil noted the following:

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- The location where seepage is occurring is well away from where the bank collapsed. The bank failure is likely as a result of natural river process. The bank at this location had failed in May 2017, although there was no seepage.
 - The location where the tree had collapsed is about 3 – 5 m from where the seepage has occurred. The over-saturation of the soil during the previous wet months of November and December 2018 is believed to have caused high bank soil saturation and/or bank erosion.
 - The third location where there is evidence of “subsidence” on walk paths has no evidence of seepage. Natural bank erosion is believed to be the cause.
 - At the Glenvill site, up to 3.5 m of earth have been removed from some places (on the Lugton St side). As the Lugton St side of the property has been completely built up, run off are collected and channelled into a drainage system, south of the road, north of the river.
 - Cut-off drains are used to collect runoffs from “Area 6”. These runoffs and those generated from the larger area, west of Latrobe Avenue are directed into sediment ponds which are located at the southwestern boundary of the property.
- 11 January 2019: Yarra City Council not satisfied with CSC Civil’s email interpretation summary of the site issues.
 - 18 January 2019: GHD was contracted by Glenvill to undertake a review of historic groundwater data for the AMCOR site and the riverbanks.
 - 22 January 2019: After a field visit by both Melbourne Water and Glenvill staff, Glenvill noted that the conclusion after the site visit was that natural river processes were responsible for the tree’s toppling and that there is no connection to water seepage.
- During this field visit, another large crack in the soil was noticed. It had emerged about 50 m from where the first subsidence has occurred. This new crack was completely dry. There is a large gum tree at the edge of the river, away from the crack.
- 23 – 25 January 2019: Melbourne Water removed the toppled tree.

2) (based on Travers Nuttall email exchange with Melbourne Water - TN email to MW 190529.pdf in the City of Yarra Folder)

- 24 January 2019: Melbourne Water notified the Yarra City Council that the subsidence is not likely as a result of natural bank erosion process, as the location of the subsidence is away from the bend in the river that is in the path of high-energy flow.
- 20 – 29 May 2019: New subsidence has occurred after some rain event. Another tree topples into the river with the subsidence. The subsidence has affected other trees (at least two). This has led to the closure of the walking path.
- 29 May 2019: Melbourne Water conducted a visit to where the riverbank and tree had failed. It concluded that the likely cause for the bank slippage is from surface water originating from an unknown location on the Glenvill property. Visual evidence of water seeping through the subsided area was noted. Also, based on Melbourne Water’s site inspection in January 2019, there was evidence of water at the base of the large embankment.

‘Due to the presence of saturated soils around the base of the latest fallen tree across the Yarra River it has been determined to be a result of the saturated soils from the development site rather than from river erosion’.

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Glenwill rejected the notion. Glenwill's investigation believes the "subsidence" is as a result of natural process. GHD findings based on historic data review showed that there is a natural perched water aquifer at the Glenwill site that discharges at or near the base of the embankment. As a result of the earth works, permeability has increased thereby resulting in an increase in the flow of this perched system (Glenwill considers this as a natural process and not a consequence of site redevelopment). Glenwill assumes that recent earth works by Melbourne Water (decommissioning of an old sewer line and the building of a replacement one) may have altered the localised flow of groundwater.

3) (see Memo - Amcor and Yarra River bank subsidence June 2019.pdf in the AMCOR folder)

3 June 2019: Water ponds can be seen on the walking paths. Where "subsidence" has occurred, topsoil is completely dry, however, about 30 cm below the topsoil, there is obvious water movement. The "subsidence" is away from the river, on the side towards the Glenwill property.

Yarra City Council Memo

(see Memo - Amcor and Yarra River bank subsidence June 2019.pdf in the AMCOR folder)

A Yarra City Council memo issued by Paul Whitten after a site visit on 3rd June 2019 detailed some findings.

The field visit was after a gum tree had collapsed due to recent ground subsidence. Two additional gum trees were also affected, although their footing is still well established. On close inspection, the top of the soil along with the upper soil layer around the subsidence were dry. However, about 300mm below the surface, water was forming freely within the soil.

The observations were that the recent soil movement and tree failures were not as a result of bank degradation by the river washing out of tree roots, but rather as a result of the increase in subsurface water content.

The memo summarised that:

1. The subsidence occurred on the path side of the trees and not close to the riverbank.
2. The subsidence occurred immediately south of major excavation works for the Glenwill main drain.
3. Around where the subsidence occurred, the topsoil is dry, however, there is observable water movement from about 0.3 m bgl.
4. Water ponds are forming on the footpaths.

Douglas Partners Report (2019)

(see: DP Report.pdf in the City of Yarra Folder)

Douglas Partners (DP) noted that development activities at the site involved the removal of former paved surfaces, removal and replacement of uncontrolled fill.

These earthworks activities would have resulted into temporary exposure of fractured basalts which could have resulted in a temporary increase in infiltration/localised recharge at some parts of the site. However, the backfilling with engineered clay filling soon after exposure over much of the site would have provided a low permeability surface seal.

Other earthworks identified by DP included the removal of decommissioned pipes and subsurface structures, and the eventual backfilling of the excavations with compacted clay. This would have resulted in a further reduction in near surface groundwater recharge pathways. Melbourne Water's decommissioned sewer is about 30 m away from the

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recent slump. The brick-lined sewer was back grouted to prevent the leakage of groundwater into it – this, DP assumed, could lead to increase in groundwater level, as it prevents the likely discharge of groundwater into the sewer as before.

Also, during the site visit, two localised pools were observed to the east of the slump.

DP suggested some likely causes of ground movement in the area:

1. Pore-water pressures and soil moisture condition can play a significant role in the stability of the bank. A dry five-month period preceding the slump might have resulted in increased suction and strength within the clay profiles and the residual clay soils derived from the weathered basalt will be highly prone to significant shrink-swell behaviour. This can lead to increase infiltration rates and water pathways into the profile. This was considered important as the slump occurred around the time of a series of rainfall events at the end of the dry spell.
2. Fluctuation in river levels can also result in changes in soil's pore water pressure.
3. Upgradient changes in standing water level could influence the soil moisture conditions in the area of slump. For this to occur, there has to be a hydraulic connection between the fractured aquifer and the soil/rock materials in the terrace area near the slump. This requires further investigation.
4. River erosion of the riverbank.
5. Bank slumping and tree toppling is a common occurrence (evidence exist at the opposite side of the riverbank).
6. The interface between new fillings and the natural soil and/or rocks can form a plane of weakness along a slope.

Local resident's testimony

(see Seepage drivers dams on AMCOR siteJL2.pdf in the AMCOR folder)

A local track user (Spiro Georgakopoulos) presented a document that summarised the chain of events that he, along with other track users, considered to have been the cause of the slumping and tree collapse.

The view presented is that the earthworks at the Glenville site was responsible for the land slumping, tree toppling and the emergence of "springs".

'New stormwater dams along with the stormwater trenches were built after the demolition of the AMCOR buildings. These facilities are located about 6 to 10 metres above and from the Yarra River. The dams are believed to be leaking, with the seepage resulting in localised groundwater recharge. The continuous seepage from these dams have contributed to an increase in soil saturation, thereby reducing the frictional shear strength of the soil and increasing the sliding forces within the terrace soil next to the Yarra River. It is also believed that the earthworks have created new groundwater flow paths that allows the seepage to flow towards the riverbanks'.

GHD's report (Groundwater Beneficial Use Impact Assessment, 2016¹)

(see BU Report Final.pdf the City of Yarra Folder)

GHD completed (most of) the groundwater monitoring programme at the site. A total of seven GMEs which were undertaken between 2008 and 2016, of which six were reported by GHD in their Groundwater Beneficial Use Impact Assessment report (GHD 2016).

Based on GHD's 2016 report, there were at least 31 groundwater monitoring wells at the site (Figure 6-1, Table 6-1). Over time, many of the wells were damaged and/or decommissioned. Groundwater level measurements from both

¹ GHD, 2016. Former Alphington Paper Mill, Alphington Groundwater Beneficial Use Impact Assessment, 2016

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the Newer Volcanics and the siltstone indicated that the flow is south-eastwardly towards the Yarra River (Figure 6-4). The estimated gradient from one of the bores (GW25) to the Yarra River is 0.09.

Using Darcy's Law, GHD (2016) estimated the rate of groundwater discharge into the river from the site (using bore MW05's location and parameters) as 5.3 m³/day.

The report also identified that the water type of most of the bores screened in the basalts were predominantly Na-Mg-Cl, which is typical of basalts in Victoria (Figure 6-4). The wells screened in siltstone showed diverse water types – reflecting possible interactions with basalt groundwater and/or impact from site activities. The ionic ratios were also consistent across the 6 GMEs.

The latest round of groundwater level monitoring data was collected on 26th May 2019 by JBS&G. A total of 37 groundwater monitoring bores were gauged during this monitoring period. It is worth noting that some of the bore names were different from those in the historical data collected by GHD.

The data collected during all the GMEs cannot be used to determine seasonal variations as the GMEs were irregular and the bores monitored varied considerably across all the GMEs (see Figure 6-3).

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Table 6-1 Groundwater bore details

Bore ID	Count	Date Installed	Well Depth (mbgl)	Screened Unit	Status (2016)
MW04	6	30-04-08	10	Unknown	Good
MW05	6	30-04-08	12	Siltstone	Gatic lid removed but serviceable
MW03	5	30-04-08	16	Basalt/Siltstone	Good
GW8	5	15-11-10	9.6	Basalt	Damage to headworks but serviceable
GW10	5	25-11-10	22	Basalt	Good
GW16	5	09-12-10	22	Basalt/Siltstone	Good
GW18	5	14-01-11	23.4	Basalt/Siltstone	Good
MW02	4	29-04-08	23	Basalt	Decommissioned (removal of tank)
GW17	4	10-12-10	15	Basalt	Good
GW6	3	12-11-10	13	Basalt	Good
GW7	3	12-11-10	14.3	Basalt	Destroyed
GW11	3	17-11-10	12.2	Basalt	Destroyed
GW12	3	17-11-10	27.5	Basalt	Decommissioned
GW14	3	25-11-10	22	Siltstone	Destroyed
MW01	2	28-04-08	17	Basalt/Siltstone	Decommissioned and replaced with nested wells MW01A and MW01B
MW01B(R)	2	28-05-15	25	Alluvium	Good
GW13	2	26-11-10	4	Clay/Basalt	Destroyed
GW15	2	29-11-10	15	Basalt/Clay	Destroyed
GW20	2	20-04-15	15.8	Basalt	Good
GW21	2	20-04-15	16	Basalt	Some damage to well head but serviceable

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Bore ID	Count	Date Installed	Well Depth (mbgl)	Screened Unit	Status (2016)
GW22	2	20-04-15	17.1	Basalt	Good
GW23	2	20-04-15	15.5	Basalt	Good
GW24	2	28-05-15	17.6	Basalt	Good
GW25	2	28-05-15	12	Basalt	Good
MW01A	1	06-03-14	18	Basalt	Destroyed
MW01B	1	06-03-14	25	Alluvium	Destroyed
GW9	1	12-11-10	2.8	Fill	Decommissioned (Dry as perched water removed)
GW19	1	27-03-14	17	Basalt	Destroyed
GW19R	1	17-02-16	18	Basalt	Good – replacement for GW19
GW26	1	17-02-16	21	Basalt	Good
GW27	1	23-02-16	22.7	Basalt	Good

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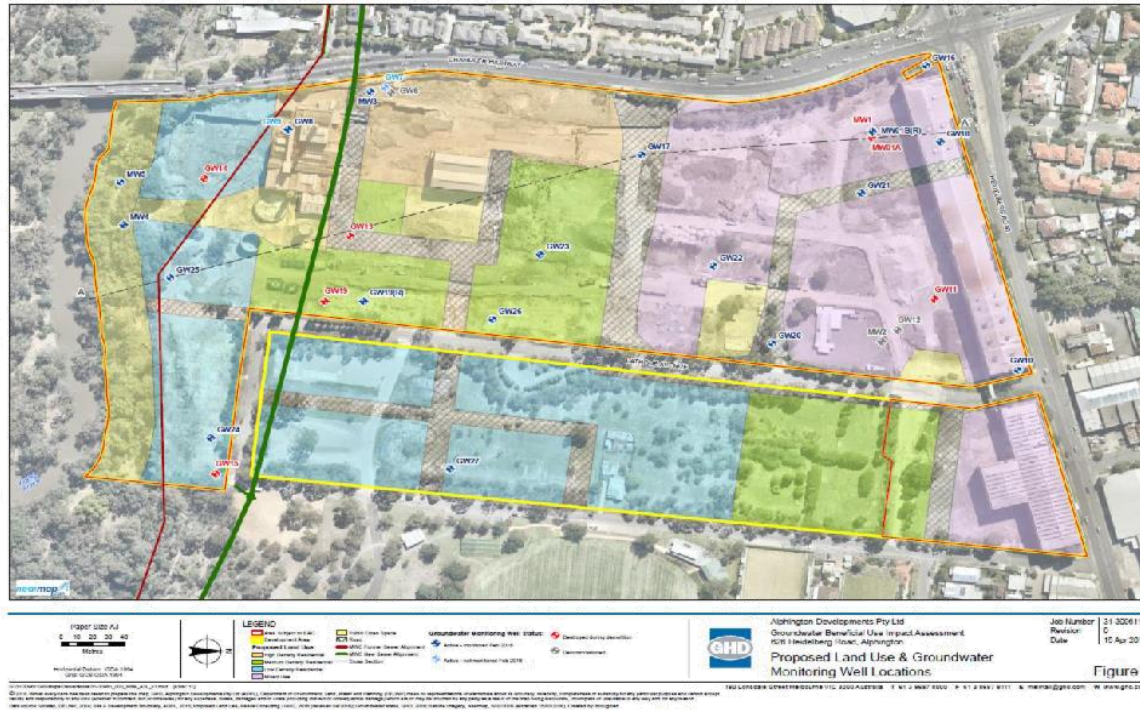


Figure 6-1 Bore locations (GHD 2016)²

² Most of the bores have been destroyed or decommissioned as part of the site development.

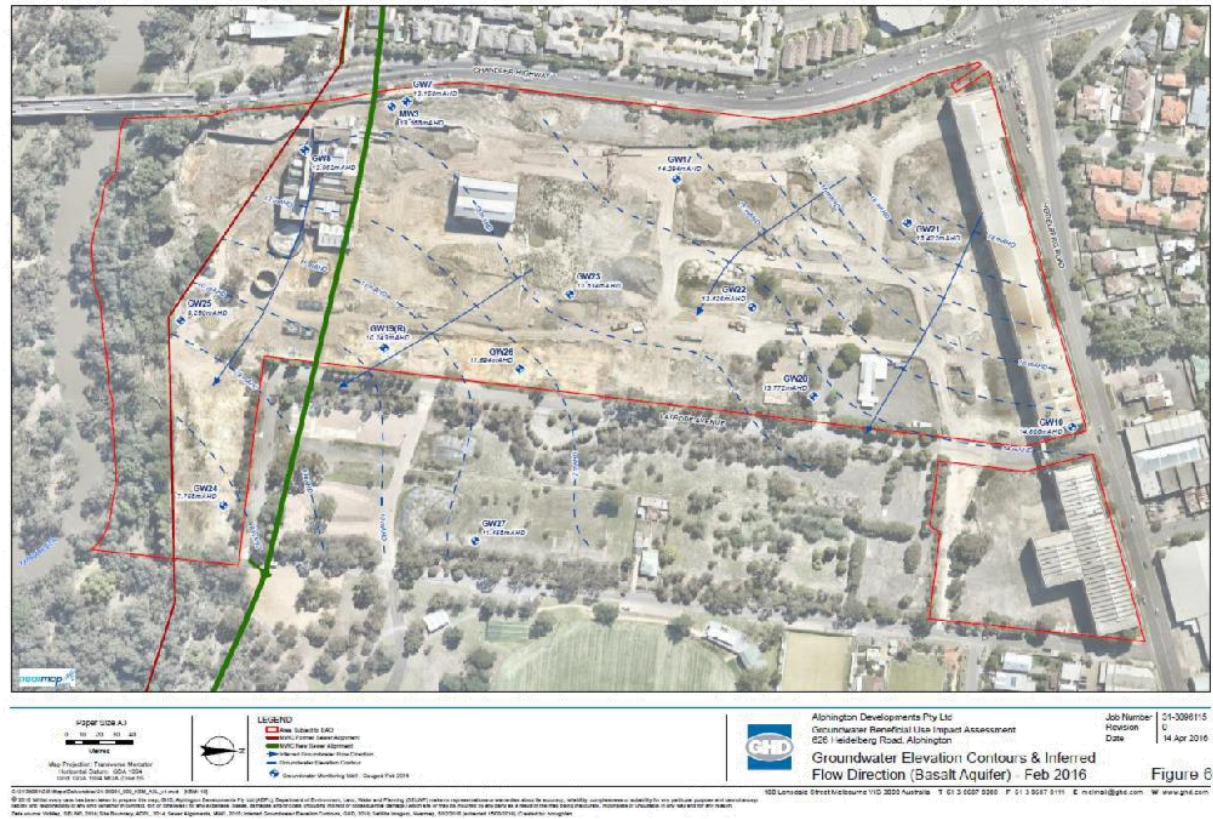


Figure 6-2 Groundwater flow direction based on GME 6 in 2016 (GHD 2016).

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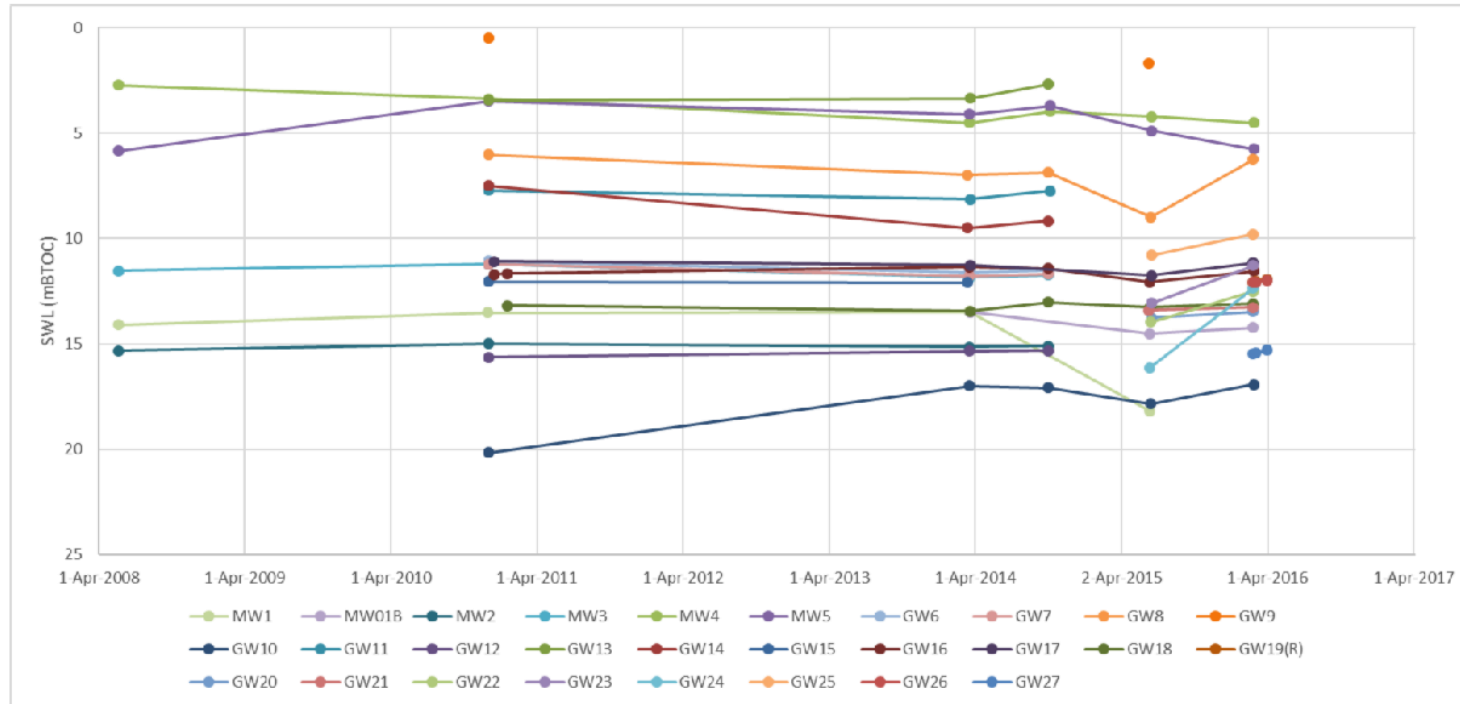


Figure 6-3 Standing Water Level data extracted from GHD 2016

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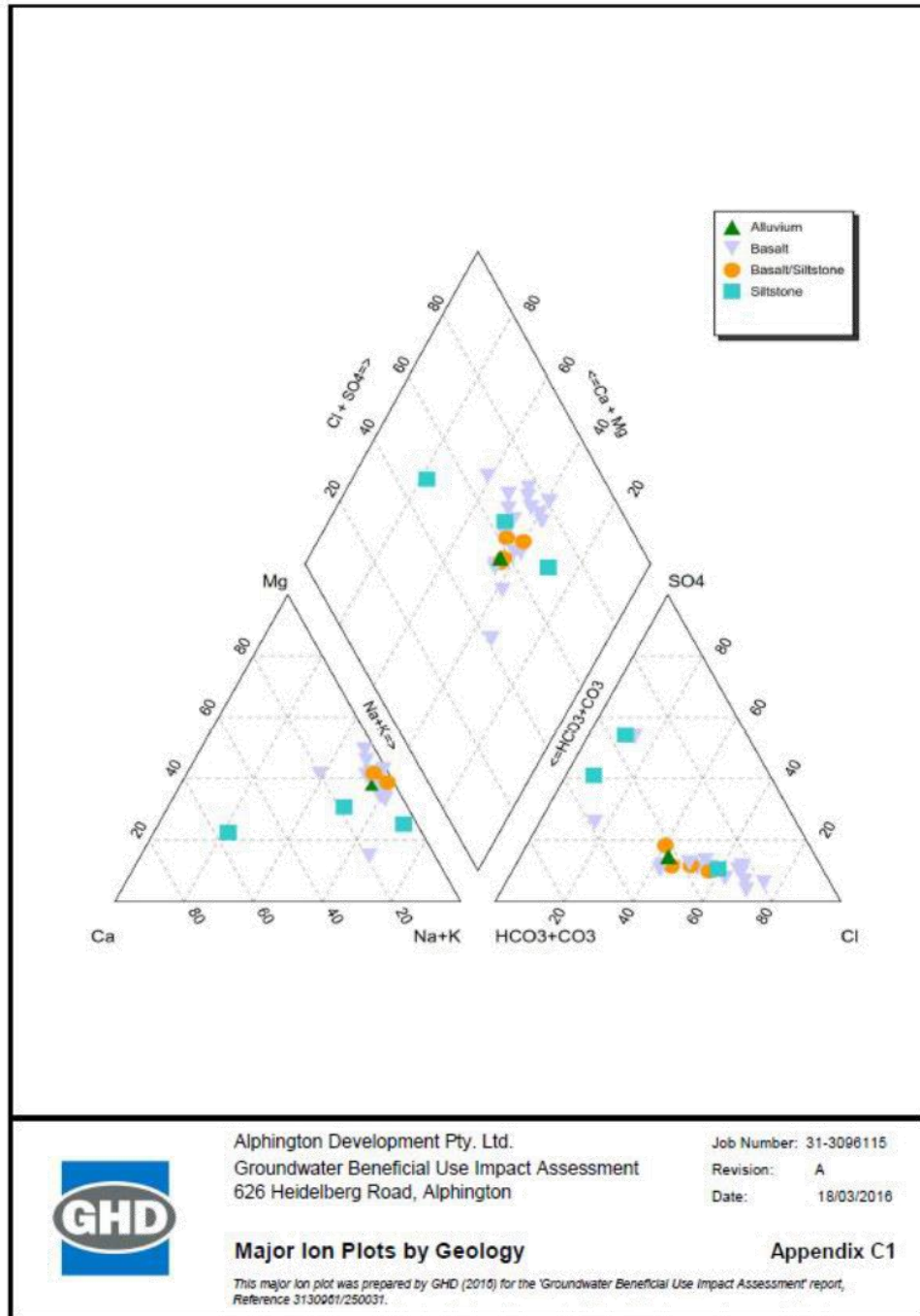


Figure 6-4 Major ions from GME 6 (GHD 2016)

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GHD (2016) identified the fractured unconfined Newer Volcanics basalt and the Silurian siltstone as the main hydrostratigraphic units (HSUs) at the site. As the river is likely at the end of a groundwater flow path, there is high potential for interaction between the river and the site's groundwater. Plant uptake around the riparian zone will also be another means of groundwater discharge.

Standing water level (SWL) collected from these wells between 2008 and 2016 indicated that the SWL varied between 0.5 and 20 mBTC (as reported by GHD 2016). SWL were not reported as metres below ground level (mbgl) or metres Australia Height Datum (mAHD) (see Figure 6-3), thereby preventing the comparison between the river stages and the watertable.

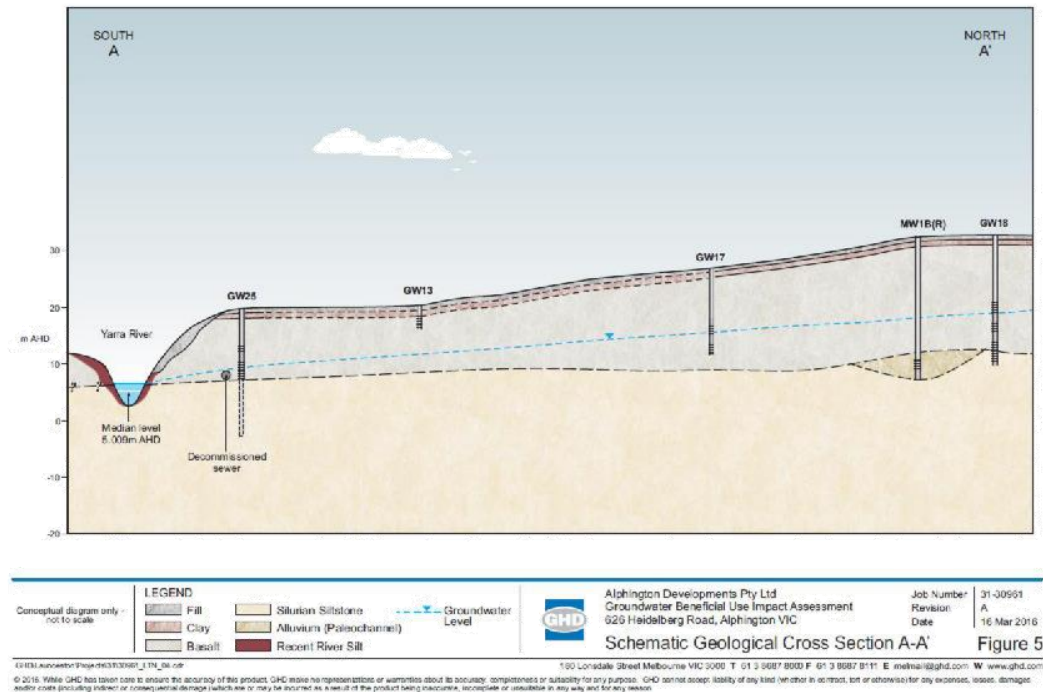


Figure 6-5 Geological Cross section of the site (GHD 2016)

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Site Visit

Key observations made during a site visit on the 25th of July related to groundwater processes are:

- 1) Site modification have removed sealed surfaces, exposing the underlying regolith.
- 2) Site modification such as surface water ponds have concentrated surface ponding and may have increased infiltration.
- 3) Groundwater discharge adjacent to the riverbank appears relatively recent (less than 3 years) – this is based upon;
 - a. No pronounced drainage line from the discharge zone, if it was permanent discharge it would be expected to see a distinct drainage line.
 - b. Lack of vegetation that has evolved to permanent saturation, for example Swamp Melaleuca.
 - c. The presence of vegetation (Tree Violet, Blackwood) that has recently died within the discharge zone, however, are healthy away from the discharge zone.
 - d. Soil colour within the discharge zones appears very similar to soil within the adjacent dry soil. If discharge was permanent would expect to see gleyed colouring or iron staining due to redoximorphic processes.
 - e. The lack of discharge in lower areas – such as the steps to the adjacent baths, if it was a broader process based on recent rainfall then would expect to see discharge in lowest landscape position.

Potential mechanisms influencing bank collapse

A simplistic conceptual site model provides an initial assessment of the likely role groundwater may have played in initiating the river bank collapse and how development activities have contributed to changing GW processes. The assessment area has been divided into 3 stages (Figure 6-6), pre-demolition and major earthworks (pre-2014), during development 2016 onwards, and a hypothetical post development:

1) Pre-demolition and major earthworks

Due to the built nature of the former AMCOR site (now Glenvill site), the amount of infiltration into the soil was negligible, as the vast majority of rain onto the site would be redistributed by stormwater flows off as runoff. It is likely the watertable at the site discharges into the Yarra River.

2) During and post-demolition and massive earthworks

During demolition and other earthworks, excavations were up to 3.5 m at some locations at the Glenvill site (based on CSC Civil email communication to Glenvill). This resulted in the removal of the impervious surfaces across the site, thereby exposing the underlying geology. This would have enabled the increase in stormwater infiltration, thereby leading to increased recharge to the underlying aquifers. In addition, stormwater runoff from the undeveloped parts of the site are directed and stored in sediment ponds, which could potentially act as point recharge zones. Subsurface moisture will increase and potentially cause very localised mounding of the water table immediately below the site.

Subsequently, the increased elevation of the water table causes groundwater to discharge higher than the river level, saturating the riverbank and contributing to bank instability.

3) Post development

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The resurfacing of the Glenvill site with impermeable materials and the design of a proper stormwater collection system will lead to a reduction of percolating water into the underlying soil/HSUs. This will result in the continual lowering of the groundwater back to pre-demolition works, thereby lowering the accumulation of moisture within the bank. A proper stormwater collection system will also ensure that point recharge zones are eliminated.

The decline in the groundwater level and moisture content in the bank will reduce bank instability.

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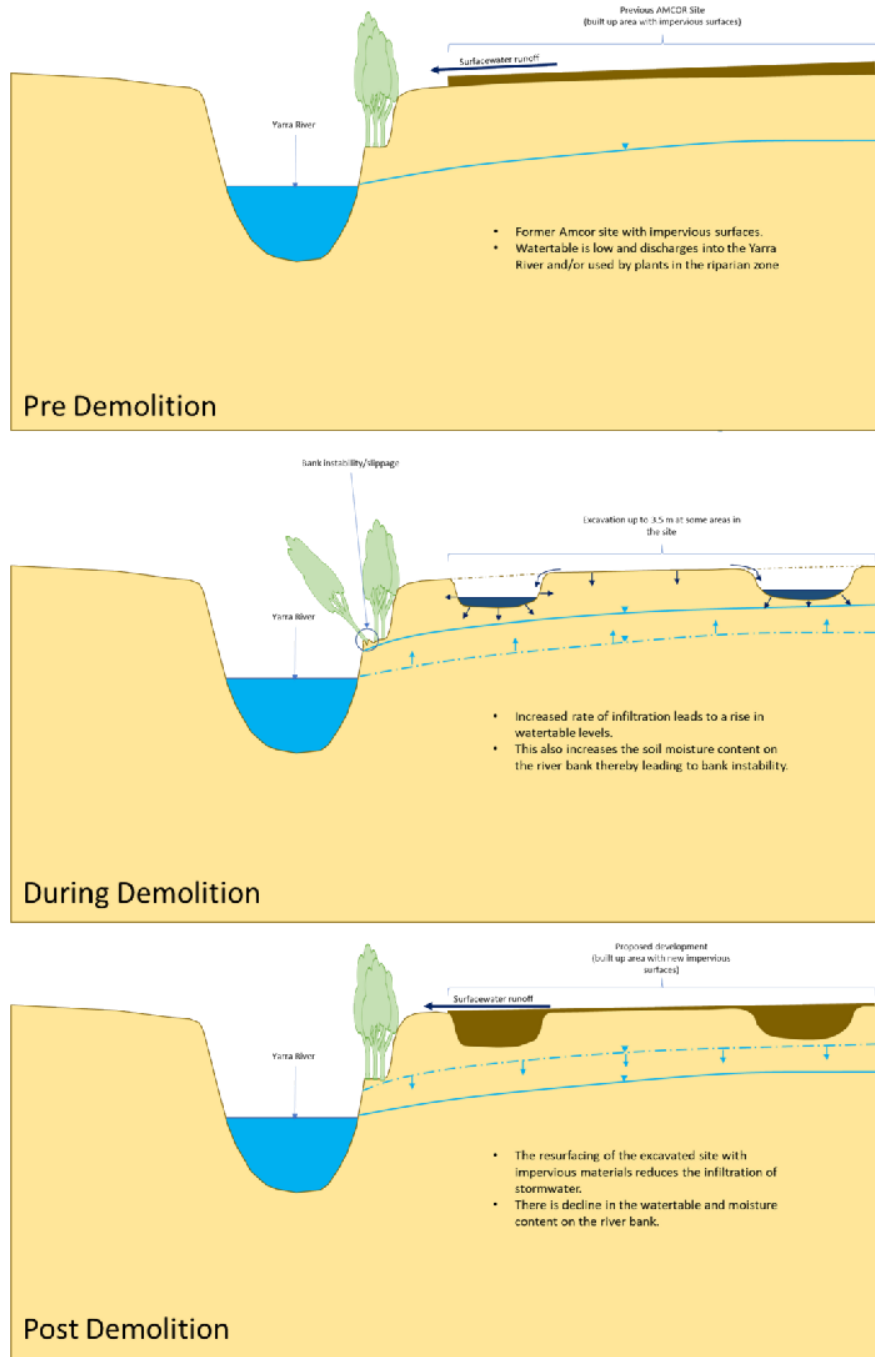


Figure 6-6 Conceptual site model

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Short term management implications

Based upon the initial review of literature and field-based observations it appears that the most likely cause of the groundwater discharge is associated with localised recharge at the site. It also appears that the discharge started around a year after site redevelopment began. It is likely that groundwater discharge will not cease in the coming weeks to months, as more infiltration is expected during winter and spring rainfall events.

Therefore, the role groundwater plays with the river back collapse is not likely to cease in the coming weeks or months.

Scope of work for Part 2: Detailed investigations

The hypothesis provided is not based upon a technical investigation designed at determining the role groundwater has with the landslides, but rather a preliminary assessment of existing data.

To better clarify the role development at the site has had on altering groundwater processes, the following are recommended:

1) Conduct a detailed topographic survey and develop a digital elevation model

A well-designed drone topographic survey will help in developing the site's detailed digital elevation model (DEM). It will also be useful in identifying current site features like surface water holding ponds and their depths, stormwater drains, site of land subsidence and locations of toppled trees (subject to visibility due to tree cover).

The DEM will be important when comparing the elevations of groundwater levels, surface water holding dams and the river heights, thereby informing the relative water levels across the site.

2) Determine source of groundwater discharging at the riverbanks. This will involve:

- a. An initial site visit and sampling of existing wells and discharge zone to compare against GHD data to begin investigations.
- b. The installation and monitoring of groundwater level and quality monitoring bores across the site. This will help determine whether (and to what extent) the current groundwater flow patterns have been altered post-demolition works.
 - i. Estimated 6 new bores of up to maximum of 20 metres
 - ii. 2 rounds of chemical sampling and analyses
 - iii. Hire and installation of data loggers
- c. The collection of water samples from the groundwater monitoring bores and the Yarra River for major ions, stable water isotopes and radionuclides (radon) analyses. This task will aid in determining the age and source of the groundwater.
- d. Preparation of a technical memorandum describing the likely source of discharge water and any existing data gaps and recommendations.

3) Determine lag time and length of discharge based upon groundwater model:

- a. Using a modelling approach (yet to be determined) to assess how long increased recharge and water table mounding may take to dissipate, and the influence future development may have on groundwater discharge.

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Appendix C: Geotechnical assessment

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TJH:sk

2 August 2019

ALLUVIUM

Level 1, 105-115 Dover Street,
CREMORNE VIC 3121

Attention: Ross Hardie

Ref: 119927/A

Dear Sirs,

RE: Yarra Bank Slump Investigation, Fairfield

Further to our previous correspondence in connection with the tree removal, attached as Appendix I, we confirm having reviewed most of the information provided in relation to the trees present, and our views have not changed.

Following the recent workshop we have discussed the overall issues with Mr Andrew Murphy at Douglas Partners and formed some view from the workshop from a geotechnical perspective, and these are summarised as follows.

Most Likely Mechanism Pathway for the Bank Collapse

There are two possible mechanisms in place, in my view, firstly the normal river processes creating localised instability in the embankment. To examine this in detail it will be required to gain an appreciation of the river profile, and Douglas Partners agree with this, but from a visual perspective the river processes are, in our view, likely to be the least significant factor in the overall embankment instability to date.

The second likely influence is seepage water within the embankment, although the source of this not completely identified, however appears likely associated with two issues, firstly the siltation ponds and build up behind the immediate embankment, and the second, probably associated with the original drainage of the site (La Trobe Street), and the old creek or water course that is shown on the plans discovered by Douglas Partners. The profile and recent topography is also considered a relevant issue and we have marked up the profile by GHD with our suspected localised flow mechanism, but this needs verification. This is attached as Figure 1.

Managing Director: T.J. Holt BEng MIEAust CPEng EC-1022

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Yarra Bank Slump Investigation, Fairfield

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Douglas Partners advised they are currently preparing a proposal for Glenvill Homes to address the water model on the site and will invite input from ourselves into this model with a view to providing an overall satisfactory response to the issues of the embankment.

Our initial comments are that the geology is somewhat complex where the basalt meets the Silurian sequence and there may be seepage paths in the less weathered basalt or above a clay that is allowing easy access of the seepage from the Glenvill site into the embankment, and the following through the embankment and into the Yarra.

We saw some evidence of this possibility in our walkover.

Short Term (No Regret) Actions to Address the Risks

The establishment of a water model and some understanding of the water pathways from the Glenvill site to the river is seen as critical. Both Glenvill and our group were conscious of this and it will take some time to collate the existing water bore data and the proposal that will be forthcoming from Douglas Partners. Douglas Partners are acutely aware of the issues and do not dismiss that either moving forward or at present the influence from the site of the housing development will be a significant factor.

Having said this, the engineering issues, in my view, should be relatively easily overcome, either by appropriate drainage (groyne drains or similar), the selection of a relatively low permeability backfill in some of the Glenvill backfill or a combination of these, or may simply dissipate quickly with improvements to the Civil Construction Management Plan, which clearly needs addressing.

It is also possible that the embankment will be denuded in any event, largely due to the contamination issues and a new embankment constructed, suitably engineered.

Thus, in answer to the above, very little short term actions to address the risk will be possible over the next month or two at least, and the priority should be to establish a course of action for summer works.

It is also apparent that the residences close to the property boundary may have basements, which will also influence seepage flows and possibly lower these in the longer term.

The following may be of benefit.

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- Line or replace the siltation ponds.
- Alter and implement a revised Construction Management Plan.

Scope for More Detailed Stage 2 Quantitative Investigation

It is apparent talking to Douglas Partners that a collaborative approach would be best to ensure there is no duplication in what I will call the base data. Douglas Partners obviously propose a hydraulic model and, whilst views may differ on this, most of the input information need only be gathered by one investigative process.

As mentioned at the site meeting, the key information, moving forward for us, is the ground water bore data, the profile at the river edge (below the water line), knowledge of the proposed development by Glenvill and profiles along the embankment.

At this point, geotechnically until these aspects are firm, there is no point in doing stability analyses or similar for them, either existing embankment or long term embankment.

- 1 Mobilisation
- 2 Auger drilling -4 bores at river level to 4.0m and 4 bores top of embankment to 8.0m, total 48.0m
- 3 Field testing
- 4 Laboratory testing
- 5 Install piezometer (no caps)
- 6 In-situ permeability testing (4 bores)
- 7 Stability analysis
- 8 Preparation of report

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Yarra Bank Slump Investigation, Fairfield

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We trust the above comments are of some assistance and should any point remain in doubt please do not hesitate to contact us.

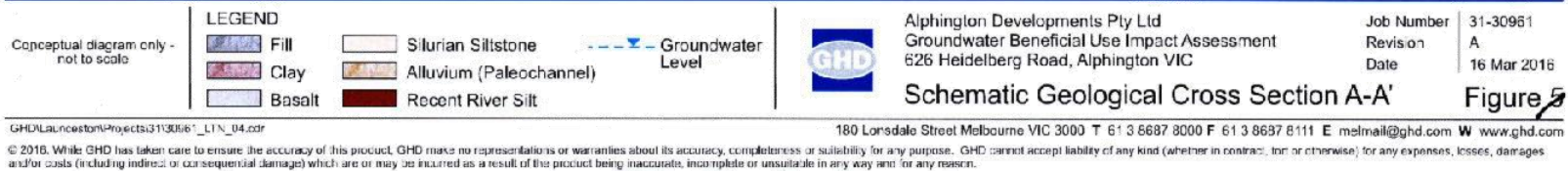
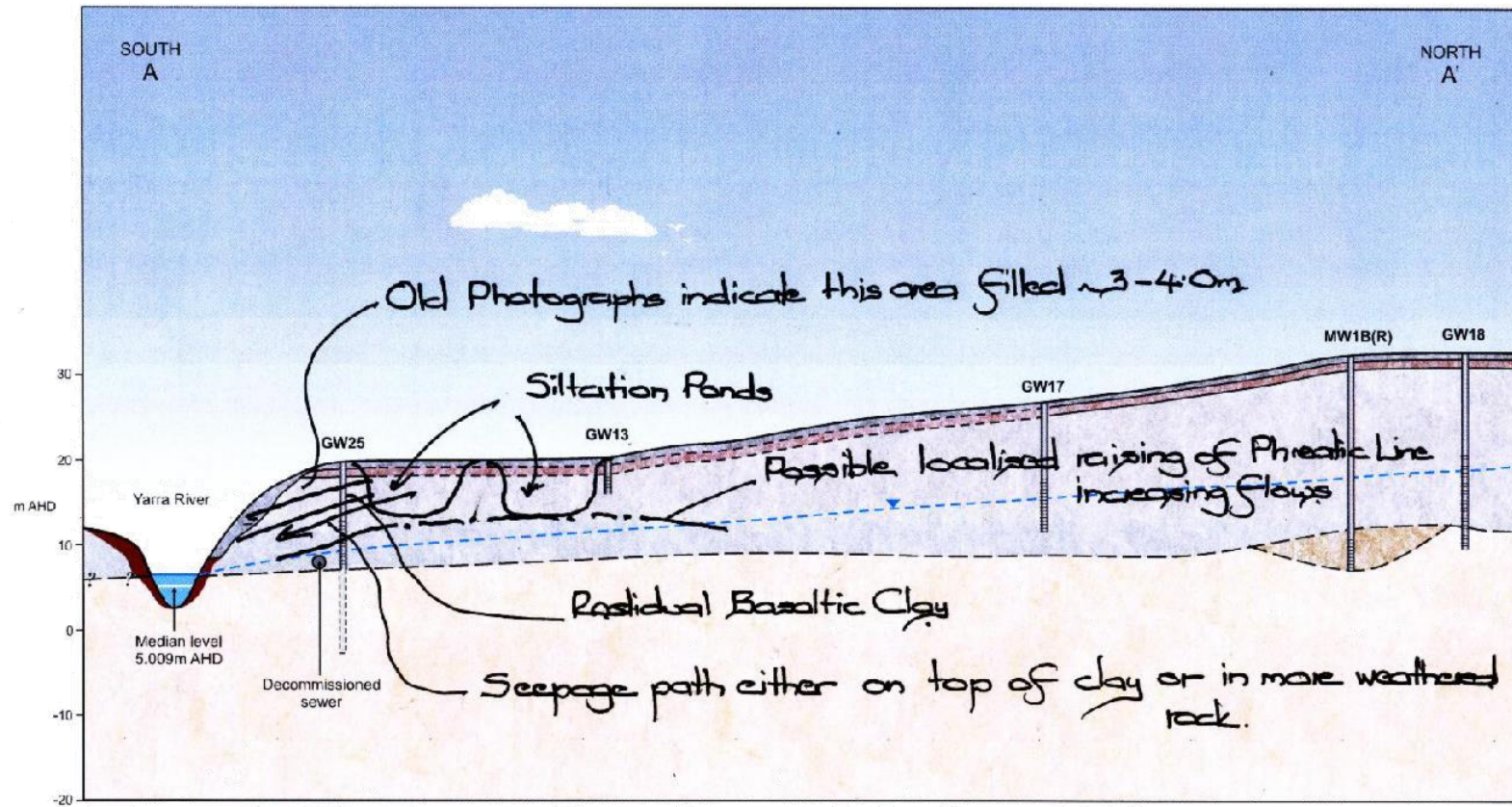
Yours faithfully,



T.J. HOLT MIEAust CPEng EC-1022
A.S. JAMES PTY LTD

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Yarra Bank Slump Investigation, Fairfield

APPENDIX I

Preliminary Tree Report Reference 119927

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



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TJH:sk

26 July 2019

ALLUVIUM

Level 1, 105-115 Dover Street,
CREMORNE VIC 3121

Attention: Ross Hardie

Ref: 119927

Dear Sirs,

RE: Tree Collapse, Yarra River Embankment Old APM Site, Fairfield

Further to our mutual inspection along the embankment of the Yarra River on 25 July 2019, we would confirm our verbal advice at this early stage in connection with the more pressing issue of two existing trees that are within, or close to, a slumped zone on the riverbank that may fall into the river in the relatively short term.

One tree (designated T1) is within a completely slumped zone or a zone that is likely to fail within the near term, ie between one and six months. The other (designated T2) is adjacent to this zone and has a significant lean, but may just be a slow progression with time.

It is likely that the river processes or localised instability will result in the collapse of one of these trees (T1) without notice, and as such it will present as a danger to either river users at that location or downstream.

This is perhaps not so in the short term for the tree outside the slumped zone (T2).

As much as this company would like to preserve this vegetation actually within the slumped zone (T1), this appears impractical or not possible. It may be it can be "lightened", but the same risk appears to exist.

Other trees were inspected that were not within slumped zones to the North that had a significant lean, but because the river processes or localised instability had not put these in danger, these obviously need not be removed.

The cause of the localised instability or river processes at this point will be the subject of the further analysis. We note, however, that this company was requested by the City of Yarra in 2017 to inspect similar deterioration in the riverbank at this location and so the river processes or cause of these instabilities would appear to have been ongoing for some time.

Managing Director: T.J. Holt BEng MIEAust CPEng EC-1022

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*Geotechnical Investigation
Tree Collapse, Yarra River Embankment Old APM Site, Fairfield*

*26 July 2019
Ref: 119927*

Should any point remain in doubt please do not hesitate to contact us.

Yours faithfully,



T.J. HOLT MIEAust CPEng EC-1022
A.S. JAMES PTY LTD

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Appendix D: Surface water assessment

P119162.10_Tree_Collapse_Bank_Slump_Investigation_R01v1b.docx

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Memo

Subject	Surface water
Distribution	Alluvium Consulting (Internal)
Date	15 August 2019
Author	Jonathon McLean
Project	Tree collapse review and investigation

Introduction

Alluvium Consulting was engaged by the City of Yarra to consider the potential influence of surface water and drainage on tree collapse and bank slump on the Yarra riverbank at Fairfield. The purpose of this document is to identify any potential surface water issues that may contribute to mechanisms influencing bank collapse by reviewing existing reports, surveys, construction documentation and plans. The investigation will also identify for the City of Yarra any short-term management implications and potential scope of work for detailed investigation.



Figure 1 – Bank collapse

Site inspection and data review

Jonathon McLean was Alluvium's lead expert on surface water and drainage. He attended an expert panel site visit including locations of sediment ponds, inceptor swale drains, retention dam connections, existing outfall drains, groundwater bores, and the Yarra River bank on the morning of 25 July 2019. The site inspection was undertaken to familiarise the expert panel with the site and gain an appreciation of the failed ground and bank conditions impacting trees along the riverbank.

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The following information and documents have formed the basis for the review:

- Nearmap aerial images
- Douglas Partners report dated 3/7/19
- CSC Civil Constructions "Construction Management Plan" dated 24/11/17
- GHD report "Groundwater Beneficial Use Impact Assessment" dated May 2016
- "Main Drain Stage 1" drawings by Reeds dated 23/6/17
- Road and drainage plans (HLR1- HLR24) by Reeds dates 20/3/17
- Stormwater quality plans (SWQ1 – SWQ6) by Reeds dates 20/3/17

Potential surface water drainage influence on bank collapse

The Amcor site covers an area of approximately 16 hectares, with the development divided into two distinct precincts, referred to hereon as the "west precinct" and the "east precinct". There is a fall of about 14 metres from north to south, with an additional "steeper" drop of over 10 metres from the top of the fill escarpment to the Yarra River bank. It is our understanding that the "fill escarpment" was artificially created many years ago by Amcor to lift the site above the Yarra River 1% AEP flood level.

The Amcor production site on the "west precinct" was predominately covered by buildings and hard stand areas, whilst the "east precinct" was predominately vegetated with grass and trees. Demolition and clearing of the site appears to have commenced sometime in 2015 (based on aerial images) with the entire site progressively being stripped and remediated. As of July 2019 the redevelopment of the "east precinct" to residential dwellings has predominately been completed whilst the "west precinct" remains bare earth.

The overwhelming opinion from the expert panel is that the failure or slumping of the riverbank is due to change in moisture conditions. From a drainage perspective the key question is "has upstream surface water conditions contributed to the change in bank moisture levels?".

As shown in Figure 1, there has been a significant change in land use on the catchment over the past few years. Land use and hydrology are intrinsically related. Therefore, a change in land use is likely to lead to a change in hydrology. During the Amcor Paper Mill operations (i.e. pre 2015) the western portion of the site was predominately impervious (i.e. roof, hardstand areas etc) and it is assumed that the vast majority of stormwater runoff from these surfaces were collected and conveyed by a drainage system of gutters, pits and pipes that connected to the existing underground 1050mm pipe network through the site. The outfall from this 1050mm pipe was directly to the Yarra River. We estimate that very little of the rainfall that landed on the "western precinct" would have had the opportunity to infiltrate into the existing groundwater. On the "eastern precinct" the majority of the site was vegetated with grass and trees. A "bluestone open channel" conveyed any surface flows to the east of the Amcor site and into the Yarra River.

As shown in Figure 1, the stripping and demolition of the site removed all of the original underground drainage systems. Rainfall that falls on the site under these circumstances lands on exposed earth, where it runs along the surface to a swale drain or pools on the surface. During bulk earthworks, it is standard practice (and a permit requirement) to manage stormwater runoff to mitigate potential erosion and sediment laden water from entering the downstream receiving environment (i.e. the Yarra River). Therefore, as you would expect a "Construction Management Plan" was prepared by CSC Civil Constructions. One element of this plan included information on the protection measures to control stormwater runoff, which involved the use of swale drains or cut-off drains and a sediment pond (refer to Figure 2).

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Figure 1 – Aerial photo of the site. March 2014 (top image), August 2018 (bottom image)

P119162.10_Tree_Collapse_Bank_Slump_Investigation_R01v1b.docx

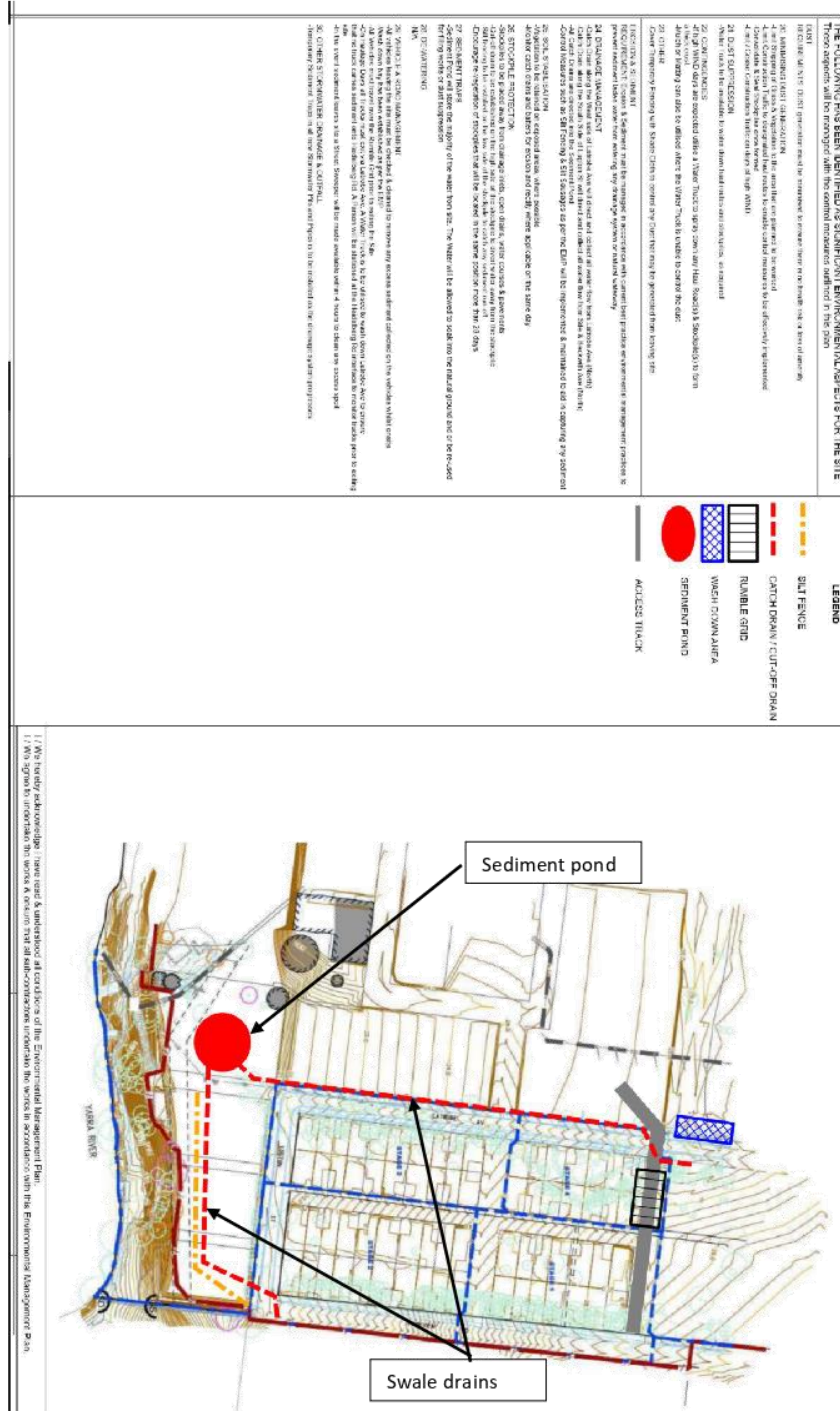


Figure 2 – extract from CSC Civil Construction “Construction Management Plan)

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From an examination of aerial images, it is clear that the location of the surface water management sedimentation ponds has moved over time (see Figure 3).



4 May 2017



17 Sep 2017



16 Jan 18



23 Aug 18



7 Apr 2019

Figure 3 – Images showing the change in sediment pond location over time

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From the available documentation it appears that there were no design plans or calculations undertaken to determine the size and material specification for the sediment basins. From the site visit there does not seem to be a formal drainage outlet for the sediment ponds, which is unusual in the Melbourne context. Therefore, it appears that the sediment pond system is relying upon reuse, evaporation and infiltration to draw down the water levels. This assumption is supported by the "Construction Management Plan" which encourages the concept of infiltration loss as evidenced by item 27 as follows:

27. SEDIMENT TRAPS

-Sediment Pond will store the majority of the water from site. The Water will be allowed to soak into the natural ground and or be re-used for filling works or dust suppression

A very high-level water balance assessment was undertaken to gather a broad understanding of the possible "order of magnitude" volumes associated with the hydrological cycle on the site. Note that the specific numbers are not important, it is the "order of magnitude" that is informative.

Over the 2017-2018 period the average annual rainfall was approximately 540mm (refer to Figure 4).

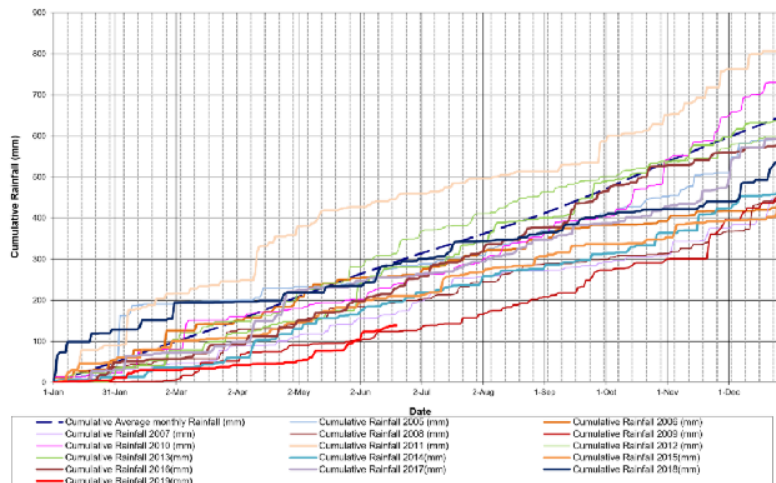


Figure 4 – Rainfall (source Douglas Partners report 3/7/19)

"Ball Park Water Balance":

- Site area of 16ha
- Assume 30% of rainfall becomes runoff (i.e. 26,000 m³ per annum)
- Sediment ponds/ basin surface area of 2,500m²
- Evaporation of 1200mm per year from the sedimentation ponds gives an evaporation volume of 3000m³ per annum
- Surplus water = 23,000m³

So, if the sediment ponds are collecting all the runoff then what happens to the excess of 23000m³ in a year?

- Does it keep accumulating like a bathtub before it spills?
- If so we, would expect the sediment ponds to look like a permanently full dam – but the aerial photos don't suggest this?

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- Therefore, a significant portion of the surplus 23,000m³ of water (the proportion that is not being reused on site) will be infiltrating into the ground as per the EMP

Based upon the site visit, an examination of the “Construction Management Plan” and the “ball park” water balance assessment it is my opinion that it is highly possible that the surface water management system on the site is contributing increased volume to the groundwater/subsurface system.

Short term management implications

The developer should develop an updated site management plan, which includes a short-term stormwater strategy that:

- Confirms the location of the proposed sediment pond
- Provides a liner to the sediment ponds to prevent infiltration
- Considers subsoil drains in the old concrete hard stand area to prevent infiltration
- Include a review of alternate discharge/treatment mechanisms of stormwater that complies with any necessary EPA requirements and guidelines.

Scope of work for Part 2: Detailed investigations

- Review and comment on the proposed short-term stormwater strategy

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Appendix E: Riparian ecology assessment



Memo

Subject Ecology / Vegetation
Distribution Alluvium Consulting (Internal)
Date 15 August 2019
Author David Carew
Project Tree collapse review and investigation – Yarra River Alphington

Introduction

City of Yarra has engaged Alluvium to investigate recent tree collapse and bank slumping events occurring on the Yarra River adjacent to the historical paper mill site in Fairfield. An expert panel convened by Alluvium Pty Ltd (Alluvium) conducted a site visit on 25 July along with John Ghasperidis (City of Yarra) and Travers Nutall (Glenvill). The expert panel reviewed the information from the site visit and other reports on Thursday 1 August 2019.

The purpose of this memo is to summarise the key vegetation issues arising from the site inspection especially the potential for imminent tree collapse and additional follow up work require.

Background

David Carew was Alluvium's lead expert on ecology and vegetation management. He attended the site visit on 25th July 2019 to gain an appreciation of the site and to review the vegetation along the waterway corridor adjacent to the Glenvill development. Two trees in and adjacent to a bank slump have been identified to be at risk of failing with another tree already having fallen into the river.

The following information and documents have formed the basis for this review:

- Nearmap aerial images
- Arboricultural assessment, Yarra Bend riverbank trees 11/06/2019 Tree Department Pty Ltd
- Assessment of River Red Gums along the Yarra River, Alphington. 15/07/2019 – C&R Ryder Consulting
- ARBORICULTURAL REPORT APM Site Heidelberg Road Alphington 05/06/2019 – Tree Radar Australia Pty Ltd
- Memo Yarra River bank subsidence – Amcor site 03/06/2019 City of Yarra
- AS 4970-2099 Protection of trees on development sites. 31/07/2009
- Victorian Planning Provisions Clause 52.17 (Native Vegetation) 31/07/2017
- Yarra Planning scheme – Significant Landscape Overlay 31/07/2018
- Yarra Planning scheme (SCHEDULE 1 TO THE SIGNIFICANT LANDSCAPE OVERLAY) 24/02/2017
- Exemptions from requiring a planning permit to remove, destroy or lop native vegetation. Dec 2017 – DELWP
- NatureKit (2019) DELWP



Waterway vegetation

Vegetation of this section of the Yarra River has been mapped as Floodplain Riparian Woodland (EVC 56) by EDWLP as shown in the NatureKit biodiversity tool. This is described as:

An open eucalypt woodland to 20 m tall over a medium to tall shrub layer with a ground layer consisting of amphibious and aquatic herbs and sedges. Occurs along the banks and floodplains of the larger meandering rivers and major creeks, often in conjunction with one or more floodplain wetland communities. Elevation and rainfall are relatively low and soils are fertile alluviums subject to periodic flooding and inundation. DSE, 2004

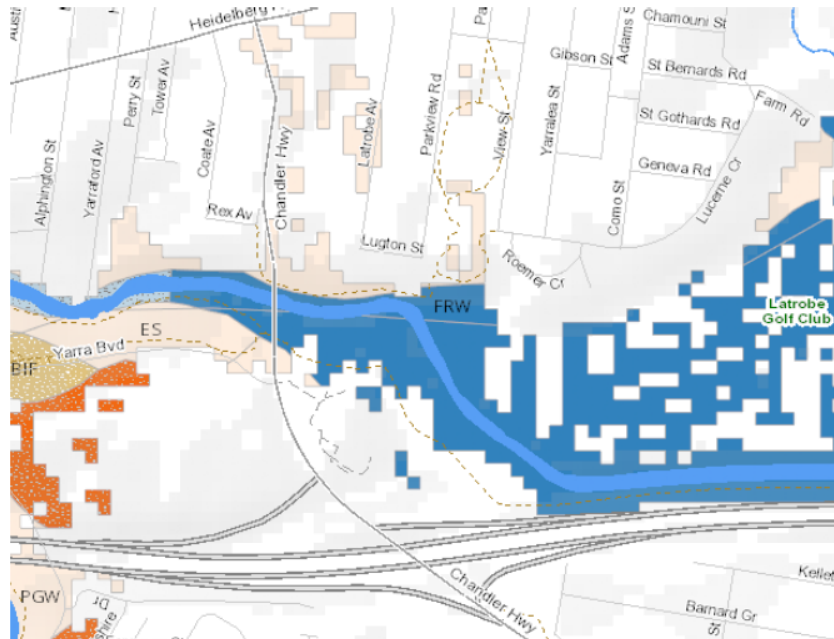


Figure 7: EVC mapping for the Yarra River at Alphonston

Eucalyptus camaldulensis (River Red Gum) is a canopy character species of this vegetation community. This species occurs along the riverbank and some of the individuals are large enough to classify as large trees for this EVC (>80cm DBH). Most of the River Red Gum would be 30 to 80 years old and growing as a result of natural regeneration from earlier clearing. These trees should be retained whenever possible.

The waterway corridor is predominately planted with non-indigenous native species such as *Eucalyptus cladocalyx* (Sugar Gum), *Eucalyptus botryoides* (Swamp Mahogany), *Grevillea robusta* (Silky Oak), *Casuarina cunninghamii* (River She-oak). Newer plantings are local indigenous plants such as *Acacia melanoxylon* (Blackwood). A few significant exotic species also are present (*Quercus* sp – Oaks) and these will be of ongoing value provided they are not invasive species.

There is a low diversity native mid storey E.g. *Acacia melanoxylon* (Blackwood), *Meliccytus dentatus* (Tree Violet) and exotic dominated ground layer.

Overall while the canopy is only partially comprised of indigenous plants it does provide appropriate structure for the site context and landscape value to users of the waterway corridor.



Figure 8: Riparian planting west of slump area -River Red Gums occur along the riverbank. The waterway corridor is predominately planted with non-indigenous natives. Newer plantings are local indigenous plants.



Figure 9: Planted trees on embankment - Trees on the embankment are 20+ year old non-indigenous natives. The trees on the embankment are growing at different angles to each other. Investigate for slumping or ground heaving to determine stability of the trees.

Site condition and vegetation observations

The site was walked from the site stormwater discharge point in an easterly (upstream) direction to the eastern boundary of the development. The bank slump and trees highlighted to be at risk were visited during the inspection. The location of the trees is shown in Figure 10

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Figure 10. Location of trees assessed at bank slump zone

Three trees occur within and adjacent to the recent bank slump. One of these has fallen into the river and is not a major focus of this memo. The two trees identified as at risk of failure during previous visits by others are shown in shown in Figure 11 and

Figure 3.



Figure 11: Tree (T1) and bank slump site visit by Alluvium

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Figure 12. *Tree collapse (T2) at the edge of bank slump*

The tree which has fallen into the river (see Figure 13) is firmly held into the riverbank and has not swung around with the river current. This suggests that the tree had a healthy root system prior to falling.



Figure 13: *Tree in slump which has fallen into river*

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Areas of the lower terrace adjacent to the riverbank were observed to be waterlogged with the vegetation in those areas showing stress or death consistent with waterlogging.



Figure 14: *Dead native plants in waterlogged area*

Figure 14 shows an area where some planted native plants (<5 years old revegetation) which were growing well but are now dead. They are in a waterlogged area. The same species growing nearby in non-waterlogged soils are growing healthily. This indicates that the ground conditions have changed affecting the plants – estimated to be within 5 years.

Some mature Oak trees are growing within and adjacent to a waterlogged area. These are significant local trees and would be a priority to be retained in a future landscape. One of these (see Figure 15) appears to also be suffering from the waterlogged ground. These trees need to be assessed in spring to check the seasonal regrowth and their health.

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Figure 15: *Oak in waterlogged area*

A Eucalyptus species (see Figure 16) has grown in the construction carpark with was a concrete covered hardstand (see Figure 23). This tree has grown >4.5m since 2016. This indicates that the ground in this area is not highly compacted and has moisture to enable rapid growth. This rapid tree growth suggests that the carpark area has well-watered but free draining soils, consistent with a site that has high levels of surface water infiltration.

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Figure 16: Juvenile tree in carpark - old logistics hardstand



Figure 23: Juvenile Eucalyptus growing in carpark

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Vegetation risk assessment

Four arborists have assessed the trees associated with the slump before the Alluvium site visit.

These reports are summarised in

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



Table 2 below. Alluvium broadly agree with the observations in the report and consider that the T1 will fail and needs to be removed and T2 can be retained with ongoing monitoring.

Table 2. Summary of Arborist report recommendations

Arborist report	Company	T1	T2
#1	Tree Department Pty Ltd (11 th July)	Removal recommended Unacceptable risk to cause harm and costs	Removal recommended Tolerable risk to cause harm – unacceptable risk due to costs post failure
#2	Ryder Arboriculture and Environment (12 th July)	Tree is likely to fail in short term (Weeks to months) Permit required for removal Assessed as Low risk to cause harm <i>Note: shown as T2 in report</i>	Tree is stable unless ground moves. Permit required for removal Assessed as Low risk to cause harm <i>Note: shown as T1 in report</i>
#3	Tree Radar Australia (2 nd June)	Removal recommended Safety risk and reduce further damage	Removal recommended Safety risk and reduce further damage
#4	City of Yarra (3 rd June)	Retain if possible. Monitor for movement.	Retain if possible. Monitor for movement.
	Alluvium summary	Remove tree – permit will be required Tree is on unstable ground within an active slump zone. This tree is likely to fall and cause further damage to the bank.	Retain tree and monitor ground stability. Tree is outside the active slump zone and is not imminently likely to fall unless further slumping occurs.

Note: Ryder Arboriculture have nominated T1 and T2 oppositely to the other reports.

Vegetation status and recommendations

The status of the subject trees has been the subject of previous memos from Alluvium to Yarra City Council. Based on the site inspection, advice from Glenwill and review of information we are of the opinion that

- The existing trees at the site be photographed as a record of the current riparian vegetation for the site. This record can inform the future vision for the site and ultimate landscape plan.
- **Tree T1:** We consider T1 will fall in the short to medium term (this could be at any time within a few days to months) and should be removed to reduce the future risk to public safety and bank damage.

The tree has suffered damage to the surface root plate within 1 to 3m of the trunk for more than 60% of the circumference of the tree. This is within the Structural Root Zone (SRZ) of the tree and is significant damage of the tree's roots. A tree suffering this level of root damage will most likely die

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within 1 year. NOTE: The SRZ of the tree is calculated to be 3.2m with the Tree Protection Zone being 10.44m (as per AS 4970-2009 *Protection of trees on development sites*).

This tree is within a bank slump which has damaged the informal earthen pedestrian path along the riverbank. This is now an unsafe pathway and has been fenced off preventing pedestrian access.

The subject tree lies within land that was subject to significant additional slumping over a period of wet and windy days (Friday 9 August to Sunday 11 August). The slumping will have further threatened the stability of the tree. The tree also contributes to the surcharge on the unstable bank. Further slumping not only threatens the lower terrace but also the adjoining steep embankment.

Based on this recent movement we have advised the City of Yarra (refer Appendix B) that the tree is at immediate risk of collapse and that such collapse would impact on property. The active movement of the bank and the extent of damage to both property and the Yarra River, constitute 'an immediate risk to property' and enables activation of clause 42.03-3 of the state planning provisions, creating an exemption for emergency works.

A copy of this advised is appended to this report.

- **Tree T2:** We are less certain of the imminent fate of T2. This tree has not received majority support by Arborists for removal. The tree appears to be outside the zone of the existing tension cracks. We suggest that the tree not be removed until:
 - Such time as it is observed to lie within tension cracks, and or
 - Results of contamination land assessment is complete, a remediation plan approved and the necessity for the removal of the tree as part of any such remediation plan is confirmed.
- Monitoring of the slump area and trees is undertaken weekly to determine if the conditions change and increase the likelihood of the trees falling. Installation of photo monitoring posts and tree tilt sensors should be considered.
- Continue to restrict access to the site maintain public safety.
Consider signage along the riverbank warning people on the river of the tree hazard.
- If tree removal is undertaken, the stump and root plates must be retained to reduce damage to the bank and to provide ongoing soil stability.

Short- and long-term recommendations

Short term

- T1 – should be removed as a matter of urgency. Until this occurs the exclusion fencing must be kept in place.
- T2 – weekly monitoring of this tree should be put in place.
- Assessment of trees and vegetation in the waterway corridor.

Undertake assessment of trees and vegetation in the waterway corridor to gain baseline data on condition of the riparian vegetation. This assessment similar to a dilapidation report which identifies the current condition of the trees and vegetation of the waterway corridor. Assessment to be compliant with data required under AS 4270-2009 *Protection of trees on development sites*.

Tree assessment – all trees >200mm DBH to be mapped and assessed:

- *Botanical name*
- *Estimate age, measure size (BDH and height)*
- *Health - vigour*
- *Structural assessment of trunk and branches*

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- *Visible surface roots*
- *Ground stability observation (soil cracking and heaving)*
- *Location in corridor (e.g. riverbank, terrace, embankment)*
- *Tree significance*
- *Origin of tree (planted, natural germination)*
- *Age class and estimated life expectancy*
- *Comments*

Vegetation assessment of corridor.

- *Reference EVC comparison*
- *Number of trees and % cover*
- *Shrub layer % cover*
 - *Native vs exotic cover*
- *Ground flora % cover*
 - *Native vs exotic cover*
- *Areas impacted by waterlogging.*

Different vegetation groups to be mapped.:

- Indigenous trees (E.g. *Eucalyptus camaldulensis* - River Red Gum.
- Native non-indigenous trees (e.g. *Casuarina cunninghamii*, *Eucalyptus* sp, *Grevillea robusta*)
- Indigenous shrubs and ground covers – (e.g. *Melicactus dentatus*, *Poa*, *Lomandra*)
- Exotic trees with amenity value – (e.g. *Quercus* sp - Oaks)
- Exotic trees
- Exotic ground cover

Long Term

- Develop a waterway corridor landscape plan with community consultation.

David Carew and Advait Madav

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



Excerpts from the Victorian Planning Provisions

https://www.planning.vic.gov.au/data/assets/pdf_file/0023/104792/FTGLS-FT98-3.3.-Significant-Landscape-Overlay-Clause-42_03.PDF

42.03 SIGNIFICANT LANDSCAPE OVERLAY

42.03-3 Table of exemptions

02/04/2015
VC124

No permit is required to remove, destroy or lop vegetation to the minimum extent necessary if any of the following apply:

- Emergency works**
- The vegetation presents an immediate risk of personal injury or damage to property and only that part of vegetation which presents the immediate risk is removed, destroyed or lopped.
 - The vegetation is to be removed, destroyed or lopped by a public authority or municipal council to create an emergency access or to enable emergency works.

http://planningschemes.dpcd.vic.gov.au/schemes/vpps/52_17.pdf

52.17 NATIVE VEGETATION

21/02/2018
M7148

52.17-7 Table of exemptions

21/02/2018
VC143

Emergency works Native vegetation that is to be removed, destroyed, or lopped:

- in an emergency by, or on behalf of, a public authority or municipal council to create an emergency access associated with emergency works; or
- where it presents an immediate risk of personal injury or damage to property. Only that part of the vegetation that presents the immediate risk may be removed, destroyed or lopped under this exemption.

Guidance on the use of the exemptions from requiring a planning permit to remove, destroy or lop native vegetation is provided by DELWP.

https://www.environment.vic.gov.au/data/assets/pdf_file/0018/91251/Exemptions-from-requiring-a-planning-permit-to-remove,-destroy-or-lop-native-vegetation-Guidance.pdf

This guidance document includes the following statement in Section 2.4 - *Emergency works*.

The second part of the exemption enables the removal any native vegetation that presents an immediate risk of personal injury or damage to property (e.g. a building) without a permit. For the risk to be considered immediate, the only option to manage the risk is by removing native vegetation within a shorter timeframe than it would take to apply for and be issued with a permit for its removal.

This exemption does not apply to native vegetation that has the potential to cause personal injury or property damage in the longer term. If future injury or damage from native vegetation is a concern, a planning permit can be sought to remove it.



Options analysis

Subject	Options analysis for Tree T1, AMCOR paper mill, Alphington
Distribution	City of Yarra
Date	12 August 2019
Project	P119162.10_Tree_Collapse_Bank_Slump_Investigation

Introduction

The City of Yarra has engaged Alluvium Consulting Australia Pty Ltd (Alluvium) to investigate recent tree collapse and bank slumping events on the Yarra River adjacent to the former Amcor paper mill site in Fairfield. The subject site adjoins the right bank of the Yarra River and is the subject of an urban renewal / development project by Glenwill.

Alluvium has convened an expert panel to review the issues associated with the bank slump and tree collapse. Alluvium submitted an initial memo to identify any immediate issues arising from a site inspection including potential for imminent tree collapse and additional information requirements.

The purpose of this memo is to identify management options for tree T1 covered in our previous memo on this topic.

The memo covers following:

4. A description of the processes leading to tree collapse
5. Development of a set of objectives for tree T1
6. Identification of constraints to the attainment of those objectives
7. Options to manage the subject tree

Background

The subject site is located on the right bank of the Yarra River upstream of Dights Falls, immediately upstream of the Chandler Highway and adjacent to the former Amcor paper mill. The riverbank at the subject site is located within freehold land. It is understood that a 30metre wide riparian corridor will be secured for public access and use as a component of the proposed redevelopment project.

The riverbank at the subject site comprises a lower terrace (including walking path) adjacent to the Yarra River water edge and a steep embankment up to the former industrial and proposed residential lands. A portion of the lower terrace comprises fill at site of a prior confluence of the Yarra River and a small creek. The steep embankment was established during the period of site occupation by Amcor, to the 1% AEP (approx.) flood elevation, to prevent flood inundation of the site. The steep embankment contains uncontrolled historic fill material.

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The lower terrace and steep embankment have been revegetated with non-indigenous native trees. However, the edge of the riverbank comprises indigenous river red gums (*Eucalyptus camaldulensis*), likely to be from natural regeneration.

The riverbank on the lower terrace has been subject to recent slumping. There are three large (but not mature hollow bearing trees) River Red Gum trees within and adjacent to a recent bank slump. One of these trees has fallen into the river and is currently lying across the Yarra River. Two other trees (T1 and T2) have been identified as at risk of collapse.

A further River Red Gum fell into the river in January 2019. This tree has been removed leaving the root ball in the bank. Other bank slumps are present and other trees along the waterway corridor may be at risk.

The mechanisms for the cause of the bank slumping is to be the subject of detailed investigations into the extent and cause of the problem and the identification of mitigation measures.

It is understood that City of Yarra and members of community wish to explore options to retain Tree T1. This memo sets out those options.

Potential process leading to tree collapse

The expert panel, convened by Alluvium to assesses the issues, has identified the potential processes leading to the collapse of trees at the site and has identified the following factors that could contribute to the collapse of T1.

Bank slump

The primary driver of T1 collapse will most likely be further ground movement destabilising the tree. Tree T1 has tilted due to bank slump and unless this issue is addressed, there is an imminent (weeks to months) risk of Tree T1 falling. Further slumping will lead to further tilting of the tree and the ultimate collapse of the tree

The expert panel has identified a rise in groundwater in lower the terrace of the Yarra River at the subject site as the likely cause of the bank slumping. The expert panel noted the poor condition (and death) of some of the introduced vegetation on the lower terrace and lower levels of the steep embankment. While a decline in vegetation condition could be the result of many factors, it is consistent with the elevated groundwater levels, indicating water logging of roots.

In addition to the tilting, the root system of T1 has most likely been damaged as a result of the bank slumping. The damaged root system reduces the ability of the tree to:

- collect and transport water to the foliage.
- Support the tree at a tilt and from falling in wind events

Initial baseline investigations suggest that riverbank erosion at site is unlikely to be the cause of the slumping. However, stream erosion has the potential to remove recently slumped material leading to further slumping and tree movement.

Wind load

The impact of wind load on trees depends on wind velocity, diameter and volume of stem, height of tree, crown area, stem breakage strength, root system (depth, weight, and diameter of roots), and strength of roots and soils. If the tree has a root system inconsistent with the size of the crown, there is a significant risk of tree collapse due to uprooting. Due to recent slumping, the root system of Tree T1 has been compromised. Heavy wind load under current root conditions can destabilise the tree, leading to collapse.

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However, T1 is in a relatively well protected location and has other trees around it offering wind protection. Therefore, the tree is not highly exposed to wind, and while contributing to the threats, the wind load may not be the immediate primary driver of collapse.

Drought stress

The root system of T1 has been disturbed by the bank slump. This will have an impact on the tree's ability to transport water to the crown. The effect of this will be seen when the water demand of the tree increases in summer and the tree experiences seasonal drought stress. The tree will be expected to lose much of the foliage and may begin to shed branches. If the root system is not able to supply adequate water to the tree it will most likely die within two summers. Ongoing shedding of limbs will create an ongoing risk to access. An ongoing decline in the condition of the tree will also increase the WHS risks to arborist and others tasked with the ongoing management of the tree.

Objectives

Council meeting (30th July) and ongoing discussion with council officers have assisted the expert panel identify objectives for the management of Tree T1. The objectives can be listed as:

Ecological value

Tree T1 (River red gum) is an indigenous native tree that has provided a healthy arboreal habitat. The tree is a character species of the endangered EVC56 Floodplain Riparian Woodland, the natural vegetation community for this section of the Yarra River. The tree has not matured into a hollow bearing tree and so is not providing valuable nesting habitat.

The tree can provide ecological value as a standing dead "stag". Standing dead trees provide rooting and nesting sites especially if they have hollows in them.

Trees falling into rivers introduces large wood structures to the river and can form primary instream habitat features. The Yarra River has a low density of large wood. The tree could provide significant ecological value as instream large wood.

Aesthetic value of tree

The Tree T1 together with other trees along this reach of the river provides significant aesthetic value to riverbank and walking path. As an indigenous species to the area, the tree contributes to the character of the river and riparian zone.

Public access

The public access to riverbank has been restricted since past few months as a result of the bank collapse and risk of tree fall. The current bank slump and condition of Tree T1 prevents access to the site. Return of public access is sought for the site.

Protection of riverbank

An uncontrolled collapse of Tree T1 will compromise the existing lower terrace of the riverbank. The tree also contributes to the surcharge / load on the riverbank.

The collapse of tree will result in further loss of bank material and damage to the path. The uncontrolled loss of the lower terrace will also compromise the stability of the steep upper bank. The loss of the lower bank and steep upper bank would result in significant loss of property, with potential release of the uncontrolled historic fill material into the Yarra River.

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However, the root ball of the existing tree can offer stability to the bank and could be kept if the tree is removed.

Protection of other trees

If T1 falls in an uncontrolled manner it may fall onto adjacent trees and shrubs damaging them. The size of this tree means other trees could be lost on the site following an uncontrolled failure of the tree. Protection of other trees will be important for the site.

Constraints on options

Constraints that impact on the feasibility of options include:

Work health safety

The use of large machinery, on the lower terrace with accompanying surcharge and vibration could increase the likelihood of collapse and may pose a work health and safety risk for operators.

Similarly, any tree work that requires an arborist to climb the tree can pose some work health and health safety risks. Retention of the tree, that results in an ongoing decline in its health, will increase the WHS risk to staff tasked with the management of the tree

Environmental regulations

A planning permit is required for native vegetation removal. However, clause 42.03-3 of the state planning provisions provides for an exemption to the requirements for a planning permit for vegetation removal to enable emergency works.

A review of the risk assessment (likelihood and consequence framework) used by Ryder Arboriculture has not changed the low risk assessment to the public safety. With pedestrian controls in place, this situation (while not ideal) may not constitute an emergency.

However, the subject tree in its current form threatens the bank stability. Council officers, have advised that the subject riverbank has undergone significant further movement over the weekend (10 and 11 August 2019), refer figure below. The subject bank is active. Further bank slumping can be expected over the forthcoming days and weeks.

The loss of the lower terrace and steep upper bank would result in significant loss of property including the walking path, with accompanying adverse outcomes for the Yarra River including release of uncontrolled historic fill material. Removal of the tree T1, to reduce the mass of the tree, and the uncontrolled collapse of the tree would meet the requirements of emergency works to protect the riverbank.



Tree T1 on and related bank slump 12 August 2019

Timeliness of action

Timeliness of actions are essential in the identification of the best available option for management of Tree T1. Based on the recent bank movement over the last few days, actions to address the risks should be undertaken with a level of urgency over a period of days rather than months.

Option assessment

Possible interventions

A set of possible interventions for management of T1 are set out below. All the following interventions will require the input from specialist contractors and a work safe assessment to ensure a safe method is applied. These interventions have been combined into three alternate management options in section 7 of this report.

Restrict site access

Ongoing signage and fencing of the path to prevent the public access along the waterway corridor. This is required while the tree is in an unstable state. Signs in the river to inform people on the water are also required. This must be in place in the short term until the site can be made safe.

This is an unlikely to be a long-term intervention option as the public will require access along the river to make use of their public spaces.

Fall tree

Tree to be cut down in a controlled manner ensuring adjacent vegetation is not impacted. The trunk and main branches to be kept intact as much as practical to enable the tree to be used for instream habitat. The root ball to be retained intact to assist the protection of the bank

Install main trunk and large branches in river as a habitat snag

The tree can be used as large woody debris (snag) in the river. This will provide desirable instream habitat which is at low levels in this section of the Yarra River.

Approval from Melbourne Water will be required for this intervention. The installation of large wood is consistent with Melbourne Water's management and priorities for waterways improvement and subject to appropriate placement, approval will most likely be given for this action.

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Brace tree

Install cables and land anchors to stabilise the tree. This will provide support to the tree against wind loads until significant ground movement occurs. If further ground movement occurs the bracing will most likely fail.

This intervention may require machinery to install the land anchors.

Infill slumping cracks

Infilling the slumping cracks with a sandy-loam soil will assist in stabilising the site and help protect the roots from exposure to air. This will also provide a substrate for roots to regrow into assisting in future growth of the tree. Infilling the slump cracks will also reduce water access to the slumped soil.

Reduce crown of tree

Lop tree to remove branches over public access paths and to even the weight distribution in the crown. This will also reduce the water demand of the tree and potential drought stress it will experience in summer.

After lopping, the tree will produce epicormic shoots to replace the reduced crown. These can be prone to dropping and pose an ongoing safety hazard. Regrowth on the tree will need to be managed over time to maintain public safety.

- It will involve arborists climbing the tree.
- A permit is required to lop the tree.

Kill tree, reduce crown and retain upright as habitat tree

This aims to retain the tree as a stag for future habitat. The tree will have most of the branches removed and be treated with herbicide to prevent regrowth and hazards from epicormic growth. Holes can be bored into the tree structure to initiate hollows for nesting.

This will not reduce weight on the bank and the stag will most likely fall if there is further ground movement.

Rock armour the bank

Rock rip rap can be used to prevent the loss of slumped bank material via river erosion processes.

To limit the safety risks, this work would need to be undertaken from the river via a barge. Placement of rock in this manner is not generally used to prevent slumping from banks as the saturated bank material can still pass through the rock. As a consequence, the approach may limit the erosion of slumped material but may not prevent further bank slumping.

Melbourne Water approval will be required to undertake rock armouring.

Sheet pile the bank

Sheet piling could be used to 'prop up' the riverbank. Stabilising the bank using sheet piling will have less intrusion into the river channel than rock and may be more successful in preventing further slumping than rock beaching. The sheet piling would also need to be installed from a barge on the river

However, sheet piling introduces a highly unnatural engineered feature into the river which is both visually and ecologically unacceptable in this location. The sheet piling may also further damage (cut) the root material of existing vegetation

Melbourne Water approval will be required for sheet piling. It is unlikely that sheet piling would be approved for installation at the site. Although this has not been tested with Melbourne Water.

Reduce slumping potent by managing soil moisture

Further soil movement and slumping will be activated by increased ground water flowing to the location. If the ground water is intercepted the risk of slumping may be mitigated.

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This option requires further detailed investigation of the ground water and geotechnical conditions to ensure this is the driver for soil movement.

Option package

The development of the option for the removal or retention of T1 has considered the site context.

Tree T1 raises a problem at this location due to the level of public access. In addition, the location has been modified in the past with vegetation clearing, replanting, land filling and land use changing over time. The current and planned use of the waterway corridor is for public use, amenity and waterway health. The waterway is expected to be in a naturalistic state but not a fully intact ecological condition. The trees along the river provide support to the waterway aquatic environment, habitat to birds and arboreal animals and visual amenity for the corridor users.

Three alternate options have been developed for T1 (the tree within the recent bank slump).

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**Option 1: Fall the tree and install as instream habitat****Interventions**

- Fall the tree
- Place the tree in river as aquatic habitat
- Infilling of slump cracks
- Retain the root ball for bank protection
- Manage soil moisture

Advantages	Limitations:
Short term <ul style="list-style-type: none"> • Opens potential for access of river frontage to community • Increases instream habitat • Reduces damage to bank due to tree falling in uncontrolled manner • Reduces risks to other trees from an uncontrolled fall • Removes safety hazard to river users • Predictable outcome. 	<ul style="list-style-type: none"> • Tree is not standing/ loss of existing aesthetic and ecological values
Long term (>10 years) <ul style="list-style-type: none"> • Access to site is unrestricted • Future planning can provide outcomes for the community • Habitat improvement in waterway. 	

Discussion

This option addresses the current safety issue presented by T1 and provides an opportunity to reopen the existing walking path to the community (refer discussion below). It provides a certain outcome including the potential addition of large wood habitat in the river. The option is not confounded by other issues related to the ground stability and success is not dependent on other issues being resolved. This option is consistent with recommendations of arborists that have visited the site.

The requirement to obtain a permit for native vegetation removal does not apply to emergency works to reduce immediate risk to property. The active movement of the bank and the extent of damage to both property and the Yarra River, constitute 'an immediate risk to property' and enables activation of clause 42-03.3 of the state planning provisions, creating an exemption for emergency works.

Reopening of the walking path: While this option provides the opportunity for reopening of the walking path, significant further work will be required to provide safe public access. The extent of such work should be explored in subsequent investigations and reporting.

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Option 2: Retain the living tree with possible engineering interventions

Interventions

- Rock beaching to protect slumped material from river erosion
- Bracing of the tree to enable safe river access, limit direction of tree fall and enable access to tree for crown lopping
- Infill slump cracks
- Reduce the crown (lopping)
- Ongoing monitoring of tree
- Ongoing maintenance of crown (if possible) if the tree suffers dieback
- Manage soil moisture
- Intermittent site access subject to tree condition and access for maintenance

Advantages	Limitations:
Short term <ul style="list-style-type: none"> • Tree could be alive, but is increasingly unlikely given recent ground movement 	<ul style="list-style-type: none"> • Tree will be changed from current visual condition. • Uncertain outcome with ongoing likely collapse. • Limited public access • Ongoing safety hazard • No guarantee of tree survival, tree loss is imminent
Long term (2-5 years) <ul style="list-style-type: none"> • Tree may be retained on the site 	<ul style="list-style-type: none"> • Ongoing survival of tree is not certain • Tree will fall or die and investment in retaining it will be lost • Ongoing site access constraint. • Ongoing safety hazard from tree of branches falling • Ongoing maintenance requirement • Tree is likely to fall

Discussion

This option partially addresses the current safety issue presented by T1. This option provides a short-term benefit with the outcome of delivering a living tree that may persist for some years.

However, the longevity of the tree would remain uncertain. The retained tree will have a compromised health and a changed visual appearance. The tree will also pose an ongoing safety hazard. The compromised tree is likely to continue to shed limbs. This may restrict access in the future and will require ongoing monitoring and maintenance commitments.

The success of this options is uncertain as is dependent upon the underlying ground stability issue being resolved. If the slump progresses the tree will fail regardless of the interventions applied.

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Option 3: Retain the dead standing tree with possible engineering operations

Interventions

- Rock beaching
- Bracing
- Infill slump cracks
- Reduce the crown
- Restrict access
- Manage soil moisture
- Kill tree with herbicide

Advantages	Limitations:
Short term <ul style="list-style-type: none"> • Tree is retained vertically • Habitat is retained riparian zone • Local character is maintained to some extent 	<ul style="list-style-type: none"> • Uncertain outcome • Restricted public access • Possibility of collapse with future ground movement • Limits options for future corridor plans
Long term (5-10 years) <ul style="list-style-type: none"> • Habitat is provided in riparian zone • Local character is maintained to some extent 	<ul style="list-style-type: none"> • Ongoing persistence of standing stag is not certain • Tree may fall and investment in retaining it will be lost • Further damage to the bank.

Discussion

This option partially addresses the current safety issue presented by T1. The outcome of a standing stag on the site is uncertain. If this achieved it is likely to provide a 5-10-year ecological benefit to the riparian zone. Uncontrolled failure of the tree with further damage to the bank and adjacent vegetation is possible.

However, the tree will pose an ongoing hazard. This may restrict access in the future and will require ongoing monitoring and maintenance commitments.

The success of this option is uncertain as it is dependent upon the underlying ground stability issue being resolved. If the slump progresses, the stag is more threatened and may fail.



Recommendation

The success of Options 2 and 3 are uncertain. These options retain the tree at the current location in an altered state. However, they also retain a safety hazard on the site and will require ongoing maintenance input. Option 3 should be immediately dismissed as an unacceptable outcome as it provides limited benefits over Option 2

Option 2 seeks to retain the current aesthetic and ecological attributes of the existing T1. However, the crown of the tree would need to be modified and would pose an ongoing public risk as the condition of the tree declines and sheds timber. The option does not provide a practical and feasible solution to the risks at the site and is not recommended.

Option 1 (Remove the tree and retain trunk for habitat and root ball for bank protection) provides a predictable outcome for the site and enables most short- and long-term objectives to be achieved. While the loss of the tree will have some impact on the character of the site, this is the only option that provides for the practical and feasible resolution to the risks posed by the severely compromised tree T1. Option 1 is the only feasible option that addresses the immediate risk of damage to property (riverbank).

Option 1 is recommended for implementation as a matter of urgency. The active movement of the bank and the extent of damage to both property and the Yarra River, constitute 'an immediate risk to property' and enables activation of clause 42.03-3 of the state planning provisions, creating an exemption for emergency works.

While not essential for public safety, the option would also help to reduce risks to public safety. Until this option is enacted, site access control (walking and boating) must be in place to manage the site safety risks.

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Appendix F: Stream stability assessment

P119162.10_Tree_Collapse_Bank_Slump_Investigation_R01v1b.docx

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Memo

Subject	Stream stability assessment
Distribution	Alluvium Consulting Australia (Internal)
Date	15 August 2019
Author	Ross Hardie & Advait Madav
Project	Bank slumping and tree collapse review and investigation

Introduction

Alluvium Consulting Australia (Alluvium) has been engaged by City of Yarra to investigate bank slumping and related tree collapse on the Yarra River at the subject site, the former Amcor site at Fairfield. The subject site adjoins the right bank of the Yarra River and is the subject of an urban renewal / development project by Glenwill. The purpose of the investigation is to:

8. Identify the causes of the bank slump and tree collapse
9. Identify any short-term actions that should be undertaken
10. Identify long term remediation measures for the site

Three trees occur within and adjacent to a recent bank slump (Figure 18). One of these has fallen into the river and is not covered in this memo. Two other trees (T1 and T2) have been identified as at risk of failure during previous visits by others. Further discussion on the stability of the trees is provided in the riparian assessment that has been undertaken in parallel to this stream stability assessment.

This memo forms part of a first stage (interim) assessment of the issues and has been based on a site inspection and review of available information. A more detailed second stage assessment is proposed based on the outcomes of the stage 1 assessment.

This memo comprises one of five, first stage assessments, undertaken by an expert panel convened by Alluvium on behalf of the City of Yarra. The other stage 1 interim assessments comprise:

- Riparian ecology
- Geotechnical study
- Groundwater management
- Surface water management

The purpose of this investigation, covered by this memo has been to identify the extent to which the subject bank slump and tree collapse could be attributed to fluvial geomorphic processes. The memo has sought to identify:

- whether the slumping is the result of stream bank erosion
- any stream management actions that could be undertaken to reduce site risks
- the scope of work for any detailed stage 2 investigation.

Site inspection and data review

The expert panel conducted a 2-hour site visit on the morning of 25 July 2019. The site visit included locations of sediment pond, inceptor swale drains, retention dam connections, existing outfall drains, groundwater

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bores, and riverbank at the subject site. The site inspection was undertaken to familiarise the expert panel with the site and review the bank morphology, existing slump areas, and condition of trees along the riverbank.



Figure 18. *Tree collapse site*

Alluvium has reviewed following reports, surveys and information provided by City of Yarra and Melbourne Water for the stage 1 interim stream stability assessment.

- Geotechnical investigation report (Douglas Partners Pty. Ltd.)
- 1-D HECRAS model and cross section survey (Melbourne Water)
- Arborist report (Ryder Arboriculture and Environment)
- Yarra River Flood Modelling report (S P Goh & Associates)

Discussion: Potential mechanisms influencing bank collapse

Bank material

The riverbank comprises a lower terrace (including walking path) adjacent to the Yarra River water edge and a steep embankment up to the former industrial and proposed residential lands. The steep embankment was filled, during the period of site occupation by Amcor, to the 1% AEP (approx.) flood elevation to prevent flood inundation of the site.

The fill material at the site includes clay and bricks and to also include asbestos. Evidence of the clay and brick fill material was observed on site.

The lower terrace and steep embankment have been revegetated with non-indigenous native trees. However, the edge of the riverbank comprises indigenous river red gums, likely to be from natural regeneration. The root material from the river red gums provide a matting within the clays and fine silts making up the riverbank material.

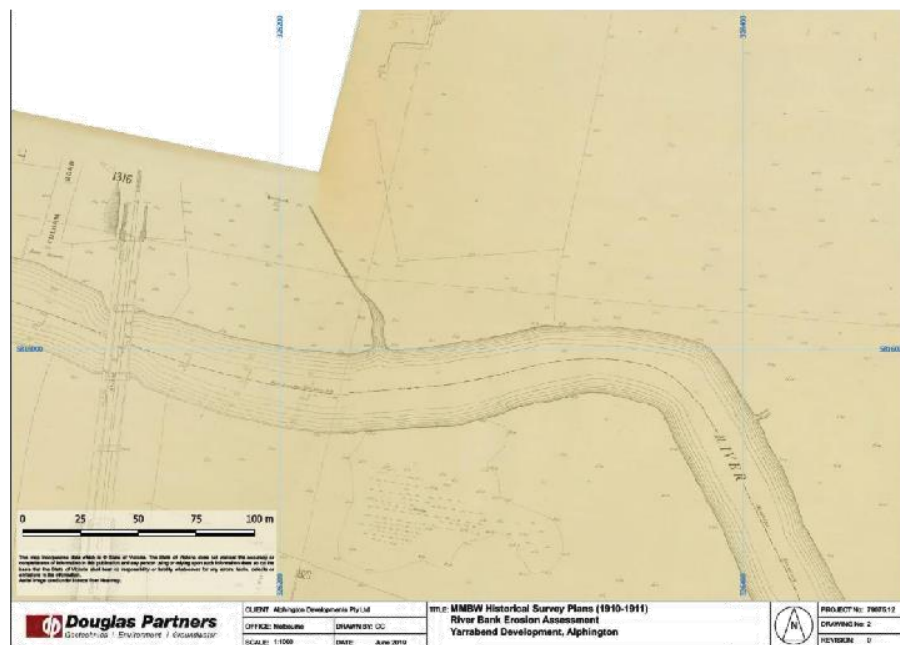
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Figure 19. Root material along bank of Yarra River at subject site

Historic creek on riverbank

As set out above there is evidence of fill material on the lower terrace. Figure 20 illustrates provides an extract of a MMBW Historic Survey Plans (1910-1911) (refer Douglas Partners 2019) of a creek on entering the Yarra River through the now lower terrace of riverbank. Figure 21 sets out an indicative location of the creek in the current landscape. We are aware of a stormwater pipe located in the area of the old creek, however there is limited surface evidence of this creek in the current landscape, suggesting that the creek and its confluence with the Yarra River have been infilled.



P119162.10_Tree_Collapse_Bank_Slump_Investigation_R01v1b.docx

Figure 20. Old Creek location from historic survey



Figure 21. Indicative location of creek in current landscape

Review of Melbourne Water hydraulic model

Shear Stress

Melbourne Water provided a 1-D HECRAS hydraulic model of the Yarra River based on bathymetric and topographic information and the 1%, 2%, 5%, 10%, 20%, and 50% AEP flow events.



Figure 22. Cross section survey and aerial view of site

Figure 22 demonstrates the riverbank site lies between CH 31752 and CH 31470 of HECRAS model. The bank slumps and tree collapse site are located between these two cross sections. The shear stress for the subject site has been assessed at both these cross sections. The results are set out in Table 3.



Adjustment of shear stress for outside bends

The hydraulic modelling results provide shear stress based on the depth of water and hydraulic grade. However, shear stress is higher on the outside of a meander bend than in the centre of a straight reach. The shear stress results for each cross section 31752 have been increased to reflect the influence of the meander bend. The method of adjustment is set out in below.

The method of adjustment was based on that set out in *Technical Guidelines for Waterway Management* (DSE, 2007), refer Figure 23. whereby the shear stress is scaled by a factor based on the radius of curvature (R_c) divided by the base width (W) of the channel (R_c/W). The resultant factor was used to factor up the cross-sectional shear stress value for the design events giving larger shear stress values on the outside of the bend.

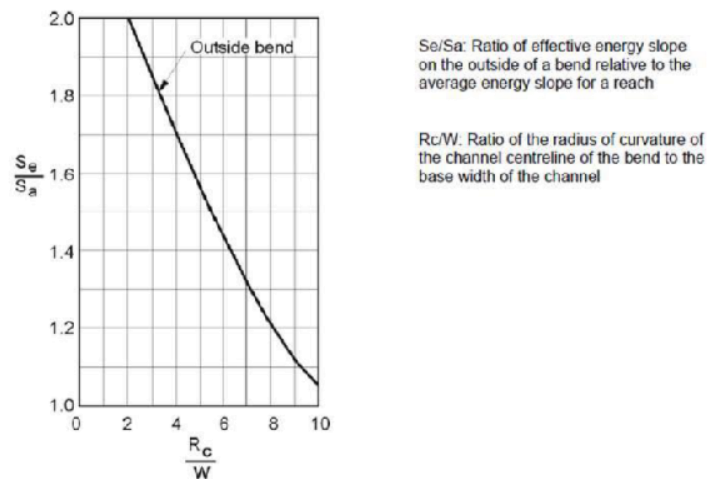


Figure 23. Effect of channel bend on effective energy slope (DSE 2007)

The shear stress results are set out in Table 3 below.

Table 3. Shear stress at riverbank (High Flow)

AEP Flow	Shear stress (N/m ²)		
	Cross section 31470	Cross section 31752	
	Channel	Channel	Channel adjusted for meander
1%	51.69	13.74	24.73
2%	47.7	12.88	23.18
5%	43.63	12.23	22.01
10%	40.74	12.1	21.78
20%	38.99	11.84	21.31
50%	35.15	11.86	21.35
100%	29	12.53	22.55

Shear stress resistance

The shear resistance of different stream bank material is set out in Table 4.

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Table 4: Shear stress thresholds (Fishenich 2001)

Boundary category	Boundary type	Permissible shear stress (N/m ²)
Soils	Fine colloidal sand	1.44
	Sandy loam (noncolloidal)	1.92
	Alluvial silt (noncolloidal)	2.39
	Silty loam (noncolloidal)	2.39
	Firm loam	3.59
	Fine gravels	3.59
	Stiff clay	12.45
	Alluvial silt (colloidal)	12.45
	Graded loam to cobbles	18.19
	Graded silts to cobbles	20.59
	Shales and hardpan	32.08
Vegetation	Class A turf	177.16
	Class B turf	100.55
	Class C turf	47.88
	Long native grasses	81.40
	Short native and bunch grass	4.55
	Reed plantings	28.73
	Hardwood tree plantings	119.70

The banks of the Yarra River comprise a silty clay material reinforced by vegetative root matt. The shear stress applied by stream flow in the Yarra River exceeds that for clay material but is well below the shear stress resistance of hardwood tree plantings, found by Alluvium to approximate the shear stress resistance of streambanks with structurally diverse native vegetation. We do not expect streambank erosion to be a primary cause of bank slump at the subject site

Discussion with Melbourne Water

Alluvium engaged in technical discussions with Melbourne Water to discuss potential slump mechanism and to understand if there have any similar incidents of bank collapse in the reach of river upstream of Dights Falls. Melbourne Water (A Mellor. Pers comm.) have advised that while isolated bank failure and tree collapse can occur in this reach of the Yarra River, the subject site has incurred slumping and tree collapse at significantly higher rates (2 trees lost in 2019 and 2 to 3 locations of bank slump) than other similar reaches of the Yarra River.

Short term management implications

Based on the information available for this assessment, we are of the opinion that the subject reach of stream in the vicinity of the proposed site is not likely to be undergoing accelerated rates of stream flow related channel erosion that would have led to the bank collapse. However

- The recently slumped bank material will be vulnerable to loss by erosion processes. The slumped material is loose and relatively susceptible to fluvial scour
- Trees that are at risk of collapse will further risk the loss of existing bank material. An uncontrolled fall of the trees at risk of collapse will result in further destabilisation of the riverbank and further expose material for erosion by fluvial processes

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- Further investigations will be required to confirm this assessment

In short term we recommend

- Removal of T1 at imminent risk of collapse (refer riparian ecology report). Subject to approval of Melbourne Water the subject tree could serve as important instream habitat
- management of boat traffic including installation of buoys and other warning signs to ensure river users do not venture close to the subject riverbanks
- continued fencing of the site to prevent pedestrian access pending resolution of the bank slumping and tree collapse issues.

We have considered the practicalities of additional works to protect the subject banks and trees from further collapse. Such works could include placement of rock beaching or sheet piling in the river to support the slumped bank material. Use of such material to protect the bank would require further investigations including geotechnical assessment for effectiveness. The subject site is at risk of further movement and for safety reasons may not be suitable for heavy earthmoving equipment. As an alternative, such work could be placed from the Yarra River by barge. Suitable equipment for barge-based rock and sheet piling placement is available in Victoria. However, these options will require significant further investigation, may not meet short term stability outcomes and may not meet desired long-term outcomes for the river.

Scope of work for Part 2: Detailed investigations

The following investigations will be required to confirm the findings of this interim assessment

Reach scale bank stability assessment

A reach scale bank stability assessment will be required to confirm (or otherwise) the anecdotal evidence provided by Melbourne Water that the subject slumping is limited to and or concentrated at the subject site. The assessment would comprise:

- Review of Melbourne Water records of staff and stakeholder reports on bank stability through the subject reach
- Walk and/ or boat-based review of left and right bank stability over a 1km reach of river (approx.) upstream and downstream of the site.

Hydrologic assessment

Review of flood history of the subject site over the period prior to and during the current site construction. The purpose would be to identify the extent to which recent hydrologic conditions (river heights) are consistent with or divergent from historic stream flow conditions

Hydraulic modelling

Development of a detailed 2-dimensional hydraulic model of the subject site to assess shear stress against the left bank of the river and compare these values with:

- Other similar reaches of river not subject to bank failure
- Shear stress thresholds for the subject bank material.

Topographic and bathymetric survey

The hydraulic investigations will require topographic and bathymetric survey of the river in the vicinity of the subject bank.

Attachment 1 - Alluvium Stage 1 Interim Report 20 August 2019



References

DSE (2007). *Technical Guidelines for Waterway Management*. Department of Sustainability and Environment, Victorian Government, Melbourne.

Fischenich, C. (2001). Impacts of stabilization measures. U.S. Corps of Army Engineers, Engineer Research and Development Center. Vicksburg.

11.2 Brunswick Street Oval Precinct Plan

Trim Record Number: D19/124534

Responsible Officer: Manager Building and Asset Management

Purpose

1. To present the Brunswick Street Oval Precinct – Needs Analysis and Concept Plan and the future vision, priority needs and estimated project costs based on the preferred scope, and to seek Council's endorsement of the concept plan and next steps in the project development.

Background

2. On 18 September 2018, Council supported a request by the Edinburgh Gardens Sporting Committee (EGSC) to reallocate \$50,000 from the 2018/19 budget for the Fitzroy Tennis Club facilities to a project to explore redevelopment of the sports and community facilities in the immediate precinct of the WT Peterson Oval (Brunswick Street Oval).
3. The EGSC was formed as a coalition of the clubs located at the precinct and includes:
 - (a) Edinburgh Cricket Club;
 - (b) Fitzroy Football Club;
 - (c) Fitzroy Junior Football Club; and
 - (d) Fitzroy Tennis Club.
4. EGSC had identified two key issues within the precinct:
 - (a) The high demand on shared facilities restricts the ability of the clubs to foster and grow community participation; and
 - (b) The outdated facilities limit the precinct's potential to be a leading and sustainable example of community sport in Victoria.
5. The City of Yarra manages and maintains the following facilities within the Brunswick Street Oval Precinct and these have been the focus of the plan:
 - (a) Fitzroy Cricket Ground Grandstand undercroft (change facilities and amenities);
 - (b) Community Room – social community and events venue; and
 - (c) Tennis courts (6) and pavilion.
6. The Fitzroy Cricket Ground Grandstand is a heritage listed building with undercroft facilities.
7. An extension to the grandstand accommodates the Edinburgh Gardens Community Room. It is the second busiest bookable community facility in Yarra: providing facilities for the sports clubs on weekends, for community seniors groups and diversity groups on the weekdays and hire facilities for private functions in the remaining period.
8. Through advocacy efforts by Council and EGSC, the State Government allocated \$50,000 matching funding for Brunswick Street Oval precinct planning, with a further \$50,000 allocated by the Clifroy Community Bank.
9. The EGSC commissioned the production of a feasibility study for the precinct, with precinct master plan options and an indication of probable cost of \$6.48 million.
10. Subsequently, the State Labor Government announced an election commitment of \$6.5 million for the development of infrastructure in the precinct.
11. A key component of the agreed Brunswick Street Oval precinct planning process, has been the production of a Needs Analysis and Concept Plan for the precinct.

12. Council officers commissioned Lovell Chen to develop the Needs Analysis and Concept Plan for the precinct (Attachment 1), which included a community engagement process that allowed the development of a concept plan for the precinct which was mindful of the greater community and stakeholders as well as the EGSC stakeholders.
13. The concept plan has considered the heritage grandstand, its curtilage, and with a view of the community assets resulting from the development having a lifetime of at least 50 years.
14. The Needs Analysis and Concept Plan aims to create the vision to establish a contemporary shared community facility that will meet the needs of a fast growing sporting community, through:
 - (a) Fully understanding the current and future sport and community needs of users and residents for services and programs that can be provided from the Brunswick Street Oval Precinct facilities; and
 - (b) Providing a clear direction on the best and most feasible model of developing and maintaining appropriate sport and community facilities to meet those identified needs.

External Consultation

15. There has been an extensive external consultation process undertaken to inform the plan.
16. A Project Control Group (PCG) was established and has met monthly to oversee and guide the project. The PCG includes representatives from each of the sporting clubs that make up EGSC, Council officers including an officer from the Venues and Events team as an advocate for the Community Room, a Clifroy Community Bank representative and the Consultant Project Manager from Lovell Chen.
17. Individual meetings have been held with each of the EGSC member club committees, the Fitzroy Bowling Club and the Italian Fitzroy Senior Citizens group.
18. Members of key user groups of the sports facilities and the community room were invited to attend the public meeting.
19. The Hon. Richard Wynne MP has also been briefed on the progress of this project.
20. In summary the broader community consultation included the following:
 - (a) Consultation promotion summary:
 - (i) Postcard to 1,500 local North Fitzroy residents delivered 3 May;
 - (ii) Social media posts on 5 May and 19 May;
 - (iii) Yarra Life e-newsletter to 13,000 subscribers on 6 May and 20 May; and
 - (iv) News item on Council website.
 - (b) Level of engagement summary:
 - (i) 99 engaged in the project online via survey;
 - (ii) 179 informed about the project (people who clicked on something on the page);
 - (iii) 540 aware about the project (people who saw the page); and
 - (c) Community drop in session held on 13 May with approximately 15 attendees.
21. The proposed next stage of consultation will be undertaken over a four week period, starting around 21 September 2019 and will provide residents and park users with multiple options to comment. The consultation will include a letter box drop, on-site drop in sessions to enable residents to have face-to-face engagement, further meetings with club representatives, signage in the park and on-line engagement through Yarra's "Your Say Yarra" portal. Respondents to the initial consultation will also be contacted and given the opportunity to provide further feedback to the current concept plan.

Internal Consultation (One Yarra)

22. Key City of Yarra staff were engaged initially and had an opportunity to discuss challenges, issues and ideas with the consultants. This supported the development of the priority facilities component needs.
23. A follow up meeting with staff from relevant internal areas presented the key findings of the project and proposed design solutions and all staff involved provided encouragement and full support for the concept plan.

Financial Implications

24. The City of Yarra, State Government and Clifroy Community Bank each provided \$50,000 for the precinct planning (\$150,000 in total).
25. Once the concept plan was prepared, a quantity surveyor's cost estimate report was sought to review the costs associated with the project, considering the more global requirements of the concept plan proposal as well as those of the EGSC.
26. The estimate of the project cost by the quantity surveyor is \$10.4 million.
27. This estimate includes:
 - (a) the scope of works as described in the recommended concept plan (including 8 tennis courts) and precinct landscaping plan;
 - (b) fees for supporting professional services including architect, quantity surveyor, DDA consultant, ESD consultant, etc.;
 - (c) Council project management labour;
 - (d) price cost escalations for a forecast construction tender circa August-October 2020; and
 - (e) a prudent contingency amount.
28. The actual project cost will be subject to a degree of uncertainty until all public consultation is complete, the required heritage and planning permits are obtained, detailed design is complete and a construction tender is undertaken. Nonetheless, a total project cost of \$10.4 million for the scope of works in the concept plan is the best objective estimate available at this juncture.
29. A total of \$9.1 million in funding sources are identified for the project as shown in the table below. The budget years relate to the version of the long-term capital works plan associated with Council's current long-term financial strategy (LTFS) 2019/20 through 2028/29; there is the ability to realign budget years for future capital works during the update of the forward capital works plan as part of the annual planning process for the 2020/21 budget year. All decisions about Councils contributions toward this project will be subject to Council approval as part of each year's budget development and adoption.

Budget Years	Source	Amount \$
2019/20 through 2021/22	State Government funding (committed)	6,500,000
2021/22	Planned Council capital expenditure - tennis courts and pavilion (listed in DCP overlay as part of larger allocation for Edinburgh Gardens, aggregated for DCP purposes)	2,000,000
2022/23	Planned Council capital expenditure – grandstand undercroft upgrade	500,000
2023/24	Planned Council capital expenditure – commercial kitchen (listed in DCP overlay)	100,000
Total		9,100,000

30. Other potential sources of funds identified and considered are as follows:
 - (a) Female Participation in Sport program – Sport and Recreation Victoria have advised that no further funds would be available for this project under this program;
 - (b) Tennis Australia court upgrade funding – this is ad hoc and the criteria are not clear. Usual funding is in the order of \$20k–\$50k, with larger amounts occasionally awarded;
 - (c) Heritage Victoria offers funding up to \$200k – the funding application round for the 2019/20 budget year has closed. Council has applied for the maximum amount of \$200k for restoration works at Collingwood Library. It is not clear whether award of funding for this project in 2019/20 might impact the likelihood of success for a subsequent application in 2021/21 associated with the Brunswick Oval precinct. The heritage consultant advises that the Fitzroy Cricket Grandstand would be considered a premier site; and
 - (d) A contribution from the clubs may be possible.
31. Council officers will further explore these funding sources and any others that may be identified.
32. Further value management during detailed design and tendering may yield cost savings without affecting the broad scope of the project.
33. There may be some ability for other Council planned capital works programs e.g. open space renewal works, to support the landscaping aspects of the project budget, although these amounts are likely to be relatively minor.
34. Subject to the final scope and tender prices, the two primary options to manage any funding shortfall include a reduction in scope, or the allocation of additional funding from Council or other sources.

Economic Implications

35. Sporting and community facilities contribute significantly to the local economy through the annual turnover, increase in local spend and increase in individual wellbeing of the participants and volunteers of the clubs and groups.

Sustainability Implications

36. Environmental sustainability is an important factor for the ongoing operations and future investment in these facilities. With the development of modern approaches, there are great opportunities to achieve higher sustainability ratings for these facilities. Environmentally Sustainable Design (ESD) will be an integral part of the next stages of design and officers' intent is that all major facility redevelopment and investment would target improvements to energy and water use and consider any other sustainable practices that can be applied.

Social Implications

37. The Brunswick Street Oval Precinct facilities will be designed and constructed to be universally accessible and support community members to participate in all aspects of club and community activities.
38. The future development of these facilities takes into consideration the importance of community needs including wellbeing and socialisation, and these have informed the recommendations on what components are required to facilitate greater levels of participation. This includes a clear focus on female participation in sport.
39. Well designed and welcoming facilities can contribute to the health and wellbeing outcomes for the City of Yarra.

Human Rights Implications

40. There are no Human Rights Implications as a result of this report. The concept plan and detailed design will respond to and contribute to delivery of Council's Access and Inclusion Strategy 2018-24.

Communications with CALD Communities Implications

41. Any future engagement or changes to facilities and services will be communicated in a range of ways to reflect and meet the needs of our diverse community.

Council Plan, Strategy and Policy Implications

42. The Brunswick Street Oval Precinct plan and development will contribute to the delivery of numerous Council strategies as outlined below.
 - (a) Council Plan 2017-2021:
 - (i) Strategy 1.2 – Promote a community that is inclusive, resilient, connected and enjoys strong mental and physical health and wellbeing;
 - (ii) Strategy 1.6 – Promote a gender equitable, safe and respectful community;
 - (iii) Strategy 1.8 – Provide opportunities for people to be involved in and connect with their community;
 - (iv) Strategy 2.1 – Build resilience by providing opportunities and places for people to meet, be involved in and connect with their community; and
 - (v) Strategy 2.5 – Supports community initiatives that promote diversity and inclusion.
 - (b) Access and Inclusion Strategy 2018-2024:
 - (i) Strategy 1.1 – Promote and encourage the application of Universal Design and Universal Access within, and external to Council;
 - (ii) Strategy 1.5 – Improve accessibility to City of Yarra buildings and facilities; including ensuring adequate amenities are available; and
 - (iii) Strategy 2.1 – Provide and/or support the community to provide a diverse range of accessible community services and arts, cultural, sport and recreational activities that are creative and fun for all abilities and ages; and
 - (c) Environmental Sustainable Design Policy – Council Buildings:
 - (i) The Brunswick Street Oval Precinct will response to the ESD requirements of Major Upgrades as required in the ESD Policy.

Legal Implications

43. There are no legal implications as a result of this report.

Other Issues

44. Incidents of antisocial behaviour from people sleeping in the grandstand were expressed throughout the consultation process as a significant safety concern for facility and park users. Ongoing support is being provided to people sleeping in the grandstands, and officers are regularly monitoring the area to ensure the amenity is retained.
45. Public lighting and safety through design have been key drivers in the concept developed for these facilities.
46. The heritage constraints of the site have been at the forefront of the project being that the grandstand is listed with Heritage Victoria and the Edinburgh Gardens are located in a heritage overlay within the Council planning scheme.
47. The number of tennis courts within the City of Yarra has been identified as low and the demand for additional courts at Edinburgh Gardens as high. It was an imperative of the concept to identify ways to address this gap in service provision especially considering that a successful tennis club and program is in place.
48. There is currently a very poor interface of the building with the park on north side of the building resulting in a poorly presented, underutilised and undervalued area.

49. The existing facilities presents with poor accessibility across the entire site. The tennis courts also have poor access, presenting challenges for the expansion of programs for people with mobility issues.
50. Traffic management improvements are required on the site for vehicles entering from Brunswick Street, to enable greater safety for visitors to the facilities.
51. The facilities are all in poor condition with investment required to improve condition and to meet modern facility and sport standards.
52. Access to public toilets within Edinburgh Gardens and at this specific site has been raised by all user groups and throughout the community consultation process.
53. It should be noted that design work has been undertaken for additional public toilets near the Junior's Pavilion (Alfred Crescent) at Edinburgh Gardens in an attempt to address this matter. Officers propose seeking confirmation of funding for the delivery of this project through the 2020/21 budget process.

Options

54. The Brunswick Street Oval Precinct Needs Analysis and Concept Plan (Attachment 1) has identified a preferred plan considering all the identified needs and the issues raised above. The plan will deliver:
 - (a) 8-court tennis facility with pavilion;
 - (b) New community room;
 - (c) Upgraded undercroft of the grandstand to accommodate female and male player amenities;
 - (d) New sports general meeting room, kitchens and amenities incorporated within the grandstand;
 - (e) External public toilets;
 - (f) Enhanced viewing and landscaping to the front of the grandstand;
 - (g) Appropriately redeveloped public gardens and dedicated spaces for the tennis and community facilities to north of the grandstand;
 - (h) New utility areas for grounds maintenance works and to accommodate more efficient and effective waste management;
 - (i) Planned parking and delivery areas to adequately meet the facility needs; and
 - (j) Enhanced grandstand and public environment.
55. An alternative concept plan offering a 7-court tennis facility has been developed as a precaution, should the preferred option fails to achieve planning and heritage approvals.
56. There is an option to either:
 - (a) undertake public consultation on the Brunswick Street Oval precinct concept plan prior to detailed design; or
 - (b) Undertake detailed design next, with any consultation being part of formal planning approval process.
57. Officers recommend that public consultation on Brunswick Street Oval precinct concept plan occur prior to detailed design.
58. Noting the estimated cost of the project based on the recommended scope and concept plan, it is open to Council to either:
 - (a) endorse the recommended scope of the Needs Analysis and Concept Plan as is, with officers to explore additional funding opportunities, value management opportunities and firm up the project cost through detailed design and construction tender; or

- (b) Direct officers to further explore opportunities to reduce project costs through scope reduction (including consideration of scope elements that could be deferred to a future phase of delivery), noting the nexus of the State funding of \$6.5 million with the scope of the original EGSC feasibility study.

Conclusion

- 59. Capital works investment is required at the Brunswick Street Oval Precinct to ensure the facilities remain safe; provide high quality experiences; attract and retain club members, volunteers and users; achieve code facility standards and continue to contribute to the health and wellbeing of the City of Yarra residents and visitors.
- 60. The State Government has made a significant commitment of \$6.5M towards this project; however the estimated cost to deliver this project, based on the current preferred scope, is in excess of \$10M.
- 61. There is an opportunity through this project to improve the amenity of the precinct and to increase participation and inclusion.
- 62. The Brunswick Street Oval Precinct Needs Analysis and Concept Plan provides a proposed way forward to guide Council's decision making and the design required to provide for the future demands and community expectations of Yarra's fast growing population.

RECOMMENDATION

- 1. That Council:
 - (a) endorse the Brunswick Street Oval Precinct Needs Analysis and Concept Plan for public consultation;
 - (b) proceed to community engagement on the concept plan for a period of 4 weeks; and
 - (c) provide a report back to Council on the results of this consultation, and with a final scope and recommended concept design for the facilities within the Brunswick Street Oval precinct, prior to proceeding to tender for architectural services.

CONTACT OFFICER: Ann Limbrey
TITLE: Senior Project Manager Buildings
TEL: 9205 5713

Attachments

- 1 [!\[\]\(97faa0168e491544be255cfcab218e9b_img.jpg\)](#) Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Brunswick Street Oval Precinct

Needs Analysis and Concept Plan

Edinburgh Gardens, Brunswick Street, North Fitzroy
VIC 3068



July 2019

Prepared by

LOVELL CHEN

Prepared for

 YARRA

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

PROJECT NAME	BRUNSWICK STREET OVAL PRECINCT		
File name	Needs Analysis and Concept Plan	Project number	7965

Date Issued	Status	Revision	Checked
12/07/2019	Preliminary	-	AMT
17/07/2019	Complete draft	A	AMT
24/07/2019	Final	B	AMT
24/07/2019	Final	C	AMT

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

1.0 Introduction

This report has been prepared for the City of Yarra as the first stage in the Brunswick Street Oval Precinct facilities redevelopment.

In 2018 the Edinburgh Gardens Sporting Community (EGSC) formed as a coalition of the sporting clubs located at the precinct including:

- Edinburgh Cricket Club
- Fitzroy Football Club
- Fitzroy Junior Football Club
- Fitzroy Tennis Club

The EGSC identified two key issues within the precinct:

- The high demand on the facilities that are shared between many community groups, the broader community and different sports restricting the ability of the clubs to foster and grow community participation;
- The outdated facilities stifle the precincts potential to be a leading and sustainable example of community sport in Victoria.

Through the advocacy efforts of the EGSC in late 2018 the State Government announced an election commitment that on re-election \$6.5M would be committed to the development of infrastructure in the precinct.

Commencement of the design and construction of the \$6.5m pavilion will proceed post the completion of this project and upon a signed agreement with the State Government.

1.1 Project Aim and Objectives

The intent of this study and report is to establish a contemporary shared community and sporting facility that meet the needs of a fast-growing sporting and local community with the aim to:

- a) Fully understand the current and future sport and community needs of users and residents for services and programs that can be provided from the Brunswick Street Oval Precinct facilities; and
- b) To provide a clear direction on the best and most feasible model of developing and maintaining appropriate sport and community facilities to meet those identified needs.

The project objectives are to:

- Provide a detailed needs analysis for the provision of facilities in the Brunswick Street Oval Precinct
- Provide considered facility expansion/upgrade options and costings for the precinct that address the findings and opportunities identified in the detailed needs analysis;
- Meet the access, environmental and social requirements of a contemporary local government sport and community facility.

1.1.1 Reference Documents

In the process of developing this report we have referenced the following documents:

- Edinburgh Gardens Sporting Community Feasibility Study (EGSC, 2018)
- Edinburgh Gardens, Brunswick Street North Fitzroy Conservation Management Plan (Allom Lovell & Associates with John Patrick Pty Ltd, 2004)
- Edinburgh Gardens North Fitzroy Landscape Master Plan (John Patrick Pty Ltd, 2003)
- City of Yarra Policy and Strategy documents as referenced in section 1.3

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

1.2 Site

The Brunswick Street Oval Precinct site is in the south-west quadrant of the Edinburgh Gardens in North Fitzroy. It is bounded by the W T Peterson Community Oval and associated mounded terraces to the south and west and garden paths to the east and north. The existing buildings and infrastructure comprise:

- Grandstand (1888)
- Community Hall (c1980s)
- Tennis Pavilion and Change Rooms (c1901 and 1960s)
- 6 courts (En-Tout-Cas and Synthetic Clay)
- Water tank
- Bocce Court
- Rubbish bin collection enclosure
- Hardstand driveway to north of Grandstand and DDA carparking

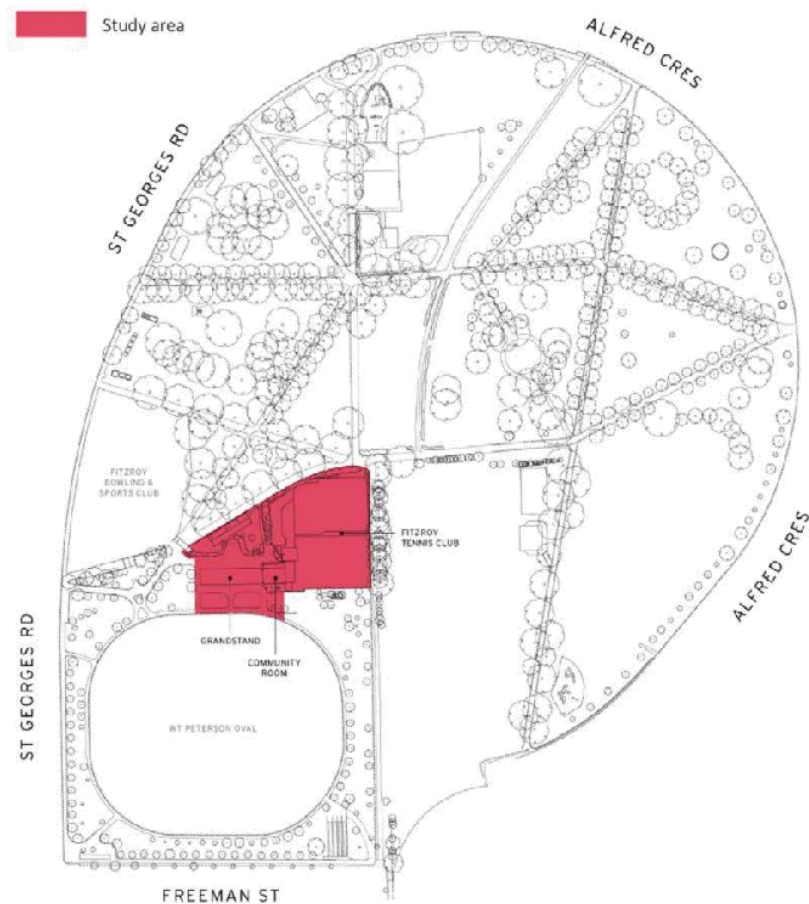


Figure 1 Location Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Figure 2 Brunswick Street Oval Precinct site area.

Source: Nearmap

The closest major street is Brunswick Street to the west. A vehicular crossover immediately to the south of the Fitzroy Bowling Club provides access for emergency vehicles, rubbish collection and cars. This access point is a shared pedestrian and bicycle path for the gardens. General pedestrian and bicycle access to the site is via the internal path network to the gardens.

1.2.1 Grandstand

The Grandstand was constructed in 1888 to the design of Nathaniel Billing. From the available contract drawings and a Jubilee History of the Cricket Club published in the 1910s, it is apparent that the building was progressively added to and altered from the basic stand that was originally constructed. From early plans and aerial photographs of the site it is apparent the north side of the Grandstand was utilised as a back-of-house area for support buildings, delivery and access with the primary address and presentation being the façade fronting the Oval.

After the Fitzroy Football Club vacated the ground in 1966 the grounds and building were little used. In the early 1980s the grandstand was restored as part of the redevelopment of the oval facilities for community use, with further works undertaken in 1991-2, 2007 and more recently to add solar panels to the roof, a DDA compliant public toilet, refurbish the toilet amenities for the community room and increase the available storage for community groups. Changes to the original fabric and configuration include removal of the sloped mound to the apron in front of the stand, construction of new steel staircases to the tiered seating and changes to the internal fit out of the undercroft.

The progressive phases of change and refurbishment to the undercroft has resulted in the plan layout and location of original external openings being substantially altered. The tiered timber seating was reinstated in the 1990s, with substantial replacement of the fabric at that time. Opportunistic vandalism and graffiti have been a recurring issue and the Grandstand is regularly occupied by rough-sleepers due to the shelter and relative security it offers. As a consequence, a regular regime of high-pressure water cleaning of the upper level of the Grandstand has been implemented which is having a progressively detrimental impact on the fabric.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Figure 3 View of the Grandstand from the west.



Figure 4 View of the Grandstand from the oval.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

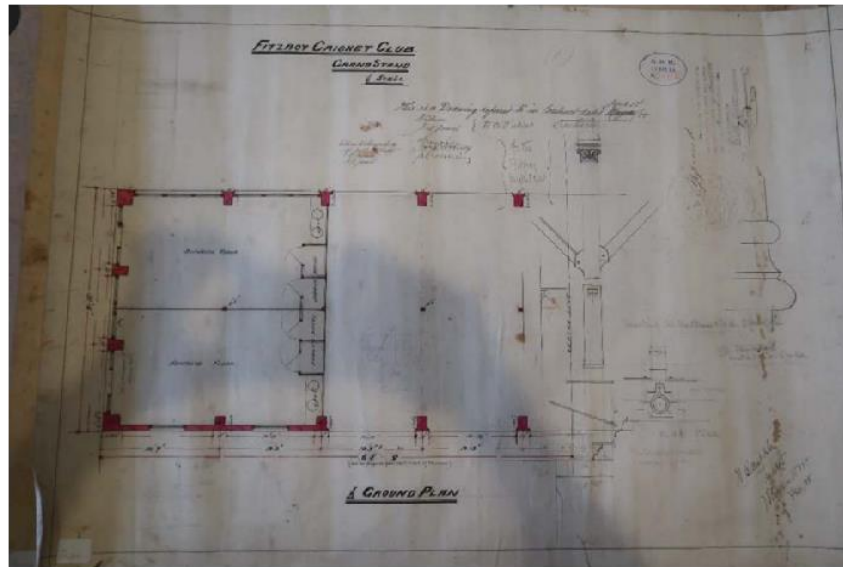


Figure 5 Contract drawing of Grandstand prepared by Nathaniel Billings, ½ Ground Plan, dated 1888. It is noted the undercroft is shown as relatively open with the change rooms located at the west end.
Source: State Library of Victoria



Figure 6 Aerial view of the Brunswick Street Oval showing the 1888 Grandstand and Tennis pavilion in the 1940s. Note the Tennis Pavilion is located further south and the area to the north of the Grandstand is populated with a Gym, yard, fences, residence and other structures.
Source: State Library of Victoria

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Figure 7 Community room viewed from the south (oval) side.



Figure 8 Community room viewed from the north (garden) side.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

1.2.2 Community Room

The single storey Community Room was added as an extension to the east end of the Grandstand in the 1980s as part of an upgrade of oval facilities undertaken by the City of Fitzroy. The brick wall with a stepped parapet at the east end of the building was originally a hit-up wall for the tennis club which was incorporated into the design. The kitchen and toilet facilities to support the community room are in the Grandstand undercroft. Improvements have included the installation of air-conditioning and additional storage to improve the amenity for community groups.

1.2.3 Tennis pavilion and change rooms

The current tennis pavilion and change rooms are an amalgam of an early timber pavilion (pre-1901) relocated to its current location, and a 1950s toilet block with alterations and additions dating from the 1980s. These are the latest in a series of structures that have served the tennis club since its establishment in 1888 on this site. The club room facilities are dated, do not provide sufficient amenity to meet the current membership size, coaching and competition program, and lack compliant DDA access or amenity.

The six existing courts were refurbished and upgraded in 2007, 3 En-Tout-Cas courts and 3 Synthetic Clay

A report prepared by Landscape & Irrigation Services (May 2019) has established the following condition of the courts and equipment:

Court layout

The existing court layout, particularly runoffs and separation between all courts do not meet the minimum requirements for Club/Recreation level tennis with discrepancies typically up to 0.5m or greater.

Lighting

The existing lighting to the southern courts is nearing the end of their service lifespan of 25 years. The lighting to the northern courts is relatively new (less than 10 years old). All light towers are located within the runoff zones of all courts and require padding for player protection. This is a significant OHS issue.

A light level assessment was undertaken by Endure Light (June 2019). Assessed against the minimum standards for Club Competition outlined in AS 2560.2.1: 2003 four of the six courts meet the minimum illuminance requirements, but none meet the uniformity standards.

It is recommended the lighting be renewed with LED fittings and the light poles are relocated to a position outside the playing surface.

Court surfaces

The enclosure 1 (southern courts) En-Tout-Cas courts are in good condition with good coverage, and surfaces are level.

The enclosure 2 (northern courts) synthetic clay courts are in fair condition only, showing evidence of mildew/mould and the surface needs rejuvenation and maintenance. These courts are approaching the lower end of their expected lifespan.

Court accessibility

Court accessibility was assessed in accordance with the requirements of AS 1428.1: 2009. The central fenced passageway meets the minimum width requirements but fails to be an unobstructed width and access to enclosure 1 (southern courts) is hindered by a 150mm step down to the courts.

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Ancillary items

The perimeter court fencing is relatively new and in good condition. Line marking, nets and net posts are in good condition and fit for purpose. Hose bibs, drinking fountains and sprinklers in the vicinity of the net posts is a hazard to players and should be located outside the court runoff zone or below ground.



Figure 9 Tennis Club room and amenities, viewed from within the courts.

1.3 Statutory Controls

1.3.1 Heritage Victoria

The Fitzroy Cricket Club Grandstand is included in Victorian Heritage Register (VHR) designated as H0751 (Figure 2). The extent of registration is restricted to the building itself and the land on which it sits; this is an artefact of the registration's origins in the superseded Register of Historic Buildings, and a modern registration would be expected to include some form of additional curtilage area external to the structure.

1.3.2 City of Yarra Planning Scheme

The Edinburgh Gardens is included to the City of Yarra Planning Scheme's Schedule to the Heritage Overlay (HO) as H0213. As such the property is subject to Clause 43.01 'Heritage Overlay' and to Clause 22.02 'Development guidelines for sites subject to the heritage overlay'. The comments provided below have had regard for the relevant sections of these policies.

1.3.3 Conservation Management Plan

A Conservation Management Plan (CMP) was prepared in 2004 by Allom Lovell & Associates (now Lovell Chen) with John Patrick Pty Ltd. It is evident from an initial review of changes which have occurred in the subsequent 15 years that major works have generally been undertaken in accordance with the CMP.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

This has included removal of a number of elements identified as intrusive in the 2004 CMP, and the relocation and expansion of some facilities of low heritage significance but which were important for their amenity value.

While the CMP's analysis of the heritage significance and specific conservation policies for elements of the Edinburgh Gardens will largely hold true to the present day, other aspects of the plan have dated and would benefit from reconsideration. Although the plan provides general conservation policies to guide contemplated intensification and change, it is likely that these could be expanded to better reflect today's heritage best practices and also provide for current and prospective usage of the Gardens. In particular, the CMP does not sufficiently address active recreation as both a current functional requirement and an important aspect of the heritage values of Edinburgh Gardens.

It would be appropriate to review the existing conservation policies and expand these in light of accumulated management experiences and the current condition of park assets. For instance, the policy related to tree replacement should be reviewed. The outcomes/recommendations of a tree replacement strategy or plan and the revised CMP should incorporate these in a policy sense if they are supportable from a heritage perspective.

It would also be desirable to update the CMP's statement of significance and assessment against criteria to reflect the current assessment criteria and practice employed in the City of Yarra and in Victoria.

Proposed improvements centred upon the tennis club grounds may be the first of a new generation of projects that seek to improve the fit-for-purpose of facilities in Edinburgh Gardens in an environment of evolving user numbers and expectations. In this context, an update to the CMP is likely to be appropriate and of considerable value in ensuring that the document matches the anticipated operating environment going forward.

In terms of best conservation practice, a CMP would ideally be reviewed on a five-yearly time frame or as required at the point of major change or development.



Figure 10 Overview showing Edinburgh Gardens and relationship between HO213 and the VHR extent of the Fitzroy Cricket Club Grandstand (H0751)
Source: VicPlan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

2.0 State Government Policy and Initiatives

At the State level the priorities and strategies for the sport and recreation sector are captured by *Active Victoria – a strategic framework for sport and recreation in Victoria 2017-2021*.

This document establishes sport and recreation as an integral part of Victoria’s social and economic life and outlines six strategic directions with targeted areas of change to achieve improvements in this sector.

This project has the scope and capacity to meet the intent of the following strategies.

Strategic Direction 1: Meeting demand

- Increasing capacity of facilities and infrastructure
 - New and existing infrastructure that ‘works harder for longer’
 - Designing infrastructure in accordance with universal design principles and to be resilient to future risks
- Increased participation opportunities
 - Actions to support increased capacity of sporting clubs and recreation providers
- Flexible and innovative options
 - Modified versions of sports that better meet the needs of potential participants
 - More teams and competitions aimed at retaining players who enjoy playing sport but are not playing at the highest level within their club or age group

Strategic Direction 2: Broader and more inclusive participation

- Operational structure of sport and active recreation
 - Adoption of universal design in both infrastructure and program delivery to increase the proportion of Victorians able to use programs and infrastructure
- Increasing the participation of women in sport
 - Female-friendly sport and active infrastructure and facilities

Strategic Direction 3: Additional focus on active recreation

- Planning for active recreation infrastructure connected to other community uses and urban development
- Maximising the potential of existing spaces to be used for active recreation

Strategic Direction 6: Work together for shared outcomes

- Joint action and investment by sport and recreation organisations, councils and the Victorian Government.

2.1 Change our Game

Increasing female participation in sport is a key component of the *Active Victoria* framework. This strategic direction builds on the findings from the independent Inquiry into Women and Girls in Sport and Active Recreation held in 2015. A key recommendation to facilitate change was the need to deliver female-friendly built environments and equitable facility usage policies.

This has been embraced by all peak sports bodies and facility managers and is a key driver of the need to upgrade the facilities in the Brunswick Street Oval Precinct.

Cricket Victoria’s assessment of venues in 2018 established that only 19% of venues across Victoria provide female friendly change room facilities and supporting amenities.¹

¹ Victorian Cricket Infrastructure Strategy March 2018, p 23.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

3.0 Peak Body Infrastructure Guidelines

In approaching the brief for the community and sporting facilities consideration has been given to amenity standards established by the peak sporting bodies represented by the clubs associated with this precinct. The following strategic planning documents have been consulted.

- AFL Preferred Facility Guidelines for State, Regional and Local facilities (AFL, 2012)
- AFL Preferred Facility Guidelines for Local, Regional and State League Facilities Amenities Upgrade for Unisex Use Addendum (AFL, 2015)
- Community Cricket Facility Guidelines (Cricket Australia, 2015)
- Victorian Cricket Infrastructure Strategy 2018-2028
- Tennis Infrastructure Planning – Planning, Design & Delivery Resource (Tennis Australia, 2018)

The following table provides a comparison of the facility requirements from the guidelines for each sport when compared with the existing provisions. In many areas, as highlighted, the existing provisions do not meet the current code. It is noted that while there are additional change rooms provided, the lack of a completely independent social room for sporting club use, results in these spaces being utilised for this purpose.

Table 1 Comparison of existing facility against

Space	AFL (area m ²)	Cricket (area m ²)	Tennis (area m ²)	Existing (area m ²)
Central entry point			15	0
Social Room/Community	100	150		133
Multi-purpose meeting			15	34.2
Tennis club room			120	34
Timekeeping	10			0
Office/Administration	15	15	25-50	0
Kitchen and Kiosk	20	25		18
Kitchen store		8		8.4
First Aid	15	10		0
Umpire room	25	15		15.5
Utility	5	5		2.75
Tennis change and toilets			50-55	38
Change room 1	45-55	30		20
Amenity Room 1	25	25		15.5
Change room 2	45-55	30		20
Amenity Room 2	25	25		15.5
Change room 3				20
Amenity Room 3				0
Change room 4				20
Amenity Room 4				0
Disability Change/Shower/Toilet				8.6
Public Toilets	25			
Male		15		9
Female		15		7.5
Accessible Toilets		5.5		4.8
Unisex external public toilets				9

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Space	AFL (area m ²)	Cricket (area m ²)	Tennis (area m ²)	Existing (area m ²)
Storage (Internal)	20	30	15	11
Storage (External)		30	12	20
Curator Store		60		0
External covered viewing area	50			
Verandah and spectator seating			100-120	
Social/BBQ area (outdoors)				
Rubbish Storage area				
Circulation	excl	excl	excl	excl
* 15m2 per club				
Total	425 - 445	493.5	177	464.75

4.0 The Yarra Community

Based on the Census of Population and Housing (Census) undertaken by the Australian Bureau of Statistics 2016 the City of Yarra community profile is described as follows:

- Yarra community has a unique demographic makeup, with many people living at the lowest end of the socio-economic scale and many at the highest.
- Population is relatively young, with half aged between 25 and 49 years and an average age of 33 years.
- Nearly one fifth of the community were born in non-English speaking countries and just under a quarter speak a language other than English at home. Top languages spoken at home, other than English, are Vietnamese, Greek and Mandarin.
- Yarra has fewer families and more group houses than greater Melbourne, and one third of all residents live alone.
- Nearly a third of the community is aged between 25 and 36.
- The population of 96,368 is expected to increase by 42% to 136,965 by 2033.
- Around 10% of the community live in public housing.
- 37% of the community live in apartments, 22% in terraces, semi-detached or town houses.
- About one in five households do not own a car.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

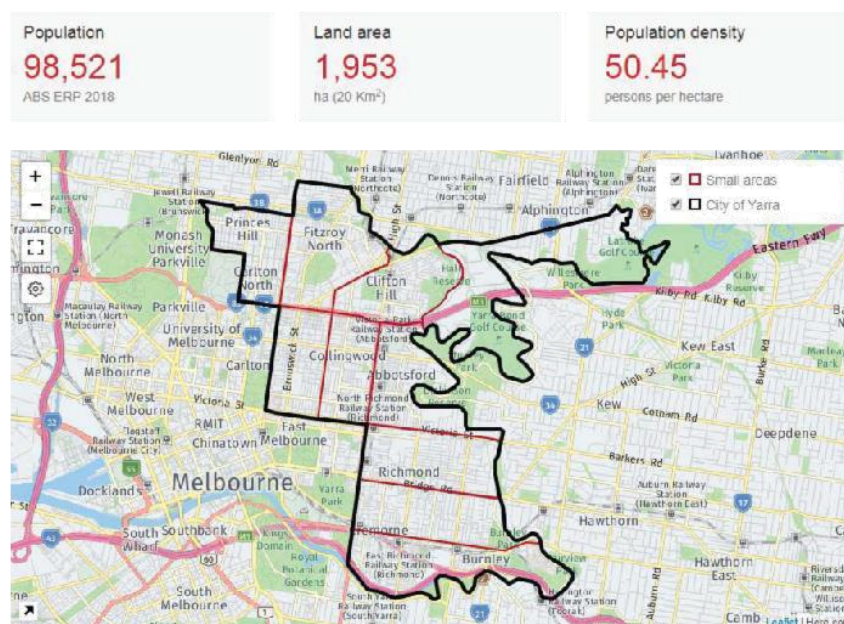


Figure 11 City of Yarra community profile, Australian Bureau of Statistics Census 2016
Source: <https://profile.id.com.au/yarra>

5.0 Yarra Council Strategies and Policies

5.1 Strategic Objectives

The Council Plan 2017-21 sets out Council's strategic objectives and associated strategies to achieve them. From these objectives flow the various policies and strategies that direct how individual initiatives and projects can contribute to achieving the overarching strategic direction.

The strategic objectives are for Yarra to be **healthy, inclusive, sustainable, liveable, prosperous, connected and leading**.

A key inclusion of the 2017-21 plan is a health and wellbeing plan which positions Council to play a key role in contributing to positive health and wellbeing outcomes for the community. A key priority is active living.

This project directly contributes to maintaining and improving facilities that provide a broad range of recreational, community and sporting activities to the Yarra community. The age range of current participants in activities based in the precinct is broad, ranging from children to senior citizens.

5.2 Council policies

A number of Council policies and strategies are applicable to any redevelopment or improvement of the precinct facilities. These include:

- Yarra Family, Youth & Children's Services 0-25 Years plan 2018-2022
- Yarra Sport and Physical Activity Strategy 2015-2019
- Aboriginal Partnerships Plan 2015-2018 (2019-2022 pending Council adoption in October 2019)
- Asset – Asset Management Strategy 2012-2022
- Bike Strategy 2016 Refresh

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- Council Plan 2017-2021
- Environmentally Sustainable Design (ESD) Buildings Policy 2014
- Multicultural Partnerships plan 2015-2018 (2019-2022 pending Council adoption in July 2019)
- Active Healthy & Ageing Strategy 2019-2022
- Public Art Policy 2015-2020
- Public Toilet Strategy 2017-2027
- Urban Design Strategy 2011
- Urban Forest Strategy 2017
- Waste Minimisation and Resource Recovery 2018-2022

As relevant these have been taken into consideration when developing the functional brief.

6.0 Site Analysis – opportunities and constraints

An overarching consideration for the precinct and the site is the heritage significance of the Edinburgh Gardens and the Grandstand and the need for any works to be sensitive to the retention of heritage significance. Further to that there are urban design and landscape considerations that also inform the design.

An analysis of the site reveals the following opportunities and constraints.

Orientation

- Site is oriented with good access to north light, opportunity to orientate new buildings to capture north light and passive solar
- Prevailing winds from south-west during winter could be masked by existing Grandstand
- Prevailing winds from north-west during summer will be moderated by the garden landscape

Views and vistas

- Grandstand has commanding views of the oval; these should remain uninterrupted
- The mounds around the perimeter of the oval modulate the long views of the Grandstand from the Gardens. These are an important landscape element to be retained.
- The Grandstand and Community Room block the connection with the garden to the north, there is no obvious visual connection to the oval when approaching from the north
- Opportunity to establish a visual connection from existing paths, past the Grandstand
- Opportunity to reorientate the community space to engage with the gardens, creating an external activated space

Landscape

- Avenue plantings are largely deciduous, creating a changing colour spectacle through the seasons and creating a wind/weather break and shading.
- Connection to the lawns and pathways is important
- Landscape in the immediate vicinity of the Grandstand and Community Room is utilitarian and low amenity
- Opportunity to reclaim landscape and elevate to similar level to other activated landscape areas of the Edinburgh Garden

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

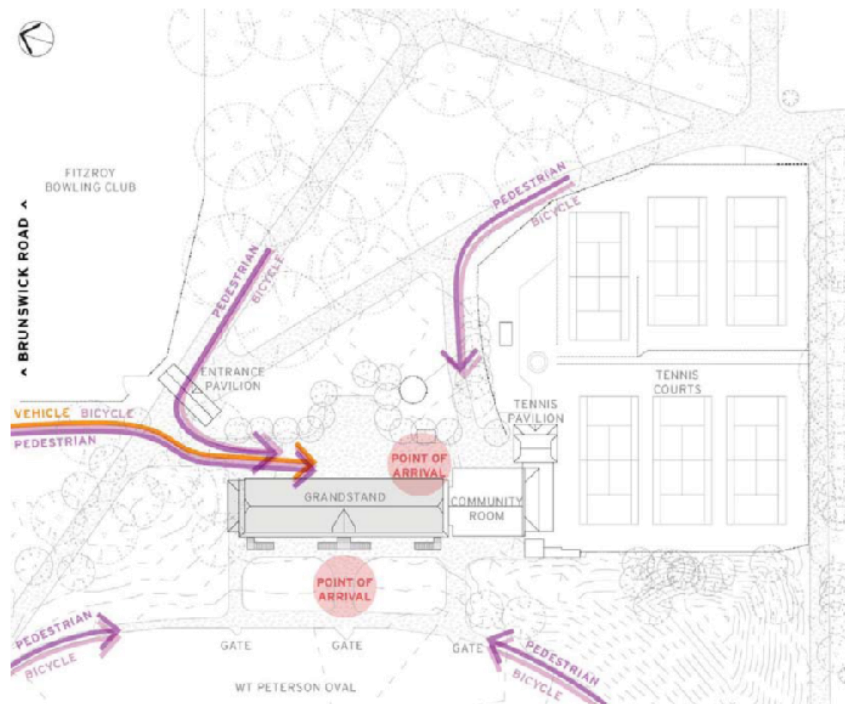


Figure 12 Arrival paths to the Precinct

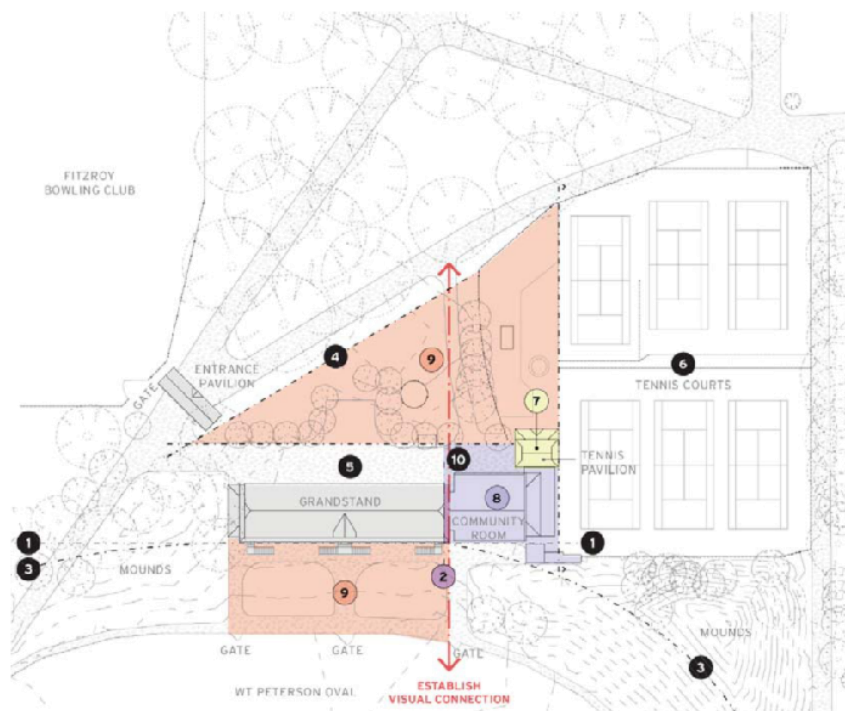
Arrival

- Site has no obvious address, two points of arrival depending on the activity to be engaged in
- Apron to north of Grandstand is a conflicting melange of cars, bin store and roadway with no obvious 'front door'
- Lack of passive security and surveillance
- Opportunity to include passive surveillance of the point of arrival by reorienting activities to focus on both sides of the precinct

Built forms

- Grandstand is the predominant built form, Community room detracts from, rather than contributes to the Grandstand
- Tennis Pavilion has limited presence due to location, landscape screening and relationship to the Community Room
- Opportunity to formalise the presence of the Grandstand to the oval frontage, while adapting the 'back' of the building to engage with the garden
- Opportunity to construct within disturbed areas of the site

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Key Opportunities and constraints

1 New built form to not extend past Grandstand	6 No build on tennis courts
2 Separate/ reveal Grandstand	7 Retain, relocate, integrate
3 Retain negative formed by mounds	8 Build on disturbed land
4 Retain avenue planting	9 Low amenity landscape
5 Apron for arrival, deliveries, waste, etc. conflict of vehicles and pedestrians	10 Arrival point: no obvious front door

Figure 13 Opportunities and constraints

7.0 Stakeholder and community consultation

7.1 Process and methodology

The consultation was undertaken in accordance with the Yarra City Council (YCC) communication policy and framework.

An *Engagement and Communications Plan* was prepared by the YCC Communications team and included the following process:

- Minimum 4-week public consultation period utilising the "Your Say Yarra" online engagement tool
- Onsite engagement activity (drop in session) Monday 13 May 2019
- Post card drop to 1500 local North Fitzroy residents delivered 3 May 2019
- News item on YCC website

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- Yarra Life EDM (e-newsletter to 13,000 subscribers) on 6 May and 20 May
- Social media promotion (YCC corporate Facebook and Twitter) on 5 May and 19 May
- Notification to Councillors via Councillor E-Bulletin

The public consultation period ran from 31 April to 31 May 2019. The response to the online engagement comprised:

- **99 Engaged** in the project online (provided survey responses - see individual responses in spreadsheet)
- **179 Informed** about the project (people who clicked on something on the page)
- **540 Aware** about the project (people who saw the page)

In addition, face-to-face meetings were held with the following stakeholder groups:

- EGSC Clubs
 - Edinburgh Cricket Club
 - Fitzroy Football Club
 - Fitzroy Junior Football Club
 - Fitzroy Tennis Club
- City of Yarra officers across the following portfolios:
 - Recreation and Leisure
 - Age & Disability
 - Venues & Events
 - Family, Youth and Children's Services
 - Building and Asset Management
 - Streetscapes and Natural Values
 - Housing and Homelessness
 - Construction & Development
- North Fitzroy Bowling Club
- Italian Fitzroy Senior Citizens

The consultation framework and list of attendees is included in Appendix A.

7.2 Key findings

7.2.1 City of Yarra

The key findings from consultation with the City of Yarra officers was a general agreement that the amenity of the precinct could be significantly improved to support a popular but poorly resourced corner of the Edinburgh Gardens. All participants in the consultation acknowledged there were ongoing issues around fit-for-purpose sports and community facilities, public security and the relationship of this precinct with the gardens and oval.

The specific issues raised under individual portfolios that have informed the functional brief and concept design are as follows.

Infrastructure

- M41 water main runs through centre of the Edinburgh Gardens and is located underground in the area to the east of the tennis courts.
- Major gas supply main also runs in this area.
- YCC in association with Melbourne Water are undertaking further development of the Edinburgh Gardens Stormwater Harvesting Scheme including construction of a new 1ML underground storage to increase the security (reliability) of supply.
- Construction of significant infrastructure or buildings in this area should be avoided.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Recreation and Leisure

- Introduction of turf wicket to W T Petersen Oval requires permanent, secure and accessible curator storage for the ground maintenance equipment including roller, pitch covers, temporary fencing etc.
- Curator store size is 20m².

Landscape

- YCC has a replacement strategy for avenue plantings scheduled to commence in winter 2020 which will be staged over next 50 years to achieve diversification of the tree age groups and types. Useful life expectancy of Dutch Elms which is the predominant species currently begins to diminish at 80 years, the existing avenue plantings have reached this age.
- Avenue to the east of the tennis courts will be replanted initially, with trees moved 3m to the east.
- Consideration should be given to vehicle movement through the precinct as related to existing trees and construction impacts during building works.

Housing and homelessness

- Rough sleeping in Grandstand is increasing with up to 10 people at any one time.
- 2 cleans a week using high pressure water is impacting the building fabric.
- Increase in anti-social behaviour and assault related to the casual occupancy of the Grandstand.

Community planning, Positive Aging, Venues and Events

- Community room is highly valued and extremely well patronised with 328 separate bookings in 2018. Second busiest facility in municipality.
- Three most popular uses in 2018 were: meetings; family gatherings; Council programming
- Highest demand was for Wednesday, Friday and Saturday/Sunday; evenings
- Council anticipates future demand for the space will remain high due to its location and relative lack of restrictions which facilities located within residential streets incur.
- Council sees the space as being intergenerational: attractive to older and younger age groups
- Key requirements are:
 - Accessible
 - Capacity for 100 people +
 - Commercial kitchen facilities
 - Good acoustics
 - Aspect/connection to garden
 - Comfortable and flexible furniture
 - Heating/cooling
 - Hirer to have controlled access
 - AV equipment (sound system, screen and projector, augmented hearing, connection to Council network)
 - Effective security including path to the venue and key code access
 - Charging station for wheelchair
 - Storage, discrete and lockable for regular users
- Need for separate and externally accessible public toilets
- Concern there is an unresolved conflict of pedestrian and vehicular traffic when community room is in use

Security

- Increasing number of assaults reported in the vicinity of this precinct
- Lack of lighting and good passive surveillance

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

7.2.2 *Edinburgh Cricket Club*

The earliest sporting association with the Edinburgh Gardens was cricket, brought about by the permissive occupancy provided by the Lands Department to the Collingwood Commercial Cricket Club of 9 acres (3.6 hectares) of the reserve in September 1862, and in the following year a further 6 acres (2.4 hectares) to The Prince of Wales Cricket Club. These clubs amalgamated in 1872 into the Fitzroy Cricket Club. The Fitzroy Cricket Club continued to play at the Brunswick Street Oval until 1985-86 when it amalgamated with the Doncaster Cricket Club and as a result moved to Schramm's Reserve, Doncaster.

Established in 1978, the Edinburgh Cricket Club's original home ground was the Alfred Crescent Oval, a ground with a pavilion but no pitch. In 1985 the club moved to the Brunswick Street Oval and is now one of the largest clubs in Victoria with 40 junior sides in 2018/19 ranging from U10 to U18 including 4 junior girl's teams, 8 senior men's, 1 senior women's and 2 Veterans teams. The club is zoned in the Inner South East Metro Region, which incorporates Yarra, Stonnington and Monash City Councils. The Edinburgh Cricket Club is an anchor club for the north-eastern end of the region.

Based on the Cricket Australia hierarchy model the club sits between the Premier/Regional and Club (Home) level.

This region is one of only four across the State to record participation increases in all player categories over the past 3 seasons, and while it has a higher than average ground to player ratio of 1:46, the overall condition rating of pavilion social spaces and player amenities is below the Metropolitan average.

The Club runs a junior and senior training and competition throughout the cricket season (October to March), with training sessions and/or games sessions at the ground Monday to Friday 4:00pm to 8:30pm, Saturday 8:00am to 6:30pm and Sunday 12:00 midday to 6:30pm. Access to the Grandstand for use of the change rooms extends to 10:00pm or 12:00 midnight on those days. Currently use of the Community Room requires pre-booking through the Council booking system and results in relatively poor access as the Club is competing with all other hirers of the space, with the warmer months being a particularly popular period for weddings, parties and Christmas events. To mitigate this lack of access the Club currently uses two change rooms to establish a temporary club room. Memorabilia is displayed in this space including honour boards and trophies to engender a club atmosphere and club pride.

The Club hosts events every 4-6 weeks during the cricket season attracting crowds of 80+, with a large school holidays program in October and again in January. Weekly activities include selection meals and other activities aligned to the training and game schedule. With better facilities the opportunities for club events and gatherings would be increased.

The Club has ambitions to expand their inclusion programmes for disadvantaged and all abilities participants, which would be enabled and enhanced by improved facilities.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

PREMIER/REGIONAL	Integrates the community cricket pathway and provides connection between Foundation and Talent pathways. Facilities service home clubs, as well as providing for the broader cricket catchment.	Home and away fixtures for Premier Cricket in each state, regional training venue for pathway squads and programs, event/carnival venue for state and regional programs and marquee venue for local competitions (e.g. finals).	Shared training venue for local community (outdoor turf pitches and possible indoor training pitches), under age Association competition venue and location for school holiday camps. Likely to be shared with a winter tenant.
CLUB (HOME)	Provide a mix of recreational and competitive cricket opportunities within a community club environment for local communities – clubs and venues connect with their associated turf or synthetic competition and pathway structure (for all age groups).	A club's home ground to conduct home and away fixtures for local, Association, metropolitan and country cricket in each state, local club training, facilitating school to club connectivity and providing opportunities for in2CRICKET and modified programs such as T20blast.	Training facilities and social amenities are provided to promote social activity and community use. Shared venue with a winter tenant. Under age Association competition venue or finals venue at key sites within local Associations.

Figure 14 Cricket Australia facilities hierarchy model applicable to Edinburgh Cricket Club for purpose, use and compatible uses
Source: Community Cricket Facility Guidelines, Cricket Australia p 15.







Strategic responses	Critical	High	Medium	Low	Stakeholders
Support land owners/managers to manage the carrying capacity of existing playing fields with high use through education and resourcing.					CV
Increase the provision of unisex change room areas, supporting amenities and more inclusive social spaces.					CV, LGA, CC
Assess the suitability and current balance of synthetic and turf cricket pitches in-line with future demand, competition structure and financial capacity of tenant club/facility owners and in consultation with key stakeholders					CV, LGA, CC
Utilise facility and participation data to develop prioritised pavilion upgrade and renewal plans.					CV, LGA, CC
Utilise facility and participation data to develop prioritised upgrade and renewal plans for synthetic practice facilities.					CV, LGA, CC
Ensure reserve master planning considers creative ways to increase the size of boundaries where possible (e.g. relocation of cricket nets if enclosed) or look to minimise safety and risk management issues of balls being hit beyond the boundary (e.g. high fencing).					LGA

Figure 15 Cricket Victoria Infrastructure Strategy for South East Metro Region
Source: Victorian Cricket Infrastructure Strategy 2018-2028

The Cricket Victoria Infrastructure Strategy for the South East Metro region has identified the improvement of off-field facilities, and inclusion of unisex facilities as a high priority.

Issues

The specific issues raised by the Club that need to be addressed are:

- Access to a permanent club room during cricket season – ability to have a presence, improve club ambiance and pride – display club memorabilia
- Ability to host club wide events during cricket season at their home ground
- Enhanced ability to facilitate cricket training, camps, all abilities programs
- Improved offering of food at canteen
- Permanent storage on site for equipment, merchandise that is secure, accessible and meets OHS standards
- Comfortable place for watching cricket between grandstand and oval – fragmentation of spectators is a problem

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

- Better access from Edinburgh Gardens to the oval
- Ability to have sponsors signage displayed
- Street address for deliveries – name the driveway
- Additional public toilets

7.2.3 Fitzroy Football Club

Established in 1883 the Fitzroy Football Club has a long and proud association with this ground and community. The Club fields teams in the largest community football competition in Australia, the Victorian Amateur Football Association (VAFA), with the Brunswick Street Oval operating as the Club's home ground. FFC first fielded a women's team in 2015. The Club operations at the ground follow the football season, April – October.

In 2019 the Club has seven teams comprising:

- Senior Men's (2 teams)
- Senior Women's (2 teams)
- Fitzroy Thirds (1 team)
- Fitzroy Under 19s (1 team)
- Fitzroy Under 23s (1 team)

Based on the AFL *Growing the Heartland AFL Victoria Football Facilities Development Strategy 2014-2020*, the Club's facility hierarchy level is 'Local'. The core uses of a facility at this level are for home and away matches and club training and to operate as the 'home' of the Club.

The issues confronted by the Club at the Brunswick Street Oval mirror the findings of this strategic planning study carried out by the AFL which identified a general lack of female friendly player change facilities and change rooms/facilities that are not fit for purpose. Currently no women's games are scheduled at this ground due to the lack of facilities to host a triple-header.

The Club runs training sessions at the club Tuesday and Thursday evenings (6:00 – 8:00pm) which includes use of the community room for player meals and selection meetings between 5:30 and 10:30pm. On Saturdays for home ground matches the Community Room and Grandstand facilities are in use from 9:00am – 11:00pm. The Club must book the Community Room in advance through the Council booking system, which means it is not always available, and requires the Club to install and remove Club associated decorations and equipment on each occasion.

Events hosted at the ground include pre-game lunches for home games, post-match functions, recovery sessions on Sundays, Trivia nights, team meetings, end of season events and other fundraising activities throughout the season.

Equipment storage is poor within the Grandstand and has been spread to other locations around the ground including the ticket box on Brunswick Street. Merchandise storage is limited and is largely held off-site. The lack of a permanent social room for the Club limits the opportunity to display Club memorabilia such as honour boards which engender Club pride and community.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

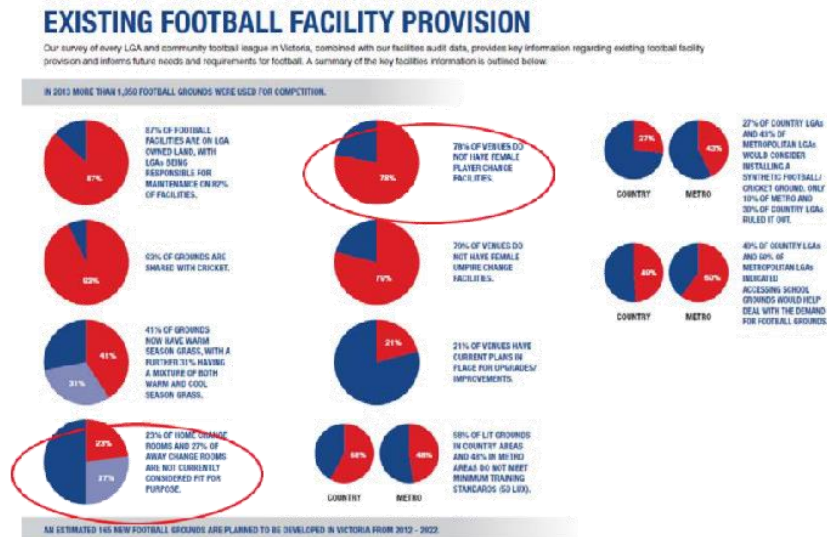


Figure 16 Summary of the state-wide facilities assessment, highlighting the need for improved facilities
Source: Growing the Heartland AFL Victoria Football Facilities Development Strategy 2014-2020

Issues

The specific issues raised by the Club that need to be addressed are:

- Female friendly facilities for players
- Dedicated social club space that can cater for training nights, player selection, player meals, events
- Appropriate bar facility to enable service of alcohol when required – Club maintains Level 3 Good Sports accreditation
- AV equipped meeting or social room to facilitate game review and presentation evenings
- Ability to have a 'home' where the Club can permanently display memorabilia
- Spaces available to support recovery activities
- Improved changerooms to enable Club to host triple headers (male and female teams on same day)
- Better, permanent and accessible storage space for equipment, merchandise
- Safe - secure location for valuables storage on game day
- First Aid room
- Carparking for drop-off and pick-up of equipment

7.2.4 Fitzroy Junior Football Club

The Fitzroy Junior Football Club (FJFC) was established in 1993. Fielding teams in the Yarra Junior Football League it is the largest club in the largest junior league in Australia. Based on the AFL *Growing the Heartland AFL Victoria Football Facilities Development Strategy 2014-2020*, the Club's facility hierarchy level is 'Local'. The core uses of a facility at this level are for home and away matches and club training and to operate as the 'home' of the Club.

The Club has boy's and girl's teams in every junior age group from U9, U10, U11, U12, U13, U14, U15, Colts, Youth Girls. Considered a destination club, the membership has grown each year over the past

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five, with the girl's competition numbers locked out each year in January due to demand and capped numbers at most year levels. The Club fielded 31 teams in 2018.

The Club operations at the ground follow the football season, April – October and are 100% volunteer run. Training occurs every night of the week from 4:30 – 6:00pm with games on Sundays. The entry level Auskick program operates on Saturday mornings.

FJFC have no access to the Community Room and all training and game day team equipment is stored in the Brunswick Street Ticket Box or off-site. The Club holds Club functions off-site due to the lack of access to a social room. Desirably their Marquee Games (e.g. Anzac Round, Girl's Round, Indigenous Round) would include a function at the ground pre or post-match and other annual events such as Welcome Day and Presentation Day held at the Club.

FJFC would like to be able to host league finals at the Brunswick Street Oval.

Issues

The specific issues raised by the Club that need to be addressed are:

- Need to create a 'home' for the Club
- Ability to interchange matches with boys/girls by having appropriate facilities
- Need to be able to shower girls and boys after games
- Aspire to be able to host league finals
- Meeting room for club management
- Better, permanent and accessible storage space for equipment, merchandise
- Club room and facility to cater for marquee games, Presentation Day, Welcome Day, dinners
- AV equipped room for presentations, training
- Ability to display Club history

7.2.5 Fitzroy Tennis Club

The Fitzroy Tennis Club has been associated with the Edinburgh Gardens since its establishment in 1888. Existing membership sits at 436 members with a 60:40 male to female ratio. Tennis is an all ages sport and the membership demographic for 2018/19 is:

- Adults: 187
- Older adults: 69
- Families (with 1 or 2 children): 92
- Juniors: 51
- Coaching staff: 9
- Honorary Life membership: 19
- Deferrals: 9

While FTC Rules and Constitution state that membership be capped at 500 members, the Club is struggling to service their current membership due to the number of courts they have available. Demand for courts at peak times is at a premium due to:

- Courts used for coaching (up to 4 courts)
- Competition (2-3 courts)
- Introduction of book-a-court system (this has increased the patronage)

The Club operates 7 days week. The current competition program comprises a Night Competition (Tues/Wed/Thurs), Victorian Pennant Competition (Weekend), Metro Masters (Thursday afternoons), Juniors (Saturday mornings).

The Racquet Lab Coaching is run by 11 coaches: 8 male, 3 female and provides classes to 308 students across various class configurations. There is consistently a waiting list for coaching, with up to 60 during summer, less through winter. The Club also holds school holiday clinics, comprising five 4-day clinics per year for 30 children and 8 adults.

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Tennis in Victoria continues to grow. In 2017/18 Tennis Victoria recorded a total of 332,931 registered participants, a 23% increase on the previous year.

The City of Yarra has 1531 registered tennis players. 835 (54.5%) of these are registered participants at Clifton Hill Tennis Club/Mayors Park Tennis Centre and Fitzroy Tennis Club. The remaining 696 (45.5%) leave the City of Yarra to play tennis at other affiliated tennis venues around Melbourne and Victoria.

The ideal provision ratio for tennis courts per head of population sits at 1 court: 2,000 head of population. To adequately cater for tennis in Yarra, there should be 47 tennis courts. The current 18 tennis courts are well below this number with court per head of population sitting at 1:5,222, almost double the recommended provision. The impact being, 46% of residents participating in tennis actually leave the municipality to do so.

The Club has the ability through its coaching personnel to offer a broader all abilities programme, which is only limited by the lack of DDA access to the courts and Club rooms and amenities. The Club and coaches place a strong focus on participation versus high performance.

Issues

The identified issues and priorities for the FTC are:

- 2 extra courts (En-Tout-Cas) to cater for increased demand
- Rebuilding of synthetic courts due to their rapid deterioration and poor drainage
- Relaying of existing En-Tout-Cas courts
- New lighting to courts
- Larger club house
- Better and compliant change rooms and toilets
- More external storage space for maintenance and coaching equipment
- Administration space for coaching and tournament operations
- Improved outdoor BBQ area, but retaining the social space and garden atmosphere
- Improved safety on approaches and paths to and from the Club enclosure through the gardens

7.2.6 Community response

The community consultation initiated a conversation with the broader Edinburgh Gardens and North Fitzroy community to establish what aspects of the precinct they liked and what aspects they felt needed to be improved. One aspect of the consultation was to garner more feedback on the Community Room and how this space was perceived.

The largest group of respondents to the 'Your Say Yarra' online engagement tool identified themselves as living nearby or interested in the Edinburgh Gardens. 70% of respondents stated they had used the Community Room.

What is liked about the Brunswick Street Oval Sporting and Community facilities?

From the 99 written submissions by far and away the most often repeated response was an appreciation and desire to retain the gardens history and heritage of the Grandstand and ground.

Comments included:

Its beautiful heritage and lovely leafy surroundings.

Open space of the oval. Heritage grandstand and local history. Presence of a community room for multiple types of functions. Tennis Club.

I like the variety of sports the facilities cover and how they are conveniently located in close proximity to each other. Also that the heritage structures are nicely tied in with the gardens and the general lay out, rather than a generic box dumped in a ill-considered location.

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I love the history and character of the place.

I love taking my son to watch the local football or cricket there and knowing that it's where people like Neil Harvey or Kevin Murray played.

I love sitting in the grandstand and looking at the skyline of Fitzroy and Melbourne.

I love the way that the grandstand, community rooms and tennis club anchor this end of Edinburgh gardens and the community life that centres around them.

I love the changing of the seasons on the trees around the ground.

I love that my father came to watch VFL games here in the 50s and 60s.

I love being able to come here with my wife and child to kick a footy on the oval.

I'm glad that homeless people can get some shelter from the rain and cold up the back of the grandstand if they need to - they're part of the community too (although I don't particularly love seeing needles and rubbish up there).

I love seeing the Fitzroy colours on the people on the hill on Saturday arvo.

I enjoy knowing that if I or my wife ever felt the need to play tennis, we could go and join the club. Hasn't happened yet, but you never know.

I treasure the memories of doing slow laps of the oval when my wife was very pregnant, and stopping to rest on the grandstand steps.

I feel privileged to have had access to community and council consultation in the rooms there - democracy happens at a local level.

I never get tired of seeing the old grandstand, the oval, the trees and all the rest of this place every day as I go about my life. It's a special place.

The ground is a beauty - it supports an incredible volume of sport with the largest junior football club in Australia fielding a huge number of boys and girls teams, the Cricket club is also massive. This is a real credit to the local community and volunteers that have driven this growth and utilise the facilities so well. I like the community feel - people walking dogs, the nearby Edinburgh gardens, on a lovely day it is splendid. Games/Sport taking place with families enjoying a picnic nearby - awesome. I have spent hundreds, if not thousands of hours, enjoying the ground and facilities over the past 15 - 20 years.

A excellent facility for the community to socialise & participate in sporting for all ages and sexes. Important to have a hub that can be used by a wide section of the community.

The following summarises the general tenor of the responses:

- History of the gardens, Grandstand and ground
- Heritage architecture
- Visual aesthetic of the Grandstand and Oval
- Links with Fitzroy Football Club
- Variety of sports the facilities cover
- Leafy surroundings, trees, setting
- Views to the city
- Community vibe and feel
- Accessibility (kicking the footy, walking the dog, teaching kids to ride their bikes)
- Location
- Strong sense of community
- Low cost place for community groups to hire
- Collegiate nature of the sporting clubs

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How can the facilities be improved?

A far more diverse response was received on what could be improved, with a small minority calling for no change or money to be spent on other more disadvantaged areas of the municipality. The key issues identified were improved facilities generally, more public toilets, and improved security and amenity.

Comments included:

Good lighting, a safe environment at night.

There has been no capital works done to the tennis club facilities for decades and membership is at capacity with a waiting list.

It needs enlarging with 2 extra tennis courts and somewhere people can socialise after playing - the current club room may be heritage listed but it's really quite disgusting - old and very grubby.

Would be great to have a social club/hub for the various sporting clubs that use the precinct. As it is, clubs often hold functions at the bowls club. Important that it is large enough to accommodate decent numbers, and also overlooks the oval. This is not just for game day, but also allows parents to keep an eye on children playing out on the oval. Also think there needs to be separate rooms/facilities so that the venue can hold men's and women's matches on the same day.

Public toilets, to prevent people (mainly men) using nearby lanes and the area under the grandstand as public urinals.

Maximise space, more storage for sporting clubs, better integration with tennis club, outdoor spaces for use during summer months, capitalise on view with second story, clubs-only space (ie. not for use by public groups), female-friendly facilities.

The community facilities need updating.

The green environment all around the facilities needs to be improved.

Cars should not be allowed to drive in to the community facilities. None I see are for people with disabilities.

The vandalism and graffiti needs to be dealt with.

There should be more water fountains with dog drinking bowls incorporated into them near these facilities.

There need to be more recycling bins made available to avoid broken bottles, bottle cap and cans being left lying about.

Could alternative housing be provided for those sleeping rough in the grand stand?

The following summary provides an overview of the responses:

- Changing rooms upgraded for female participation in sporting codes
- More water fountains with taps for bottle refill, seating, more recycle/rubbish bins
- Improved pathways
- Upgrade community facilities, enable people outside sports clubs to use the precinct
- Space where people of all ages and diversity can meet
- Public toilets (24/7 access)
- BBQ and playground near the community room, picnic benches
- Oval fenced off for off-lead dog walking
- Gym / exercise station
- Rough sleepers moved on
- Synthetic turf to courts

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- En-Tout-Cas courts
- Community room that opens to the gardens
- Netball courts
- More trees
- Café
- Bike parking
- Remove cars
- Remove car and pedestrian conflicts
- Upgraded kitchen facilities
- Additional tennis courts
- More artwork
- Deck chairs (e.g. Federation Square)
- Better lighting, safer environment at night
- Better integrated with Bowls Club
- Decent club room, better kiosk/canteen
- Better seating options around oval
- More/better signage
- No change – like them as they are
- Better acoustics in community room
- Elevated viewing area
- More storage for sporting clubs
- More storage for community group users
- A place to feel at home for sporting clubs
- More parking, short stay parking
- DDA access
- Solar panels
- Outdoor power points
- More cover for rainy days

7.2.7 Other consultation

Face-to-face consultation was also held with other key stakeholders who are associated with the precinct and use of the Community Room.

Italian Fitzroy Senior Citizens

The Italian Fitzroy Senior Citizens have been long-term users of the Community Room. They hold weekly lunches for up to 60 people and a monthly function for 100 people which includes live music for dancing and a 3-4 course dinner. They utilise the commercial kitchen for a team of volunteers to prepare the meals. A substantial amount of inbuilt storage has been made available to them within the Community Room and kitchen as they keep on site all the cookware, bakeware, tableware, glassware, appliances, decorations, trolleys and pantry staples they require for these events. Their attachment to the precinct is evident and is associated with the garden setting, ease of access (no lifts, no stairs) and ability to drive into the site. The demographic of the community attending these events is aged and somewhat infirm.

The issues they identified as needing attention in any refurbishment or new build are as follows:

- Dedicated and appropriately sized storage that they can secure (avoid overhead storage)
- Larger commercial kitchen with proper commercial grade/sized equipment including exhaust
- Airconditioning
- Freezer (e.g. ice-cream) and refrigeration
- Good acoustics
- Access to two spaces to allow for men and women to hold separate activities at the same time
- Pest control in kitchen

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Fitzroy Bowling Club

The Fitzroy Bowling Club has a long association with the sporting precinct in the Edinburgh Gardens having provided the original club facilities for the Cricket Club in the 1870s. The relationship has been maintained to this day and there is much interaction between the clubs with the Cricket and Football clubs hosting regular family and member events during the season at the Bowling Club. This relationship is envisaged to be something that continues.

Operationally the precinct poses some issues and opportunities for the Bowling Club that need to be considered in any new development including:

- Maintain the historic pedestrian access/link between the precinct and Bowling Club via the existing gateway in south-east corner – encourages casual patronage of the Bowling Club by spectators at Oval
- Restrict parking – illegal parking in front of the back gates and delivery area is an issue
- Improve wayfinding/signage – often having to redirect people to the oval/Grandstand/tennis club
- Additional public toilets in the area to relieve pressure on the Bowling Club
- Additional lighting in area to improve security generally
- Look at ways to minimise access for rough sleepers in Grandstand which has had the knock-on effect of increased number of break-ins to Bowling Club in attempt to access power, BBQ and toilets.

7.3 Identified needs

From the consultation process there is consensus between all the stakeholders as to what is required to upgrade and improve the amenity for the precinct. The community and sporting clubs are aligned in their desire to retain and celebrate the heritage significance of the precinct, retaining the highly valued garden aspect, while improving a much-loved corner of the Edinburgh Gardens.

There is acknowledgment that there needs to be reasonable accommodation for the sporting clubs that create the activity and vibe on the oval, while enabling the community to also enjoy access to the precinct.

The key needs are:

- Additional tennis courts to meet demand, and full compliance upgrade for existing tennis courts
- Upgraded change room facilities for all sports to support both male and female teams and achieve DDA compliance
- Club social room to create a permanent 'home' for the cricket and football clubs
- Retention of and improvement to community room and associated commercial kitchen, storage and amenities
- Improved storage and support spaces to serve the sporting clubs and ground operations
- Improved landscape amenity in the precinct to support spectators and users of the gardens including better passive security and removal of pedestrian and traffic conflicts
- Public toilets
- Improved public safety in the precinct through improvements to lighting and landscape

8.0 Functional Brief

The following brief has been developed based on the stakeholder consultation, assessment of relevant policies, strategic plans and facility standards as applicable to the precinct.

8.1 Site Master Plan and Functional Relationships

The Brunswick Street Oval precinct is a distinct sports activity area located in the south-west quadrant of the Edinburgh Gardens. Bounded by an established and relatively formal lawn and tree avenues

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landscape the site is typically approached on foot via the path system. Primary vehicular access is from Brunswick Street, with a secondary services access possible from Napier Street.

In assessing the existing functional relationships these can be summarised as follows:

Location:	The Grandstand is a key element in the precinct. The existing functional relationship of the Grandstand to the oval and surrounding mounded terraces must be maintained. The location of the heritage Tennis pavilion is not original and it can be relocated.
Access:	Access to the site by the following transport means is to be retained: Pedestrian paths from within the gardens and connecting to surrounding streets Cyclist paths from within the gardens and connecting to surrounding streets Limited vehicular access to DDA parking spaces to be retained and space for pick-up/drop-off and deliveries via the single trafficable entry from Brunswick Street.
Relationships:	The Grandstand and sporting precinct has a historical operational connection with the Fitzroy Bowling Club, this should be maintained.
Operations:	Operational access for cleaning and maintenance is to be maintained from the existing Brunswick Street entry and north-south path to the east of the tennis courts that is accessible from Napier Street.

The Grandstand is designed to serve as a spectator stand and sports facility with a focus on football and cricket. This focus will remain unchanged, however the additional facilities required should be co-located or embedded within the existing structure to maintain and strengthen the primacy of the existing structure.

The tennis courts and associated amenities operate independently of the Grandstand. It is appropriate that this approach be maintained. There needs to be sufficient separation between the structures such that they both have a visible 'front door' and can operate independently at the same time.

The Community Room is not related to the sports operations and can and should have the ability to operate independently. The natural focus of the Community Room is the gardens and this relationship and orientation should be strengthened with a clear address to the gardens.

8.2 General Design Considerations

Considerations	Response
Design Quality	Demonstrate high quality design. The built environment is to be physically sound and durable. It must use quality materials and construction techniques, finished to a high standard. Materials and their functional application on site are to satisfy accepted norms for environmental practices. Meet all statutory and regulatory obligations and relevant government policies.
Heritage	Design to be in accordance with the conservation management plan policies for the Edinburgh Gardens. Built outcomes must ensure the retention of heritage significance of the Grandstand and Edinburgh Gardens with consideration given to the reversibility of works and working in disturbed areas where possible.

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Sustainability	Deliver environmentally sustainable outcome to meet the City of Yarra design standards for project of this type and scale.
Functionality	Deliver the functional requirements well, so that the experience of the sporting and community activities and the building works is convenient, safe, efficient and fit for purpose.
Safety and access	<p>Improve the security for people traversing or attending activities in the precinct.</p> <p>Create a safe site for all stakeholders, visitors, public, project team and the environment during delivery and operation.</p> <p>Provide equality of access to the buildings, landscape and services for people of all abilities to meet accessibility standards and demonstrate inclusive practices.</p>
Public realm	<p>The place must be knowable and discoverable.</p> <p>Amenities that facilitate and support use of the gardens by the community are to be included in the works (e.g. public toilets, water fountains, seating, waste management).</p>
Landscape/Urban Design	<p>Deliver a quality landscape that meets the needs of both passive and active recreation users.</p> <p>Incorporate ESD principles including Water Sensitive Urban Design (WSUD) and rain water harvesting into the design.</p>

8.2.1 Heritage considerations

The *Edinburgh Gardens Conservation Management Plan* policies provide an overall framework for the retention of significance. It is acknowledged that the CMP will undergo a process of review and renewal in the next 6 months. Based on the current CMP the applicable general policies are as follows:

Use and Public Access

1. *Future use of the place should have regard for those factors which have been identified in the statement of significance as contributing to its significance and should not detract from the identified cultural significance of the place.*
2. *The Edinburgh Gardens should be maintained as a place of passive recreation and social interaction. Accordingly, public access should be maintained at all times. Existing active recreation areas may be retained and a range of passive recreational uses and activities should be permitted within the Gardens. Activities which have potential to affect the fabric of the Gardens should be discouraged.*

Adaptation and New Works

1. *Adaptation of and new works to significant elements should not detract from the overall cultural significance of the place.*

New Buildings and Elements

Any new buildings and elements should be carefully sited and be of an appropriately understated scale, form and design. Anything which has the potential to dominate the landscape of the Gardens should not be contemplated.

Parking

Parking should generally be confined to the surrounding streets other than for service vehicles engaged in activities associated with events or buildings.

The following specific conservation policies for built elements are also applicable:

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Grandstand

1. *Retain and conserve the Grandstand in its current location in conjunction with the Peterson Oval and its environs.*
2. *Install and maintain fire detection and security lighting throughout the grandstand.*
3. *Adapt and alter the area under the grandstand as required.*

Community Hall

Retain or remove the community hall as required.

Tennis Club and Courts

1. *Retain or remove the tennis club facilities as required.*
2. *Retain and conserve the tennis club pavilion to the extent of its early twentieth century form and fabric.*

Bocce Court

Retain or remove the bocce court facilities as required.

Path System

1. *Retain and maintain the formal pathway layouts and surface treatment.*

Sundry Items

1. *Maintain an adequate level of general lighting.*
2. *Retain and maintain or replace the garden furniture as required.*
3. *Introduce new sporting infrastructure only if it does not adversely impact on heritage values.*

Avenue Plantings

1. *Retain Elm and Oak avenues.*

8.2.2 Sustainability

The City of Yarra is committed to embedding ESD principles in the creation, renewal and demolition of Council owned and managed buildings.

The ESD Buildings Policy sets out minimum standards. In the context of climate emergency, consideration is made to building new buildings to the best standard of sustainability possible with a focus on reducing energy consumption and greenhouse gas emissions. This project is considered a Major New/Major Upgrade and therefore the aim is to achieve **6 Star Green Star**.

Specific initiatives which need to be embedded in the design are outlined as follows.

Maximise Solar - the roof design must be considered from the start to maximise solar panel space. This includes the roof design but also the placement of roof penetrations which can hinder solar panel installation. As the site will be active at night and require lighting the scope should include a battery storage system to run the evening operations.

No Natural Gas – Disconnect gas from the site and all appliances to be high efficiency electric.

Design for Climate Change – Design for more extreme weather events that are forecast with climate change, particularly heavy rain.

Back-up power mode for power outages – Enable the site to run in 'island mode' utilising battery storage system.

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8.2.3 BCA

A full Building Code Review is required at schematic design stage to establish the design parameters for the project. The design is to comply with the deemed-to-satisfy requirements of the BCA unless otherwise varied through an alternative solution or dispensation provided by the Building Surveyor.

The building occupancy for both the Grandstand and Tennis Pavilion as defined in the BCA is Class 9b Public Assembly and on this basis the minimum type of construction required is Type B.

The Grandstand is currently protected with an automatic sprinkler system due to the existing structure being timber and no fire separation between floors. This is to be retained. It is assumed fire compartmentation will be required between the Grandstand and any new structure and will need to achieve FRL 120/120/120. Consideration should be given to extending the automatic sprinkler system to any adjoining structure to simplify the fire resistance design.

Should works, including alterations or adaptation to the Grandstand, exceed by more than 50% volume of the existing building, allowance should be made for assessment of and implementation of seismic strengthening of the structure.

8.2.4 DDA

Provide disability access in accordance with the Federal Disability Discrimination Act, Victorian Disability Act, the Disability Standards and other Australian Standards. This includes upgrading the Grandstand to meet current standards, including providing lift access to the mezzanine and upper level of the stand.

8.2.5 Hazardous Materials

The following reports have been provided by the City of Yarra to inform the project:

- Division 6 Hazardous Materials Assessment Edinburgh Gardens Alfred Crescent Fitzroy North, Victoria (Prensa, May 2019)
- Preliminary Soil Contamination Assessment Edinburgh Gardens Fitzroy North, Victoria (Prensa, June 2019)
- Soil Management Plan Edinburgh Gardens Fitzroy North VIC 3068 (Prensa, June 2019)

Due to the works carried out to the Grandstand within the last 15 years, hazardous materials remediation has been carried out. It is possible there may be latent, undetected areas of contamination which could only be identified by destructive investigation.

Asbestos

- Non-friable asbestos in the form of upper wall and ceiling linings to the main room of the tennis club pavilion
- Non-friable asbestos in the form of wall cladding within the toilets of the tennis club pavilion
- Non-friable asbestos in the form of wall cladding to the exterior of the tennis club pavilion
- Non-friable asbestos within the external west side gable end

Synthetic Mineral Fibre (SMF)

No suspected SMF materials were identified at the time of the assessment.

Polychlorinated Biphenyls (PCB)

No PCB containing capacitors were identified or suspected during the assessment.

Lead containing paint (LCP)

No LCP was identified or suspected during the assessment.

Ozone Depleting Substances

No ODS containing air conditioning units were identified or suspected during the assessment.

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Soil Contamination

Contamination was identified within the fill at the site to a depth of 1m below ground.

A *Soil Management Plan* has been prepared to guide the management of the soil contamination by Council and Contractors.

Consideration should be given during the design phase to the necessary on-site stockpiling and remediation of any excess soil prior to reuse on site or removal as Industrial Waste. Preferably the soil should be remediated and reused on site.

8.2.6 Arts Strategy

In accordance with the Arts and Cultural Strategy opportunities for an imbedded commissioned arts piece as part of the building and landscape works is to be included in the project. This is to be funded by allocating 1% of the total project budget.

8.2.7 Bicycle parking

Provide bike parking hoops and/or pole vault hoops in appropriate locations adjacent to the Tennis Club, Community Room and Grandstand entries. Locate in position where the hoops are visible to minimise casual vandalism and theft.

8.2.8 Crime Prevention Through Environmental Design

The design should manage the ongoing safety of all users of and visitors to the precinct through implementation of CPTED principles when developing the urban design, landscaping and building designs.

This should include engagement at an early stage with Community Partnerships, Recreation and Open Space, Engineering Operations, Asset management, Urban Design, Arts and Cultural Services and Family Youth and Children's Services.

Opportunities for graffiti are to be minimised through selection of materials that can be easily maintained and cleaned, minimise opportunities for climbing, or alternative treatments such as commissioning of murals.

8.2.9 Public Toilets

Public toilets that are accessible to users of the Edinburgh Gardens are to be integrated into the design. This should include provision of gender-neutral public toilets to ensure convenience for LGBTIQ groups, families with young children and elder people with carers. The design of the facility should:

- Not allow any concealed areas that could be used for inappropriate congregation or loitering or hiding drugs
- Avoid provision of barriers or vision screen at the entry to provide a clear view of the interior and cubicles from the external public space
- Provision of lighting inside and outside the toilets for clear visibility
- Installation of sharps disposal units to avoid littering of syringes
- Use fresh and appealing colours for the walls and flooring and utilise impermeable materials that minimise maintenance requirements and reduce odour
- Provision of natural light through skylights to minimise use of artificial lighting during the day. Use low energy lighting such as LED or solar powered lighting or sensor lights for interior use
- Provision of natural ventilation to minimise use of energy
- Consider measures to minimise water usage in the self-cleaning process of the automated toilets
- Have access to a designated parking bay for people with disabilities should be considered. If it is not possible to do so, the shortest, most convenient and uninterrupted path of travel that complies with Australian standards should be provided from the car to the facility

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- Provide required clearances around the facility for access for people with disabilities and maintenance personnel
- Provision of clear, inclusive and informative signage to include direction, distance (including nearest disability accessible toilet), opening hours and telephone number to contact. Signage for people with vision impairment should also be provided
- Inclusion of graphics and visual symbols to serve the culturally and linguistically diverse (CALD) communities
- Provision of additional facilities like parent rooms, baby change tables and changing places facilities for people who have special access requirement should be considered based on the location and availability of space. It is important to consider provision of baby changing places facilities in both men and women toilets, if they are provided separately
- Provision of 24-hour access to facilities closer to important public transport nodes which also serve the homeless community may contribute to addressing anti-social behaviours
- Provision of wider doorways to ensure access of mobility devices such as wheelchairs and mobility scooters
- Provision of semi-automatic doors which allows for both automatic and manual functions

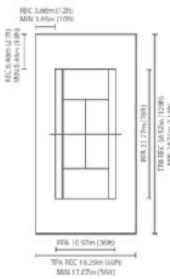
8.3 User Requirements

Element	Detail
Operating Hours	<p>Community Room</p> <p>7:00am to 10:00pm Sunday – Thursday</p> <p>7:00am to 11:00pm Friday, Saturday</p> <p>Tennis Club</p> <p>7:00am to 9:30pm</p> <p>Grandstand</p> <p>As required by sporting club operations</p> <p>Evening functions to close by 10:00pm Sunday – Thursday, 11:00pm Friday and Saturday</p>
Access/Security	<p>Tennis Club – ‘Book A Court’ gate access technology (keypad).</p> <p>Grandstand – access by keypad</p> <p>Community Room – access by keypad</p> <p>Open Access to all public toilets, Grandstand seating</p> <p>Privileged Access to social spaces, plant areas, grounds maintenance store, individual club storage areas, community storage spaces.</p> <p>Open access = space is publicly accessible standard operating hours</p> <p>Privileged access = space is unlocked by Club/Hirer/Council management (i.e. key pad/key access)</p>
Food and Beverage	<p>Reheat kitchen for Community Room and Club Social Room. Staffed by external caterers or volunteers.</p> <p>Reheat Kitchen equipment to include commercial scale combi ovens, steamer, hot plates, fryer, pot wash sink, commercial dishwasher, ice machine, benches (fixed and mobile), refrigeration and freezer (drinks, consumables), equipment storage, kitchen exhaust, hand sinks.</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Element	Detail
	<p>Kiosk for Tennis Club and Grandstand. Staffed by volunteers.</p> <p>Grandstand Kiosk equipment to include pie warmer, microwave, sink, refrigeration (drinks fridge), bench, coffee machine, Zip unit for hot water, cash drawer, sufficient bench space for equipment and service, storage for consumables, display space for consumables, hand sink, space for ice-cream freezer.</p> <p>Tennis Club kitchen/kiosk equipment to include oven, sink, microwave, refrigeration, dishwasher, bench, Zip unit for hot water, sufficient bench space for service and storage for consumables, hand sink, cash drawer.</p> <p>Community Room will not be a licensed venue. Hirers must apply for a temporary limited license if they intend to sell alcohol or submit a Partysafe form to Victoria Police if they wish to supply alcohol free of charge to guests or allow guests to bring their own alcohol.</p> <p>Club Social Room will have a bar facility integrated which can be locked off from the room when required.</p> <p>It is preferred the participating Clubs have achieved Good Sport Level 3 certification and have a Good-Sports alcohol management policy in place.</p> <p>Bar equipment to include refrigeration (drinks), sink, bench, hand sink, glass washer, ice machine, Zip unit for hot water, cash drawer, coffee machine, storage for glasses, consumables, bench space for service.</p>
Audio visual	AV setup for presentations to Community Room, Meeting rooms, Club Social Room comprising LED screen, computer, projector, screen, MATV.
Maintenance	Technical maintenance will be required for audio visual installations.
Staffing	<p>Management of Community Room and associated meeting rooms will be through Council Booking system and managed by Venues and Events.</p> <p>Management of Tennis Club and Club Social Room will be through specific agreements entered into by sporting clubs with Council.</p>
Storage	<p>Suitable storage for function spaces, within close proximity, and door opening spans to accommodate furniture as selected for the space.</p> <p>Suitable storage for community groups who regularly utilise the community room in close proximity to the room.</p>
Services	<p>Heating/Cooling to function spaces, meeting rooms. Ability to have each function space zoned and operated independently, if there's multiple different events being run concurrently e.g. HVAC, Lighting, AV, Electronic Security, Physical Security. All these systems must allow for individual space operation not 'all on or all off'.</p> <p>Kitchen exhaust, mechanical exhaust to bathrooms.</p> <p>CCTV to public areas.</p> <p>WAP (internal/external) throughout.</p> <p>External power provisions.</p> <p>External tap for pop-up coffee cart, BBQ.</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Element	Detail
	Recycled water for toilet flushing – water tank on site.
Waste management	<p>Waste management (standard + food waste) is to be integrated into the design and provide best practice sustainable management of waste streams based on Yarra City Council <i>Waste Minimisation and Resource Recovery Strategy</i>.</p> <p>Develop and implement a specific bin infrastructure strategy for the precinct that includes education and engagement with the sporting clubs and regular hirers of the Community Room.</p>
Wayfinding	<p>Signage at Brunswick Street to indicate vehicular/pedestrian access to the Grandstand, Tennis Club and Community Room.</p> <p>Desirably the path is 'named' to provide a formal address to the precinct to facilitate deliveries.</p>
Furniture	Flexible, ergonomic furnishings (tables, chairs) within all function spaces to suit maximum capacity.
Tennis Courts	<p>8 courts delivered to comply with recommended court dimensions for club play of 34.77 x 17.07m.</p> <p>Run-off at back of court: 5.48m</p> <p>Run-off at side of court to fence: 3.05m</p> <p>Minimum distance between two courts (unfenced): 3.66m</p> <p>Recommended distance between two courts (unfenced): 4.27m</p> <p>Surface: En-Tout-Cas and Synthetic Clay</p> 
Landscape furniture	<p>Grandstand south side: Drinking fountains, external lighting, bicycle hoops, seating for spectators, standing space for portable BBQ in close proximity to Grandstand Kiosk window.</p> <p>Community Room: Casual fixed seating and lighting in landscaped area in proximity to room for indoor/outdoor events.</p> <p>Tennis Club: Fixed BBQ with sink facility associated with Tennis Club Pavilion, lighting.</p> <p>Landscape generally: seating and lighting to support activation of new landscape areas.</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

8.4 Spatial Brief									
No.	Name of space	No. of people/ spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
TENNIS PAVILION									
1	Administration office	1 person	10m2/p	10	Principally for tennis club coach, operations, restringing, tournament management. Window to courts.	Tennis club areas	N	✓	✗
2	Tennis male change room			20	2 showers, 3 closet pans and 2 handbasins	Tennis club rooms, courts	N	✓	✗
3	Tennis female change room			20	3 showers, 3 closet pans and 2 handbasins	Tennis club rooms, courts	N	✓	✗
4	Tennis accessible change			10	1 shower, 1 closet pan, 1 handbasin, baby change table	Tennis club rooms, courts	N	✓	✗
5	Tennis club room (incl existing pavilion)	50 people	1.3m2/p	80	Tennis club space, views towards the tennis courts, incorporates the retained pavilion		N/EX	✓	✗
6	Kitchen/Kiosk (tennis)			20	Kitchenette level for food preparation, kiosk window to exterior, can double as tournament operation point	Courts, club room	N	✓	✗

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/ spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
7	Tennis storage			15	Permanent storage for merchandise, coaching equipment	Courts, club room	N	✓	✗
8	Tennis grounds storage				Direct access to tennis courts for spreader machine, ANTHS equipment, drag mats, brooms and sweepers, coaching baskets, ball machine, roller	Courts			
				12			N	✓	✗
Total				187					
Additional 30% allowance for circulation, etc.				243					
COMMUNITY PAVILION									
9	Community Room - Large	130 people	1.0m2/p	130	Bookable community room. AV facilities (projector, screen, LCD, whiteboard) Storage cupbards min 600mm deep to wall for user storage	Foyer, commercial kitchen, public toilets	N	✗	✓
10	Meeting/Conference room	30 people	2m2/p	60	Bookable meeting room for community, used by clubs for committee meetings. AV facilities (projector, screen, LCD screen, white board)		N	✓	✓
11	Store 1 - Community group storage			6	Store room with adjustable shelving, space for furniture and trolleys	Community Room	N	✗	✓

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
12	Store 2 - Venue and events			10	Shared storage for chairs, tables, white boards, community users lockable storage cupboards, AV cupboard	Community room, Club room	N	x	✓
13	Commercial kitchen			30	Kitchen for use by community, clubs own use or external caterers for event	Community room, Club room	N	✓	✓
14	Kitchen storage			8	Storage space associated with commercial kitchen use	Commercial kitchen	N	✓	✓
15	Public toilets - male	Design occupancy: 130 (assume 50:50 M/F)		10	Accessed from within the building only 1 closet pan, 1 urinal, 1 handbasin	Community room, meeting rooms	N	✓	✓
16	Public toilets - female	Design occupancy: 130(assume 50:50 M/F)		10	Accessed from within the building only 2 closet pans, 2 handbasins	Community room, meeting rooms	N	✓	✓
17	Public toilets - changing places toilet			14	Accessed from within the building only, baby change 1 closet pan, 1 handbasin	Community room, meeting rooms	N	✓	✓
18	Externally accessed public toilets	Design occupancy:		50	Publically accessible facility from building exterior	Exterior	N	✓	✓

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
19	Utility/cleaners	1000 (assume 50:50 M/F)			Male: 2 closet pans, 5 urinals, 4 handbasins Female: 8 closet pans, 4 handbasins Unisex DDA: 1 closet pan, 1 handbasin				
20	Cricket External Storage			5	Adjacent to kitchen and community room. Includes trough.	Commercial kitchen, community room	N		
21	Grounds curator storage			30	Permanent storage for training and match day equipment	Field	N	✓	✗
				20	Direct access to oval for roller, covers, equipment, secure for authorised access only. Roller door access.	Trafficable path to oval	N	✓	✗
Total				383					
Additional 30% allowance for circulation, etc.				498					
GRANDSTAND									
22	Change room 1	12 - 22 + trainers		30	clothing bag/hooks, bench seating around perimeter	Amenity room, Oval	EX	✓	✗
23	Amenity room 1	12 - 22 + trainers		25	3 cubicle showers, 4 toilets, 2 handbasins, seating within shower	Change room, Oval	EX	✓	✗

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
24	Change room 2	12 - 22 + trainers		30	cubicle, bench seating in general change area clothing bag/hooks, bench seating around perimeter	Amenity room, Oval	EX	✓	✗
25	Amenity room 2	12 - 22 + trainers		25	3 cubicle showers, 4 toilets, 2 handbasins, seating within shower cubicle, bench seating in general change area	Change room, Oval	EX	✓	✗
26	Change room 3	12 - 22 + trainers		30	clothing bag/hooks, bench seating around perimeter	Amenity room, Oval	EX	✓	✗
27	Amenity room 3	12 - 22 + trainers		25	3 cubicle showers, 4 toilets, 2 handbasins, seating within shower cubicle, bench seating in general change area	Change room, Oval	EX	✓	✗
28	Change room 4	12 - 22 + trainers		30	clothing bag/hooks, bench seating around perimeter	Amenity room, Oval	EX	✓	✗
29	Amenity room 4	12 - 22 + trainers		25	3 cubicle showers, 4 toilets, 2 handbasins, seating within shower cubicle, bench seating in general change area	Change room, Oval	EX	✓	✗
30	Umpire Room	2 - 6 people		25	Unisex change and toilet facility, 2 pans, 2 showers, 2 handbasins, change areas, path to oval side for run-out, 1 ambulant compliant	Oval	EX	✓	✗

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
					toilet cubicle, seating within shower cubicle, bench seating in change room, full-height partitions, power outlets near dryers for hair dryers, shelving near basin for personal grooming, sliding shutter doors to divide the space				
31	First Aid/Medical			15	Required for club management and assisting volunteers. Separate to club rooms. Incorporates first aid facilities including bench / stretcher area, sink and wash basin. Storage for first aid equipment.	Oval, change rooms	EX	✓	✗
32	Kiosk/canteen	2-3 volunteers		15	Cricket and Football club use - snack food and beverages on game days. Sink + separate hand basin. Power for coffee machines, pie warmer, refrigerator, microwave. View of field preferred.	BBQ area Spectator area Oval	EX	✓	
33	Cricket Storage			20	Storage of training and match day equipment, club equipment, merchandise	Club Room	EX	✓	✗
34	Football Storage (junior)			20	Permanent storage for training and match day equipment, merchandise	Field, club room	EX	✓	✗

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/ spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
35	Football Storage (senior)			20	Permanent storage for training and match day equipment, merchandise	Field, club room	EX	✓	✗
36	Club Social Room	100 - 150 people	1.3m2/p	130	Shared permanent club room for events, display club memorabilia, player meetings, training meals	Commercial kitchen, toilets	N	✓	✗
37	Social Room public toilets	Design occupancy: 150 (assume 50:50 M/F)		30	Male: 1 closet pan, 2 urinals, 2 handbasins Female: 4 closet pans, 2 handbasins Unisex DDA: 1 closet pan, 1 handbasin	Club Social Room	N	✓	✗
Total				495					
Additional 30% allowance for circulation, etc.				644					
Internal Area Total				1385					
EXTERIOR SPACES									
38	Verandah/spectator seating (tennis)			80	External shaded seating area overlooking courts		N	✓	✗
39	External covered area (cricket/football)			50	Existing grandstand (DDA access required)		EX	✓	✗
40	Social BBQ area			115	Tennis social area, within or adjacent to tennis club secure zone		N	✓	✗

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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

No.	Name of space	No. of people/spaces	Unit area (m2)	Total area (m2)	Notes	Related space	Existing or New	Club Use	Community
41	Timekeeping / scoring box			NA	Within Grandstand. Clear view of playing field. Preferably centred		EX	✓	✗
42	Interchange bench / coaches boxes			NA	On ground/oval. Temporary furniture storage within general storage area.		EX	✓	✗
43	Spectator area between Grandstand and oval			350	Seating, water fountain with dog bowl, BBQ area,		EX	✓	✓
44	Rubbish storage area			10	10 x 240L Wheelie bins 580x580mm, secure area, access to driveway for removal		N	✓	✓
45	Bike parking				14 Ground Mounted Hoops		N		
46	Carparking				2 DDA spaces, 2 spaces for admin/delivery		N		
	External Area Total			605					

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

8.5 Life cycle costs

The built project should be cost effective and efficient to maintain the ongoing condition of the assets included in the design solution.

Waste, water, energy and other resources consumption should be minimised wherever possible.

The assets linked to the design solution should have a minimum renewal period of 50 years.

8.6 Safety in design

The project is to be reviewed in all disciplines during the design phase for safety-in-design during construction and operation.

9.0 Concept Design

A concept design has been developed for the precinct based on the consultation outcomes and functional brief.

The design is described in the attached drawings included in Appendix A.

CD01/rev A	Site Plan	1:500 @ A1
CD02	Existing Floor Plan	1:250 @ A1
CD03/rev A	Demolition Plan	1:250 @ A1
CD04/rev A	Proposed Floor Plan 8 Courts Option	1:250 @ A1
CD05/rev A	Proposed Floor Plan 7 Courts Option	1:250 @ A1
CD06	Grandstand Proposed Plans	1:200 @ A1
CD07	Proposed Landscape Concept	1:250 @ A1

9.1 Design approach

The design provides a site master planning approach for the redevelopment of the precinct. The key principles that have generated the design approach are:

- Maintaining and enhancing the historic relationship of the Grandstand to the Oval
- Restoring and adapting the Grandstand to meet the operational needs of the Cricket and Football Clubs, maintaining it as the principal sports related facility at the oval
- Providing a new fit-for-purpose Tennis Club building that incorporates the heritage Pavilion
- Constructing 8 new tennis courts (sized to achieve compliance with 'Club' level standards as stipulated by Tennis Australia)
- Constructing a new Community Room and associated public facilities on the north side of the Grandstand with a focus and connection to the gardens, enabling activation of the landscape to the north of the Grandstand and removing programmatic conflicts thereby achieving equity between the sports and community uses/users of the precinct
- Improved and activated landscape to the north side of the Grandstand and between the Grandstand and Oval that can be shared with and occupied by the Edinburgh Gardens community
- Integration into existing path network of the precinct and elimination where possible of the pedestrian/car conflicts
- Maintaining historic links to Bowling Club.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

9.1.1 Grandstand

The Grandstand has been progressively altered and adapted to suit the changing needs of cricket and football since it was erected in 1888. Retention of the building as an operating and occupied facility is an essential design action to ensure it remains connected and relevant to the sporting activities in this precinct.

The ground floor undercroft which fronts the oval remains the place for the activities that directly service the players and their access to the oval including change rooms including amenities (toilets, showers), umpire rooms, first aid and the kiosk.

The existing mezzanine level, which is hardly used, with improved access is the logical location for storage of equipment.

Including a new social room within the grandstand that surveys the oval within the rear section of the tiered spectator stand area can be sensitively managed by back lighting the glazed space, enabling the pavilion roof to retain the appearance of a floating element and diminishing the solidity of the new space.

Activation of the stand will alleviate the impact of rough-sleeper occupancy that is incrementally deteriorating the fabric and increasingly impacting the safety of users of the precinct.

Given the primary relationship and presentation of the building is to the oval, any opportunity for expansion is restricted to the rear, north side of the Grandstand which has always operated as the back-of-house area.

Carefully sculpted the addition can provide the necessary compliance upgrade the Grandstand requires (lift, public toilets, waste management, ground curator store), while integrating the community activation of the precinct by introduction of a new community room. Focusing activity to the north of the Grandstand will provide a degraded landscape with renewed purpose and focus, encouraging activities and improving the safety in this area of the gardens.

The community room is a necessary inclusion within the precinct. It provides an amenity that other community facilities can't replicate, chiefly because it is located within a landscape that provides an appealing aspect, has separation from the harder edge of the suburb and provides opportunities for an internal/external activity which is valued by most users. By co-locating it with the sports activities there are opportunities for crossover use when events or activities arise that need the expanded space.

By pairing it with the Grandstand, there are opportunities for services to be centralised and amenities to be shared.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

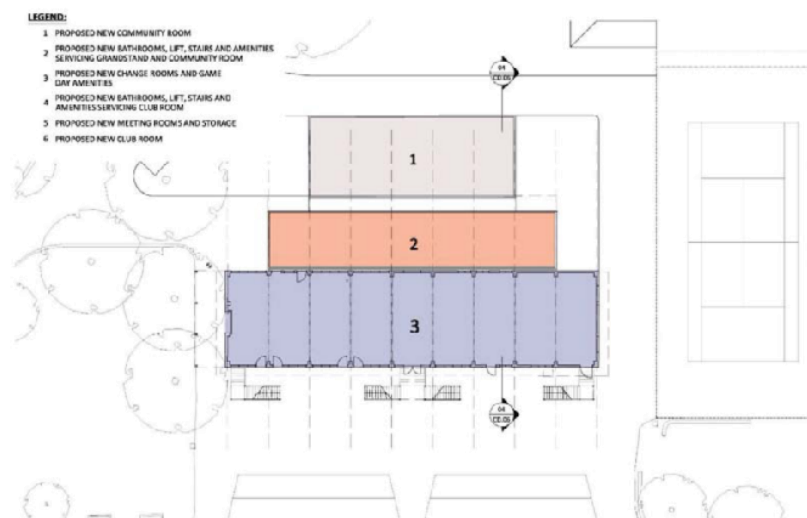


Figure 17 Proposed ground floor plan

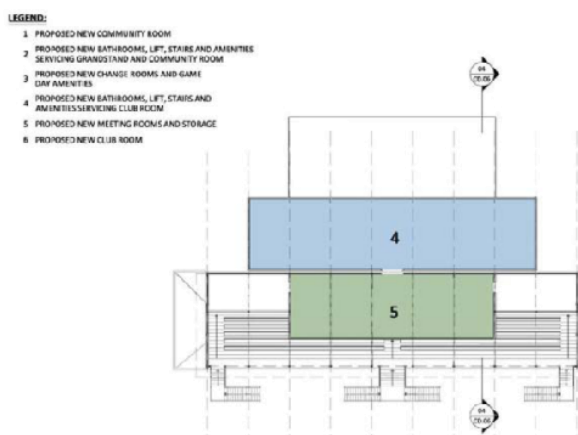


Figure 18 Proposed mezzanine floor plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

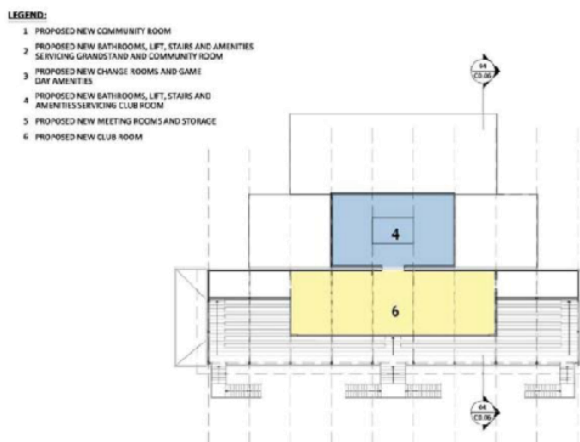


Figure 19 Proposed first floor plan

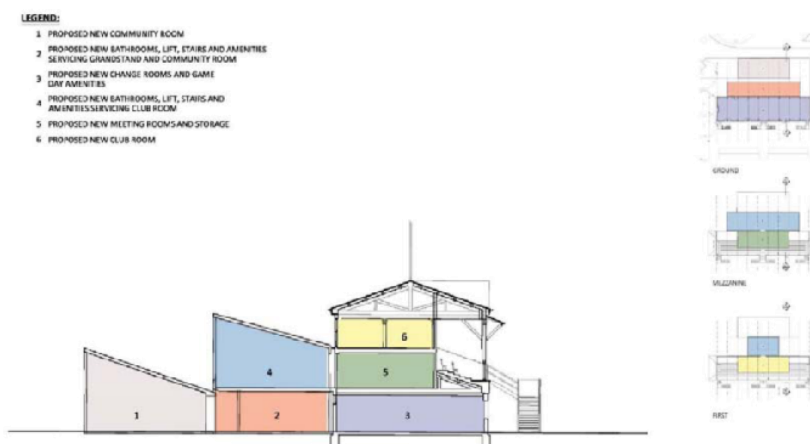


Figure 20 Proposed section A

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

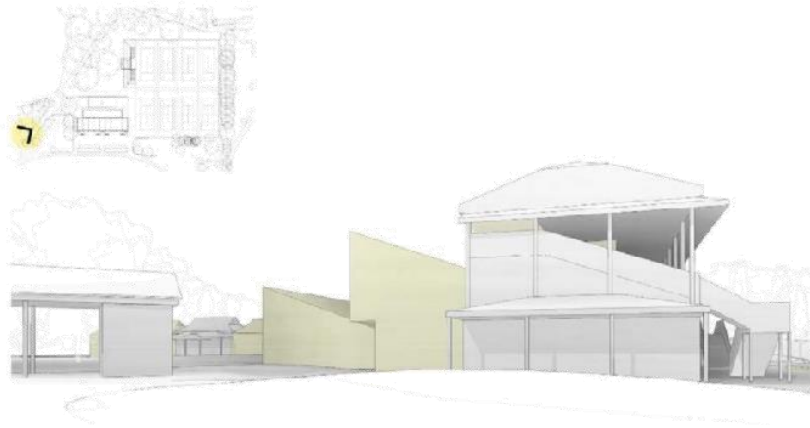


Figure 21 View from Brunswick Street entrance



Figure 22 View from oval

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

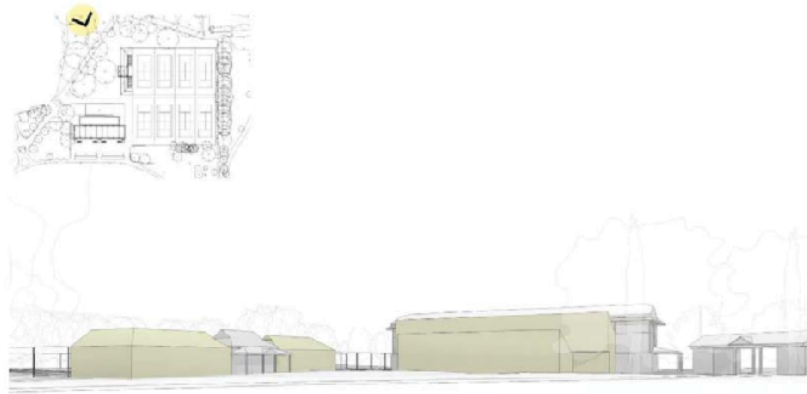


Figure 23 View from gardens

9.1.2 Tennis Club

The existing tennis courts and tennis club amenities are compromised and non-compliant and therefore complete replacement is the preferred approach. This design resolves the increased demand for courts by sensitively integrating additional courts and a new Clubhouse within the precinct.

The design incorporates the retention and relocation of the earlier Pavilion club room, suggesting it become the central focus of the new clubroom development.

9.2 Landscape

To accommodate the expanded area for the tennis courts, an existing path and some of the avenue planting to the north of the courts will be removed. The courts are significantly restricted by this path and the 'left over' landscape is poorly presented and occupied as a result. The loss of the path will allow for a new landscape around which the tennis pavilion and Community Room pivot, a space that can be activated by the users of these spaces, or independently by the Edinburgh Gardens community. It is envisaged to be a space that welcomes active or passive, quiet occupation depending on the season or time of day. The landscape needs to enhance the perception of and actual safety of the public and this will be done through lighting, clear view corridors and the passive surveillance the activated buildings will offer this corner of the gardens.

The area between the oval and Grandstand will be regenerated as a friendlier space for viewing and game day activities, and casual use of the oval including water fountains and new seating. Landscaping elements will desirably reference the original terraced tiers that originally formed the apron to the Grandstand and be designed to withstand the heavy occupation of this space by players and spectators.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Figure 24 Proposed landscape concept

9.3 Construction phase operations

It is envisaged that the oval would continue to operate during the redevelopment works and portable temporary facilities would be located adjacent to the oval to meet the demand of the Clubs. Consideration will need to be given to a shutdown period for the tennis club, possibly during the winter months to enable the complete replacement of the courts.



Figure 25 Lords Cricket Pavilion, an example of a pavilion with a 'floating' roof.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



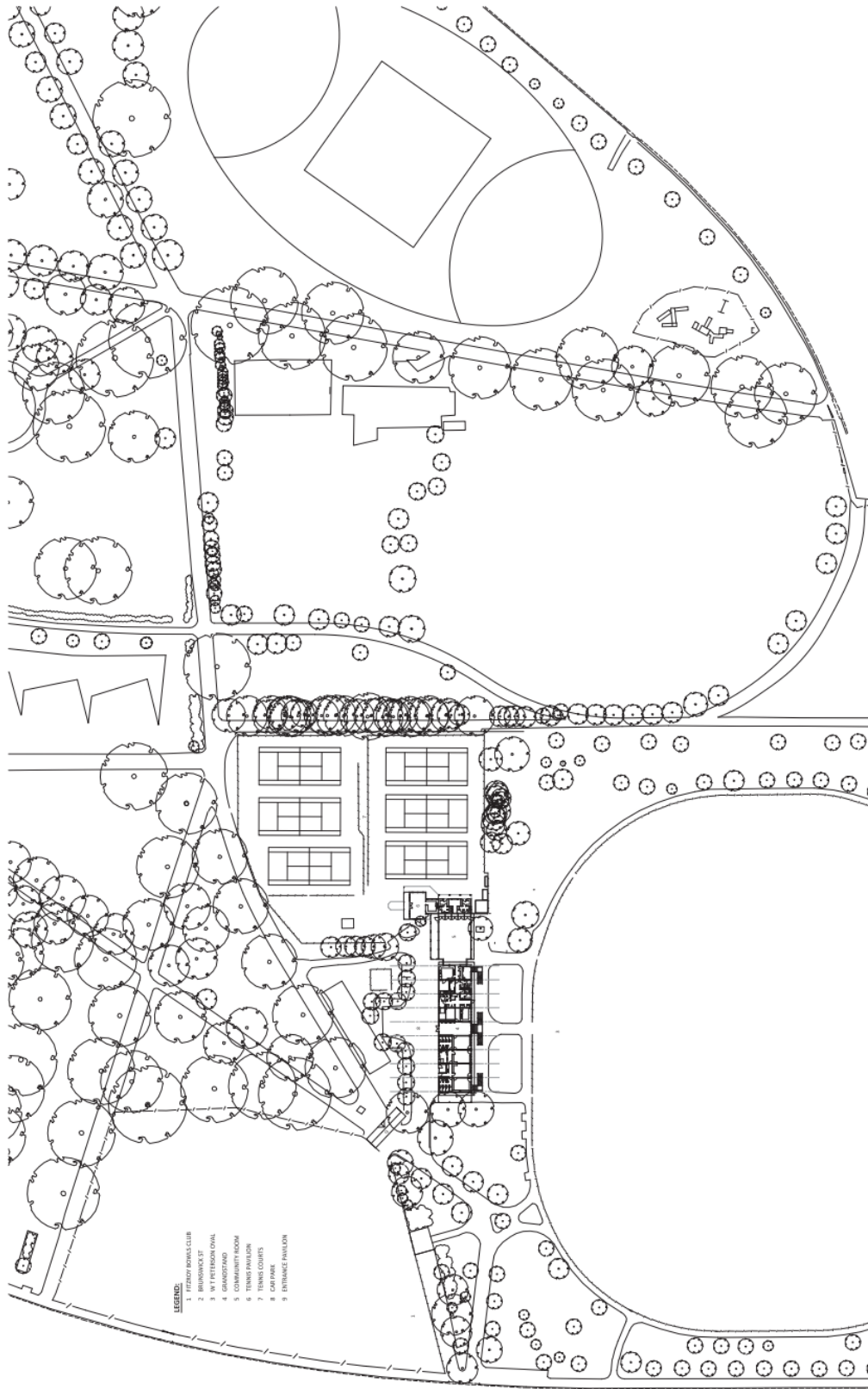
Figure 26 Sydney Cricket Ground pavilion, showing an enclosed social space in the tiered seating, enveloped by seating. Backlit the room disappears.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

APPENDIX A ARCHITECTURAL DRAWINGS

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

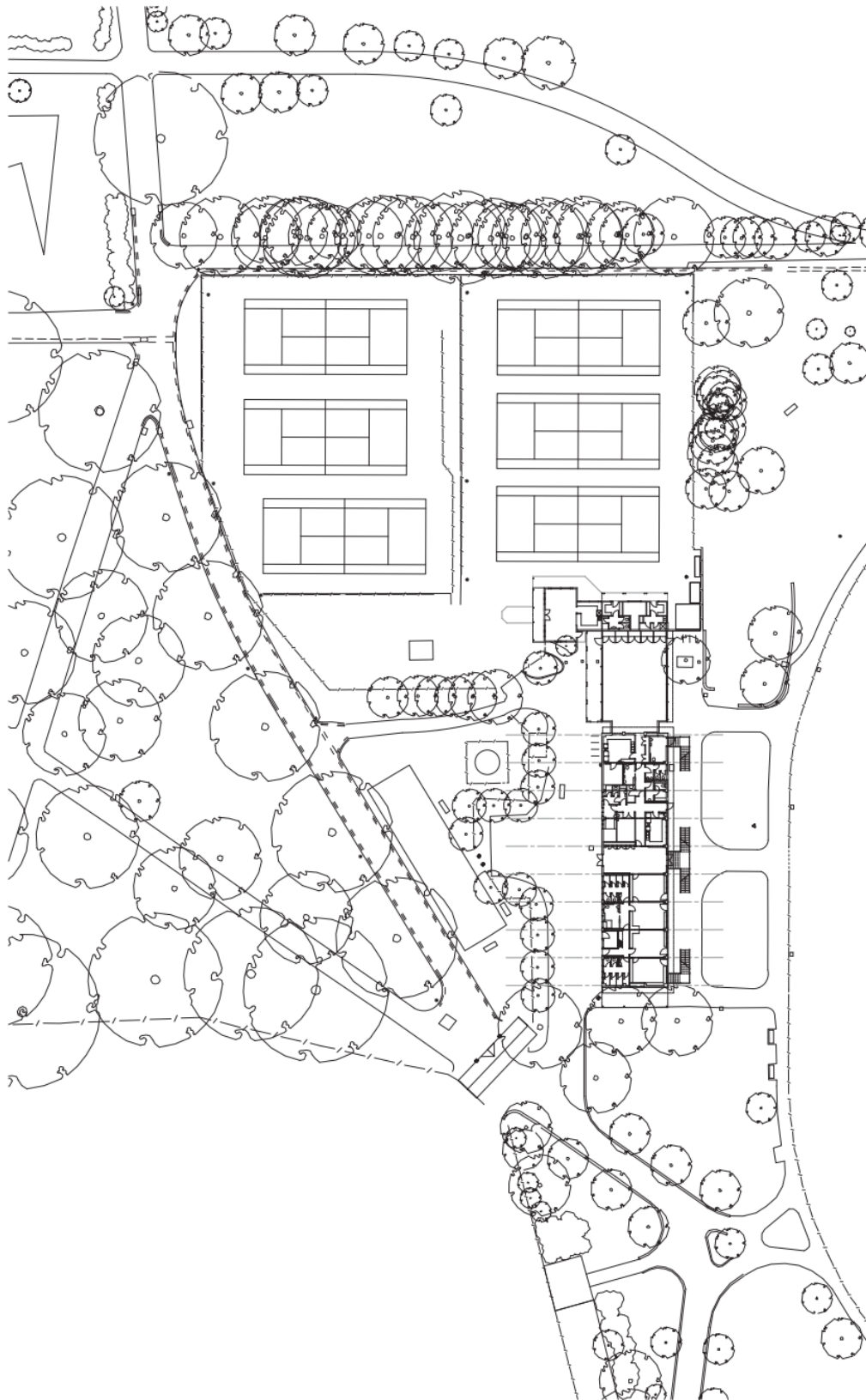
Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



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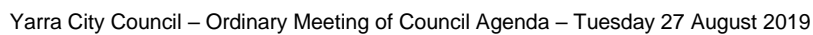
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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

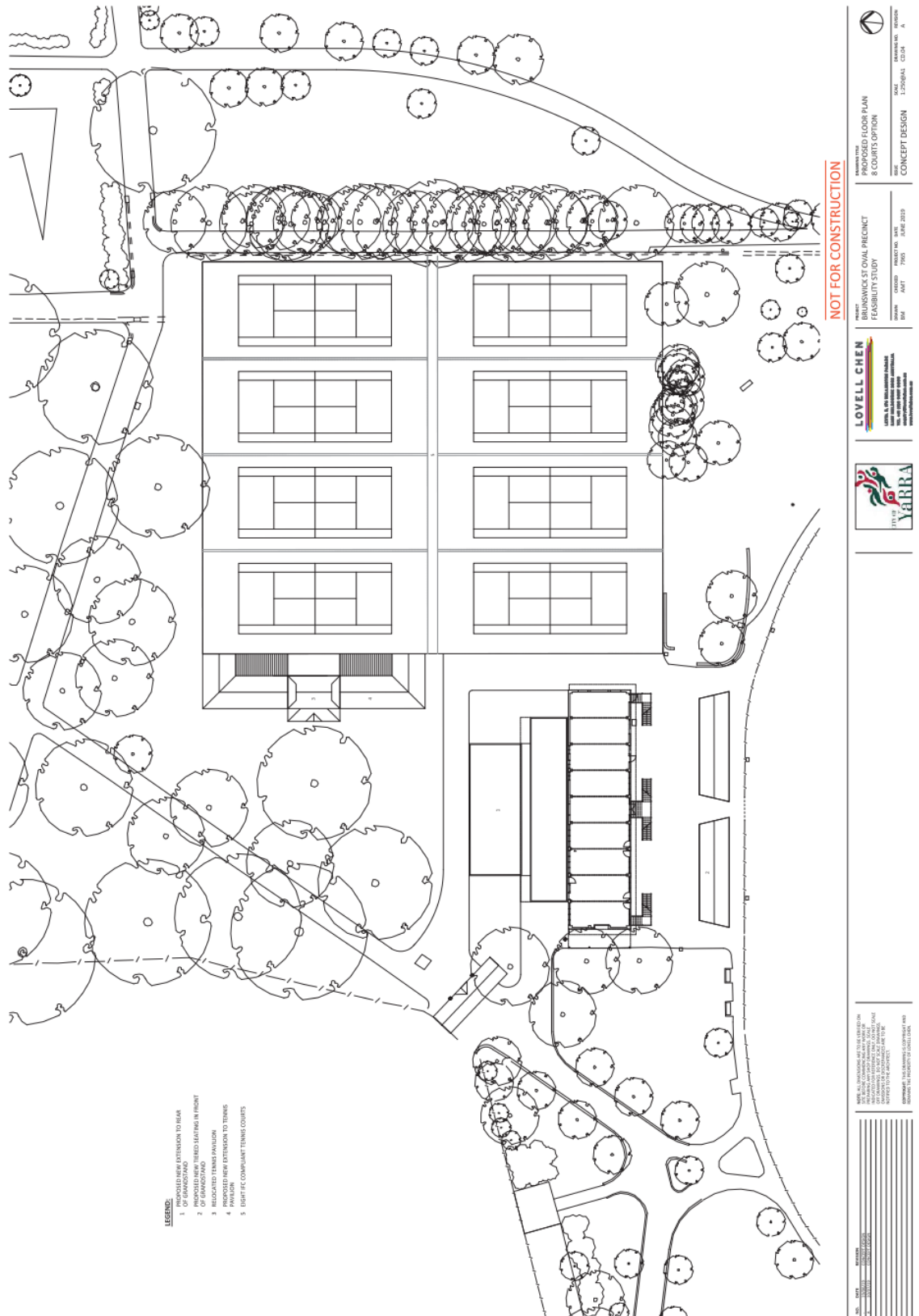


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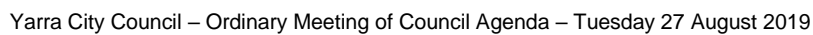
	<p>BRUNSWICK STREET OVAL PRECINCT FEASIBILITY STUDY</p>	<p>LOVELL CHEN ARCHITECTS 100/102 BRUNSWICK STREET MELBOURNE VIC 3000 TEL: 03 9412 1234 WWW.LOVELLCHEN.COM.AU</p>	<p>EXISTING FLOOR PLAN</p>	<p>CONCEPT DESIGN</p>
<p>DATE: 2019/08/27 DRAWN: [Name] CHECKED: [Name] APPROVED: [Name]</p>	<p>PROJECT NO: 1234567 SHEET NO: 1 OF 1</p>	<p>DATE: 2019/08/27 DRAWN: [Name] CHECKED: [Name] APPROVED: [Name]</p>	<p>PROJECT NO: 1234567 SHEET NO: 1 OF 1</p>	<p>DATE: 2019/08/27 DRAWN: [Name] CHECKED: [Name] APPROVED: [Name]</p>



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan







Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



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BRUNSWICK STREET OVAL PRECINCT

PROPOSED LANDSCAPE CONCEPT

CONCEPT PLAN

DATE: 1.25.2014
DRAWN BY: JACOB
CHECKED BY: JACOB
DATE: 1.25.2014

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

APPENDIX B STAKEHOLDER CONSULTATION FRAMEWORK


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

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Brunswick Street Oval Precinct Project – Consultation Framework

Stakeholder	Consultation Methodology	Date/Time	Location	Consultant/Client Attendees	Connection
EGSC Clubs					
Edinburgh Cricket Club	Meeting with club appointed representatives	16 April 2019	Board Meeting	Anne-Marie Treweek Stuart Whiley, President Brad S Shadbolt, Vice President Jane F Seeber, Secretary Nathan Hudson, Treasurer Nick Ward, Non-Executive Director	Sporting clubs that regularly utilise the precinct facilities
Fitzroy Football Club	Meeting with club appointed representatives	9 April 2019	Board Meeting	Anne-Marie Treweek Joan Eddy, President Kate Nolan, Vice President Michael Smale, Treasurer Sharon Torney, Secretary Gabrielle Murphy, Director Michael Pickering, Director Rob Olney, Director David Leydon, Director	
Fitzroy Junior Football Club	Meeting with club appointed representatives	17 April 2019	Board Meeting	Anne-Marie Treweek Phil Murdoch, President Matt Drew, Coaching Director Andy Hogan, Infrastructure	
Fitzroy Tennis Club	Meeting with club appointed representatives	24 April 2019	on site	Anne-Marie Treweek Kerry Irwin, Manager Recreation and Leisure Viviane Harangozo, President Sarah-Jane Beavitt, Secretary Cheryl Coughlin, Vice-President Charles Tinney, Committee Michelle Stephens, Committee and Juniors Comp organiser Georgina Ashby, Committee Luke Devlin, Head Coach at Racquet Lab Wayne Stephens, member Nell White, member Chris Canavan, member Liz Morrow, member John Morrow, ex-member Jenny Clark, member and ex-president	
Edinburgh Gardens Community	NOTE: Requires 6 week lead in time to prepare key messaging and questions for the community, printed collateral, website etc.				
Public consultation	Your Say Yarra Project page https://www.yoursayyarra.com.au/	4-week consultation 23 April – 21 May 2019	YCC website		General public who use the Edinburgh Gardens, or precinct facilities
Public consultation	On site engagement activity	6 May 2019 3:30-6:30pm	on site	Anne-Marie Treweek Steven Jackson, Coordinator Recreation Kerry Irwin, Manager Recreation and Leisure Ann Limbrey, Senior Project Manager Buildings YCC Comms staff	
Italian Fitzroy Senior Citizens	Meeting	Wednesday 15 May 2019		Anne-Marie Treweek Ann Limbrey, Senior Project Manager Buildings Vincenzo Gaetano Barestra	Community group who use facilities
Positive Attitude Community Group	Invitation to community consultation on site	6 May 2019 3:30 – 6:30pm	on site	Anne-Marie Treweek Steven Jackson, Coordinator Recreation Kerry Irwin, Manager Recreation and Leisure Ann Limbrey, Senior Project Manager Buildings YCC Comms staff	Community groups who regularly use facilities
Yarra Girl Guides					
Friends of Baucau					
Dance Therapy Association of Australia					
PNG Wontocks					
The Devonshire Society					

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

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Stakeholder	Consultation Methodology	Date/Time	Location	Consultant/Client Attendees	Connection
Council Agencies/Stakeholders					
City of Yarra	Face to face meeting Lovell Chen to provide agenda	Thursday 28 March 2019 10:30 – 11:30am	345 Bridge Road, Richmond	Anne-Marie Treweek Steven Jackson - Coordinator Recreation Kerry Irwin - Manager Recreation and Leisure Graham Davis - Manager Building and Asset Management Peter Moran - Coordinator Construction & Development Ann Limbrey - Senior Project Manager Glen Williams – Coordinator Streetscapes and Natural Values Blake Farmer-Bowers – Coordinator Recreation Michael Ward – Engagement Advisor – Housing and Homelessness	YCC staff who facilitate the use of the amenities, provide programmes or services that result in use of the buildings, or have carriage of the maintenance of the facilities
City of Yarra	Meeting on site	Tuesday 2 April 2019 2:00 – 3:00pm	On site	Steven Jackson - Coordinator Recreation Ann Limbrey, Senior Project Manager Buildings Patrick Orr – Coordinator Service Contracts Anne Polites-Bitta	
City of Yarra	Face to face meeting	Tuesday 9 April 2019 2:00 – 3:00pm	Collingwood Town Hall	Adrian Murphy – Manager Age & Disability Cheryle Gray – Coordinator Community Planning Frances Moloney – Coordinator Positive Aging Bridie Jones – Venues Coordinator Venues and Events	
External Stakeholders					
John O'Brien, Sports and Recreation Victoria	Phone interview	TBC		Anne-Marie Treweek	
Kirsty Reedy, Women in Sport	Phone interview	TBC		Anne-Marie Treweek	
Ken Barton, Tennis Victoria	Review information already provided			Anne-Marie Treweek	
Edinburgh Gardens Bowls Club	Meeting	TBC		Anne-Marie Treweek Dobe Newton Nikita Boon	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

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Stakeholder	Consultation Methodology	Date/Time	Location	Consultant/Client Attendees	Connection
Statutory Authorities					
Heritage Victoria	Pre-application meeting	On completion of concept design	On site	Anne-Marie Treweek Suzanne Zahra Ann Limbrey Kerry Irwin	Permit authority
Yarra City Council Statutory Planner and Heritage Advisor	Pre-application meeting	On completion of concept design	YCC	Anne-Marie Treweek Suzanne Zahra Ann Limbrey Kerry Irwin	Permit referral authority

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

APPENDIX C EDINBURGH GARDENS TENNIS COURTS AUDIT & LIGHT LEVEL REPORTS

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

EDINBURGH GARDENS TENNIS COURTS

COURT AUDIT



Client	City of Yarra
Site	Edinburgh Gardens
Location	Fitzroy North
Auditor	Landscape & irrigation Services
Audit date	20 May 2019

Site Summary	
Total number of enclosures	2
Total number of courts	6
Total number of floodlit courts	6
Total number of enclosed mini courts	Nil
Hierarchy	Club/Recreation

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

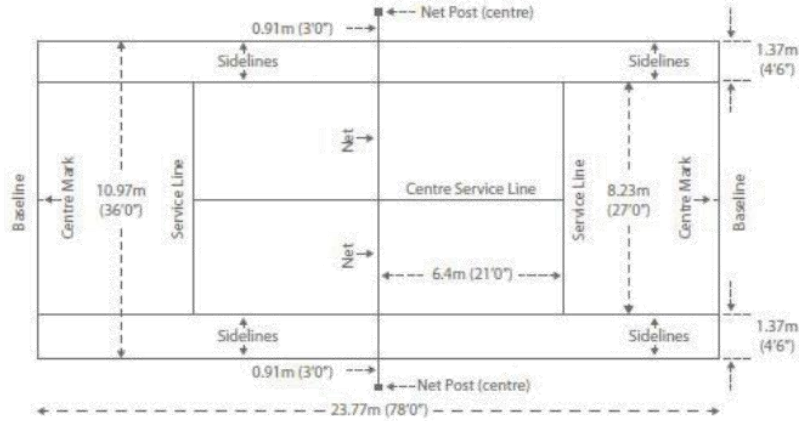
BACKGROUND & OBSERVATIONS

The following indicate Tennis Australia's minimum requirements for tennis courts and are used as the basis for this audit.

Court Dimensions

Playing Lines

The plan and dimensions of a tennis court's lines are (not to scale). All measurements are to the outside of the lines.



All court dimensions meet the requirements for tennis courts.

Court Runoffs & Court Separation

Court Dimensions	Club / Recreation	ITF (e.g. Pro Tour, Davis/Fed Cup Zonal ties)*	Stadium Court (e.g. Davis/Fed Cup World Group ties)*
Total Area	34.77m x 17.07m	36.6m x 18.3m	40.23m x 20.11m
Run-off at back of court	5.48m	6.4m	8.23m
Run off at side of court to fence	3.05m	3.66m	4.57m
Minimum distance between two courts (unfenced)	3.66m	5.48m	n/a
Recommended distance between two courts (unfenced)	4.27m	n/a	n/a

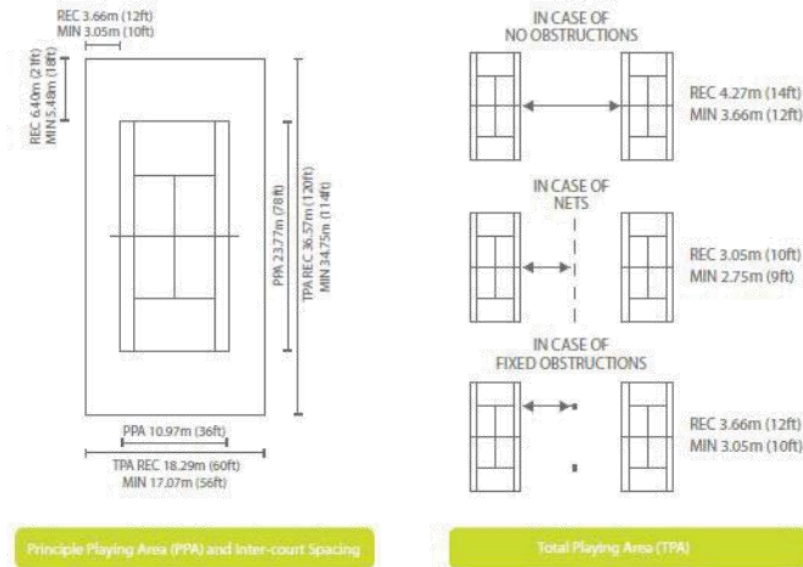
* Note: Other considerations apply

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Dimension guide

For both recreational and club play (not to scale).

As a guide, the suggested recommended minimum and recommended dimensions for tennis courts are:



Typically runoffs & separation between courts **do not meet the minimum requirements** for Club/Recreation level as outlined above.

Court 1 – N end runoff is **0.54m less than** the minimum runoff requirements.

S end runoff is **0.57m less than** the minimum runoff requirements.

E side separation between Courts 1 & 2 is **0.86m less than** the minimum requirement.

NW side runoff is **0.43m less than** the minimum runoff requirements.

SW side runoff is 2.01 more than the minimum runoff requirements.

Court 2 – N end runoff is **0.54m less than** the minimum runoff requirements.

S end runoff is **0.56m less than** the minimum runoff requirements.

E side separation between Courts 2 & 3 is **0.86m less than** the minimum requirement.

W side separation between Courts 1 & 2 is **0.86m less than** the minimum requirement.

Court 3 – N end runoff is **0.54m less than** the minimum runoff requirements.

S end runoff is **0.58m less than** the minimum runoff requirements.

E side runoff is **0.19m less than** the minimum requirement.

W side separation between Courts 2 & 3 is **0.86m less than** the minimum requirement.

Court 4 – NE end runoff is 1.78m more than the minimum runoff requirements.

NW end runoff is **2.18m less than** the minimum runoff requirements.

S end runoff is **1.32m less than** the minimum runoff requirements.

E side separation between Courts 4 & 5 is 0.04m more than the minimum requirement.

With netting in place, E side separation between Courts 4 & 5 is **0.9m less than** the minimum requirement.

W side runoff is 0.37m more than the minimum requirement.

Court 5 – NE end runoff is 0.17m more than the minimum runoff requirements.

NW end runoff is **0.08m less than** the minimum runoff requirements.

S end runoff is 0.12m more than the minimum runoff requirements.

E side separation between Courts 5 & 6 is 0.09m more than the minimum requirement.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

W side runoff is 0.04m more than the minimum requirement. *With netting in place, E side separation between Courts 5 & 6 is **0.9m less than** the minimum requirement.*

Court 6 – N end runoff is **0.17m more than** the minimum runoff requirements.

S end runoff is 0.12m more than the minimum runoff requirements.

E side runoff is **0.53m less than** the minimum requirement.

W side runoff is **0.09m more than** the minimum requirement. *With netting in place, W side separation between Courts 5 & 6 is **0.9m less than** the minimum requirement.*

Court Lighting

Standard of play	Average Initial Lux level	Average Maintained Lux level *	Minimum average uniformity
Social Play	310 Lux	250 Lux	0.6
Club Competition	435 Lux	350 Lux	0.6
International	1250 Lux	1000 Lux	0.7

* after lamp burn-in and allowance for lamp depreciation and dust build-up.

Lighting to courts 1-3 (which also partially service Courts 4-6) are nearing the end of their lifespan of 25 years. Lighting (north end) to Courts 4-6 is relatively new (ie less than 10 years old). Tennis court lighting has improved in recent years with the advent of LED luminaires. Benefits of LED include:

- Lower energy consumption
- Greater optical control
- Near-zero maintenance
- Improved uniformity
- Instant light (no warm-up or re-strike time)
- Longer lifetime

A lighting lux level test is required to confirm if lighting levels meet the above requirements.

Also, light towers are located within the runoff zones of all courts. Note, protection to players is provided with padding to each tower.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court & Ancillary Items Lifespan

Life cycle costs guidelines – surface costs per court (Feb 2011)

Surface	Expected Life	Average life	Possible replacement cost	Annual maintenance cost	Annual replacement cost	Total annual maintenance & replacement cost
Hot Mix Asphalt (30mm)	20 years	20 years	\$ 14,000 includes removal of existing asphalt (or Geotextile over existing)	\$ 200	\$ 700	\$900
Acrylic (3 coats)	8-10 years	9 years	\$ 8,000	\$ 300	\$ 900	\$1,200
Sand filled Artificial Grass	7-14 years	11 years	\$ 20,000	\$ 1,100	\$ 1,800	\$2,900
Red porous	20 years	20 years	\$ 30,000 Includes auto irrigation	\$ 6,000 (includes labour)	\$ 1,500	\$7,500
Natural Clay	25 years	25 years	\$ 40,000	\$ 7,000	\$ 1,600	\$ 8,600

Life cycle cost guide – ancillary items – per court (Feb 2011)

Surface	Expected Life	Average life	Possible replacement cost	Annual maintenance cost	Annual replacement cost	Total annual maintenance & replacement cost
Net	7 years	5 years	\$300	\$20	\$ 50	\$70
Posts/ winders	15 years	15 years	\$450	\$20	\$30	\$50
Lights	25 years	25 years	\$12,000	\$400	\$600	\$2,300
Fencing (single court)	25 years	25 years	\$15,000	\$200	\$0	\$200
Fencing (4 courts in a row costed per court)	25 years	25 years	\$8,000	\$200	\$320	\$520

Court Fencing

Typically fencing is in good condition and relatively new (ie less than 10years old). The oldest section of fencing on the south side of the site is nearing the end of its lifespan of 25 years. It is still serviceable but **will need replacement within 5-7 years**.

Court Surfaces

Enclosure 1 court surfaces are typically in good condition with a good coverage of court material. Surfaces are level with no apparent undulations or worn areas.

Enclosure 2 court surfaces are typically in fair condition. Whilst there are no apparent undulations or worn areas, the courts show signs of mildew/mould spotting and the surface is in need of rejuvenation/maintenance. The surface is approaching the lower end of its expected lifespan of 7-14 years.

Tennis Australia recommends falls between 1% & 1.5% for courts. **A survey is required to confirm if court falls meet the above requirements.**

Both enclosures fall to the south and drainage infrastructure is located at the south ends of both Enclosures. Drainage infrastructure was observed at the outfalls to be functioning. **Drainage pits are located within runoff areas in Enclosure 1. Trench drainage is located within the runoff area in Court 4 - Enclosure 2.**

Court Accessibility

Court accessibility was accessed in accordance with the requirements of Australian Standard AS 1428.1-2009 'Design Access and mobility' Part 1 and Part 2.'

Access to the facility is via a self closing, coded entry gate. The surface within the facility, leading from the main entrance to the courts, is relatively flat. Materials consist of brick paving from main entrance to the courts.

The Standard requires 'Accessways, walkways, ramps and landing shall have – (a) an unobstructed width of not less than 1000mm.... and shall be constructed with no lip or step at joints between abutting surfaces. NOTE a construction tolerance of up to 5mm is acceptable using rounded or beveled edges.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Access to both Enclosures is via a fenced passageway (1.07m – 2.54m wide) between Enclosures 1 & 2. Court 1 can be accessed directly from the brick paving. The remaining courts are accessed from a brick ramp leading to the passageway. The passageway meets the minimum width requirements of the Standard, ***however fails in being an unobstructed width***. It was observed, particularly in the wider section of the passageway, furniture obstructing access through the passageway. Also access from the passageway to Enclosure 1 courts is ***hindered by a 150mm step down to the courts***.

Ancillary Items

Linemarking, nets & net posts are typically in good condition and are fit for purpose.



The location of hose bibs, drinking fountains and sprinklers in the vicinity of net posts is considered to be a hazard to players. Ideally these would be located, where possible, below ground and/or outside court runoff zones.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



DETAILED ASSESSMENTS	
Enclosure 1	
Number of courts in enclosure	3
Courts size	Full
Number of enclosed mini courts	0
Surface type in enclosure	Red Porous
Court base in enclosure	Crushed rock
Overall base rating	Good

Court 1	
Surface Condition	
Surface type	Red Porous
Surface condition rating	Good. No worn areas visible.
Surface life span	10+ years
Court condition notes	The court is in good condition. Court material is adequate and even across the court. There are no apparent undulations or worn areas.
Court condition photos	 <p>VIEW FROM NW CORNER OF COURTS 1 TO SE CORNER OF COURT 3</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – Court 1	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for red porous courts and there are no obvious signs of breakages.
Linemarking condition photos	
	
BASELINE COURT 1	SIDELINE COURT 1



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – Court 1	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	6-10 years
Net life span	6-10 years
Net/post notes	Posts and nets are generally in good condition.
Net/post photos	
	
NET & POST COURT 1	CENTRE NET ATTACHMENT COURT 1


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – Court 1	
Is the court runoff compliant	North: 4.94m to fence South: 4.91m to fence East: 2.80m to Court 2 West: 2.62m N end, 5.06m S end
Could the court be made compliant	No. Due to existing infrastructure (ie mounds to the south, and trees, drainage channel and footpath to the east) this would not be recommended due to considerable cost in both tree loss and expenditure.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable
Are lockable post hole covers fitted and safe	No
Compliance notes	The court runoffs do not meet the minimum requirements for Club/recreation use. On the east side a timber deck encroaches into the runoff area. This could be removed to achieve compliance.
Compliance photos	 <p>ENCROACHMENTS INTO RUNOFF ZONE WEST SIDE COURT 1</p>



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – Court 1	
Fence type	N end - black PVC chainwire, S end - galvanized chainwire.
Fence height	2.85m N end, 3.50m S end
Fence rails	Top & bottom rails NW end 2 panels only.
Fence attachments	2.20m high green site screen S end.
Fence condition rating	N end - good, S end - fair -.
Fence lifespan	N end – 10+ years, S end 5-7 years
Fence notes	N end fencing is relatively new and should provide long maintenance free life. S end fencing is serviceable and is fit for purpose.
Fencing photos	
 <p>FENCING ALONG NORTH END COURT 1</p>	 <p>FENCING ALONG SOUTH END COURT 1</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – Court 1	
Drainage infrastructure	Formed
What type of drainage is in place?	Grated pits with PVC drainage pipes.
Are drains, pits or other drainage infrastructure within runoff areas?	Yes, GP at S end.
Drainage condition	Fair. GP holding water
Drainage notes	GP is holding water. Cleanout SW pipe and pit to improve drainage. Check invert levels to determine if SW pipe fall is sufficient.
Drainage photos	
	
GRATED DRAINAGE PIT SOUTH END COURT 1	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – Court 1	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Galvanized steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies, 1 per SW cnr tower, 2 per S mid enclosure tower, 2 per NW cnr tower, 4 per NE mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Fair
Lighting infrastructure life span	5+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	
 <p>VIEW FROM NW CORNER OF COURT 1 LOOKING SOUTH</p>	 <p>VIEW FROM NW CORNER OF COURT 1 LOOKING EAST</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Accessibility – Court 1	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access no required.
Path material	Brick
Main gate dimensions	1050mm
Accessibility notes	The enclosure can be accessed from brick paving leading to red porous surface. A brick/concrete edge, at paving level, separates courts from adjacent paving.
Accessibility photos	
	
<p>ACCESS TO COURTS 1-3 VIA BRICK PAVING</p> <p>ACCESS TO COURT 1</p>	
Maintenance & Risk management – Court 1	
Court	Continue to maintain good court surface coverage.
Drainage	Investigate why GP's are holding water.
Infrastructure	Generally good. Southern boundary fence will need replacement in 5-7 years.
Lighting	Conduct a lighting lux level test
Safety issues – Court 1	
Are there any critical safety Issues	Yes. Relocate existing sprinklers (located next to net posts) either outside court runoffs or install in below ground valve box. Drinking fountains should be relocated outside court runoffs.
Enclosure recommendations	



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Enclosure 1	
Court 2	
Surface Condition	
Surface type	Red Porous
Surface condition rating	Good. No worn areas visible.
Surface life span	10+ years
Court condition notes	The court is in good condition. Court material is adequate and even across the court. There are no apparent undulations or worn areas.
Court condition photos	
	
<i>VIEW FROM NW CORNER OF COURTS 1 TO SE CORNER OF COURT 3</i>	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – Court 2	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for red porous courts and there are no obvious signs of breakages.
Linemarking condition photos	
	
BASELINE COURT 2	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – Court 2	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	6-10 years
Net life span	6-10 years
Net/post notes	Posts and nets are generally in good condition.
Net/post photos	
 <p>NET POST COURT 2</p>	 <p>CENTRE NET ATTACHMENT COURT 2</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – Court 2	
Is the court runoff compliant	North: 4.94m to fence South: 4.92m to fence East: 2.80m to Court 3 West: 2.80m to Court 2
Could the court be made compliant	No. Due to existing infrastructure (ie mounds to the south, and trees, drainage channel and footpath to the east) this would not be recommended due to considerable cost in both tree loss and expenditure.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable
Are lockable post hole covers fitted and safe	No
Compliance notes	The court runoffs do not meet the minimum requirements for Club/recreation use.
Compliance photos	
 <p>VIEW TO COURT 2 LOOKING EAST</p>	
 <p>VIEW ALONG EAST SIDE OF ENCLOSURE 1 SHOWING RESTRICTIONS TO EXTENDING FOOTPRINT</p>	 <p>VIEW ALONG SOUTH SIDE OF ENCLOSURE 1 SHOWING RESTRICTIONS TO EXTENDING FOOTPRINT</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – Court 2	
Fence type	N end - black PVC chainwire, S end - galvanized chainwire.
Fence height	2.85m N end, 3.50m S end
Fence rails	Top & bottom rails NW end 2 panels only.
Fence attachments	2.20m high green site screen S end.
Fence condition rating	N end - good, S end - fair.
Fence lifespan	N end – 10+ years, S end 5-7 years
Fence notes	N end fencing is relatively new and should provide long maintenance free life. S end fencing is serviceable and is fit for purpose.
Fencing photos	
	
NORTH END COURT 2 FENCING	SOUTH END COURT 2 FENCING




Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – Court 2	
Drainage infrastructure	Formed
What type of drainage is in place?	Grated pits with PVC drainage pipes.
Are drains, pits or other drainage infrastructure within runoff areas?	Yes, GP at S end.
Drainage condition	Fair. GP holding water
Drainage notes	GP is holding water. Cleanout SW pipe and pit to improve drainage. Check invert levels to determine if SW pipe fall is sufficient.
Drainage photos	
	
GRATED DRAINAGE PIT AT SOUTH END OF COURT 1	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – Court 2	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Galvanized steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies. 1 per SE cnr tower, 2 per S mid enclosure tower, 2 per NE cnr tower, 4 per N mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Fair
Lighting infrastructure life span	5+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	 <p>VIEW FROM NW CORNER OF COURT 1 LOOKING SOUTH</p>  <p>NORTH END MID ENCLOSURE 1 LIGHT TOWER</p>



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Accessibility – Court 2	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access no required.
Path material	Brick
Main gate dimensions	1050mm
Accessibility notes	The enclosure can be accessed from brick paving leading to red porous surface. A brick/concrete edge, at paving level, separates courts from adjacent paving. The court can also be access via the passageway between Enclosures 1 & 2.
Accessibility photos	
 <p>NORTHERN ACCESS TO COURTS 2-3</p>	
 <p>NORTHERN GATE ACCESS TO COURT 2</p>	
Maintenance & Risk management	
Court	Continue to maintain good court surface coverage.
Drainage	Investigate why GP's are holding water.
Infrastructure	Generally good. Southern boundary fence will need replacement in 5-7 years.
Lighting	Conduct a lighting lux level test
Safety issues	
Are there any critical safety Issues	Yes. Relocate existing sprinklers (located next to net posts) either outside court runoffs or install in below ground valve box. Drinking fountains should be relocated outside court runoffs
 <p>COURT 2 NET POST WITH SPRINKLER ATTACHED</p>	
Enclosure recommendations	



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Enclosure 1	
Court 3	
Surface Condition	
Surface type	Red Porous
Surface condition rating	Good. No worn areas visible.
Surface life span	10+ years
Court condition notes	The court is in good condition. Court material is adequate and even across the court. There are no apparent undulations or worn areas.
Court condition photos	
	
VIEW FROM NW CORNER OF COURTS 1 TO SE CORNER OF COURT 3	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – Court 3	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for red porous courts and there are no obvious signs of breakages.
Linemarking condition photos	
	
SERVICE LINE LINEMARKING COURT 3 SOUTH END	CENTRE SERVICE LINE COURT 3



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – Court 3	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	6-10 years
Net life span	6-10 years
Net/post notes	Posts and nets are generally in good condition.
Net/post photos	
	
NET & POSTS WITH SPRINKLER & HOSE BIBS BETWEEN COURTS 2 & 3	CENTRE NET ATTACHMENT COURT 3


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – Court 3	
Is the court runoff compliant	North: 4.92m to fence South: 4.90m to fence East: 2.86m to fence West: 2.80m to Court 3
Could the court be made compliant	No. Due to existing infrastructure (ie mounds to the south, and trees, drainage channel and footpath to the east) this would not be recommended due to considerable cost in both tree loss and expenditure.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable
Are lockable post hole covers fitted and safe	No
Compliance notes	The court runoffs do not meet the minimum requirements for Club/recreation use.
Compliance photos	
 <p>NORTH END RUNOFF COURT 3</p>	 <p>EAST SIDE RUNOFF COURT 3</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – Court 3	
Fence type	N end - black PVC chainwire, S end - galvanized chainwire.
Fence height	2.85m N end, 3.50m S end
Fence rails	Top & bottom rails NW end 2 panels only.
Fence attachments	2.20m high green site screen S end.
Fence condition rating	N end - good, S end - fair.
Fence lifespan	N end – 10+ years, S end 5-7 years
Fence notes	N end fencing is relatively new and should provide long maintenance free life. S end fencing is serviceable and is fit for purpose.
Fencing photos	
 <p>EAST SIDE FENCE COURT 3</p>	 <p>SOUTH END FENCE COURT 3</p>



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – Court 3	
Drainage infrastructure	Formed
What type of drainage is in place?	Grated pits with PVC drainage pipes.
Are drains, pits or other drainage infrastructure within runoff areas?	Yes, GP at S end.
Drainage condition	Fair. GP holding water
Drainage notes	GP is holding water. Cleanout SW pipe and pit to improve drainage. Check invert levels to determine if SW pipe fall is sufficient.
Drainage photos	
	
OUTFALL TO COURTS 1-3 DRAINAGE INFRASTRUCTURE (EAST SIDE)	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – Court 3	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Galvanized steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies. 1 per SE cnr tower, 2 per S mid enclosure tower, 2 per NE cnr tower, 4 per N mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Fair
Lighting infrastructure life span	5+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	 <p>MID ENCLOSURE 1 NORTH LIGHT TOWER</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Accessibility – Court 3	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access no required.
Path material	Brick
Main gate dimensions	1050mm
Accessibility notes	The enclosure can be accessed from brick paving leading to red porous surface. A brick/concrete edge, at paving level, separates courts from adjacent paving. The court can also be access via the passageway between Enclosures 1 & 2.
Accessibility photos	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>NORTHERN ACCESS TO COURT 3</p> </div> <div style="text-align: center;">  <p>NORTHERN GATE ACCESS TO COURT 3 NOTE LIP RESTRICTING EGRESS</p> </div> </div>	
Maintenance & Risk management – Court 3	
Court	Continue to maintain good court surface coverage.
Drainage	Investigate why GP's are holding water.
Infrastructure	Generally good. Southern boundary fence will need replacement in 5-7 years.
Lighting	Conduct a lighting lux level test
Safety issues – Court 3	
Are there any critical safety Issues	Yes. Relocate existing sprinklers (located next to net posts) either outside court runoffs or install in below ground valve box. Drinking fountains should be relocated outside court runoffs.
Enclosure recommendations	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Enclosure 2	
Number of courts in enclosure	3
Courts size	Full
Number of enclosed mini courts	0
Surface type in enclosure	Synthetic grass
Court base in enclosure	Concrete
Overall base rating	Fair

Court 4	
Surface Condition	
Surface type	Synthetic grass
Surface condition rating	Fair. Mildew/mould spotting in parts of the court.
Surface life span	10+ years
Court condition notes	Regular maintenance of courts recommended including mould/mildew removal. There are no apparent worn areas.
Court condition photos	
	
VIEW LOOKING FROM NW CORNER COURT 4 TO SE CORNER COURT 6	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – COURT 4	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for synthetic courts and are clearly visible with sharp edges.
Linemarking condition photos	
	
BASELINE CORNER COURT 4	BASELINE COURT 4

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – COURT 4	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	10+ years
Net life span	10+ years
Net/post notes	Posts and nets are generally in good condition.
Net/post photos	
 <p>NET COURT 4</p>	 <p>CENTRE NET ATTACHMENT COURT 4</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – COURT 4	
Is the court runoff compliant	NW cnr 3.30m to fence, NE cnr 7.26 to fence South: 4.16 to fence East: 3.70 to Court 5 West: 3.42 to fence
Compliance notes	The NW cnr & South end back of court runoffs do not meet Club/recreation minimum requirements ie 5.48m. Netting between Courts 4 & 5 do not meet minimum requirements for netting between courts ie 2.75m.
Could the court be made compliant	No due to existing infrastructure (ie angled footpath to the north) restricting the footprint of the courts being extended to the north.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable
Are lockable post hole covers fitted and safe	Yes
Compliance photos	
 <p>RUNOFF RESTRICTION DUE TO PROXIMITY OF PARK FOOTPATHS</p>	 <p>RUNOFF RESTRICTION DUE TO PROXIMITY OF PARK FOOTPATHS</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – COURT 4	
Fence type	Black PVC chainwire.
Fence height	2.85m N end, 3.50m S end, 1.0m W side..
Fence rails	Top & bottom rails.
Fence attachments	Nil
Fence condition rating	Good
Fence lifespan	10+ years
Fence notes	All fencing is relatively new, is fit for purpose and in good condition.
Fencing photos	
 <p>LOW FENCING EAST SIDE COURT 4</p>	 <p>NORTH END FENCE COURT 4</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – COURT 4	
Drainage infrastructure	Formed
What type of drainage is in place?	Trench grate South end.
Are drains, pits or other drainage infrastructure within runoff areas?	No.
Drainage condition	Good
Drainage notes	Trench grating is intact, level and in good condition. Trench grating channel not holding water.
Drainage photos	
	
TRENCH GRATE ALONG SOUTH END COURTS 4-6	


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – COURT 4	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Powder coated steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies, 2 per SW cnr tower, 4 per S mid enclosure tower, 1 per NW cnr tower, 2 per NE mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure S end lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Good
Lighting infrastructure life span	10+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	
	
LIGHTING NORTH END COURTS 4 & 5	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan


Accessibility – COURT 4	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access provided to court access pathway.
Path material	Brick
Main gate dimensions	1500mm
Accessibility notes	The enclosure can be accessed from brick paving leading to a 1.1m wide access path along the S end of the courts. The courts are accessed via a gate between Courts 4 & 5.
Accessibility photos	
	
<i>LIP RESTRICTING ACCESS TO COURT 4</i>	<i>ACCESS TO COURTS 4-6</i>
Maintenance & Risk management	
Court	Undertake regular maintenance of courts including mould/mildew removal.
Drainage	Nil
Infrastructure	Improve access to court by removing lip and providing ramp at court entrance.
Lighting	Conduct a lighting lux level test
Safety issues	
Are there any critical safety Issues	Yes. Relocate existing drinking fountains/hose bibs (located next to net posts) outside court runoffs.
Enclosure recommendations	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan


Enclosure 2	
Court 5	
Surface Condition	
Surface type	Synthetic grass
Surface condition rating	Fair. Mildew/mould spotting in parts of the court.
Surface life span	10+ years
Court condition notes	The court is in fair condition. Regular maintenance of courts recommended including mould/mildew removal. There are no apparent worn areas.
Court condition photos	
	

BASELINE COURT 5 SOUTH END SHOWING MILDEW/MOULD SPOTTING

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – COURT 5	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for synthetic courts and are clearly visible with sharp edges.
Linemarking condition photos	
	
<i>NORTH END LINEMARKING LOOKING EAST</i>	


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – COURT 5	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	10+ years
Net life span	6-10 years
Net/post notes	Posts and nets are in good condition.
Net/post photos	
	
NET POST COURT 5	CENTRE NET ATTACHMENT COURT 5

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – COURT 5	
Is the court runoff compliant	NW cnr 5.40m to fence, NE cnr 5.65m to fence South: 5.60 to fence. East: 3.75 to Court 6. West: 3.70 to Court 4.
Compliance notes	The NW cnr back of court runoff does not meet Club/recreation minimum requirements ie 5.48m. Netting between Courts 4 & 5 do not met minimum requirements for netting between courts ie 2.75m.
Could the court be made compliant	No due to existing infrastructure (ie footpath to the north) restricting extending the footprint of the courts to the north.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable
Are lockable post hole covers fitted and safe	No
Compliance photos	
	
<p>NORTH END COURT 5 LOOKING EAST SOUTH END COURT 5 LOOKING WEST</p>	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – COURT 5	
Fence type	Black PVC chainwire, netting to E side.
Fence height	3.60m N end, 3.00m S end, 1.0m W side, 2.5m E side.
Fence rails	Top & bottom rails.
Fence attachments	Nil.
Fence condition rating	Good.
Fence lifespan	10+ years
Fence notes	Fencing is relatively new and should provide long maintenance free life for 10+ years.
Fencing photos	
 <p>SOUTH END FENCING COURT 5</p>	 <p>NETTING BETWEEN COURTS 4 & 5</p>


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – COURT 5	
Drainage infrastructure	Formed
What type of drainage is in place?	Trench grate South end.
Are drains, pits or other drainage infrastructure within runoff areas?	No
Drainage condition	Good
Drainage notes	Trench grating is intact, level and in good condition. Trench grating channel not holding water.
Drainage photos	
 <p>TRENCH GRATING SOUTH END</p>	


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – COURT 5	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Galvanized steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies, 2 per SW cnr tower, 4 per S mid enclosure tower, 1 per NW cnr tower, 2 per NE mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure S end lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Fair
Lighting infrastructure life span	5+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	
	
COURT 5 SOUTH END LIGHTING	COURT 5 NORTH END LIGHTING


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Accessibility – COURT 5	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access not required.
Path material	Brick/synthetic grass.
Main gate dimensions	1450mm
Accessibility notes	The enclosure can be accessed from brick paving leading to synthetic grass surface passageway. Maintain clear passageway for disabled access by fixing furniture in place.
Accessibility photos	
 <p>ACCESS TO COURTS 4-6</p>	
 <p>ACCESS GATE TO COURTS 4-6</p>	
Maintenance & Risk management	
Court	Continue to maintain good court surface coverage.
Drainage	Investigate why GP's are holding water.
Infrastructure	
Lighting	Conduct a lighting lux level test
Safety issues	
Are there any critical safety Issues	Yes. Relocate existing drinking fountains/hose bibs (located next to net posts) outside court runoffs.
Enclosure recommendations	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Enclosure 2	
Court 6	
Surface Condition	
Surface type	Synthetic grass.
Surface condition rating	Fair. Mildew/mould spotting in parts of the court.
Surface life span	10+ years
Court condition notes	The court is in fair condition. Regular maintenance of courts recommended including mould/mildew removal. There are no apparent worn areas.
Court condition photos	
	
COURT 6 SOUTH END	


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Linemarking – COURT 6	
Line marking description	Tennis only lines
Linemarking rating	Good
Linemarking condition notes	The lines are standard for synthetic courts and are clearly visible with sharp edges.
Linemarking condition photos	
 <p style="text-align: center;">BASELINE COURT 6</p>	



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Net Posts – COURT 6	
Net post type	Square powder coated steel installed directly into pavement.
Net post condition	Good, posts straight
Net post winders	Collapsible winders
Net condition	Good
Net structure	Net tethered to posts and centre strap fitted.
Net post life span	6-10 years
Net life span	6-10 years
Net/post notes	Posts and nets are generally in good condition.
Net/post photos	
	
POST & WINDER COURT 6	CENTRE NET ATTACHMENT COURT 6



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Court Compliance – COURT 6	
Is the court runoff compliant	North: 5.65m to fence. South: 5.60m to fence. East: 3.13m to fence. West: 3.75m to Court 5.
Compliance notes	The court runoffs meet the minimum requirements for Club/recreation use.
Could the court be made compliant	Not applicable.
Is the court to the standard dimensions	Yes
Court orientation	North south
Are netball goal posts outside tennis court run of areas?	Not applicable.
Are lockable post hole covers fitted and safe	No
Compliance photos	
 <p>EAST SIDE COURT 6 RUNOFF</p>	

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Fencing – COURT 6	
Fence type	Black PVC chainwire.
Fence height	3.60m N end, 3.00m S end, 3.6m E side.
Fence rails	Top & bottom rails NW end
Fence attachments	2.20m high black site screen E side and small advertising screen to NE corner..
Fence condition rating	Good.
Fence lifespan	10+ years
Fence notes	Fencing is relatively new and should provide long maintenance free life for 10+ years.
Fencing photos	
	
FENCING NE CORNER COURT 6	FENCING EAST SIDE COURT 6


Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Drainage – COURT 6	
Drainage infrastructure	Formed
What type of drainage is in place?	Trench grate South end
Are drains, pits or other drainage infrastructure within runoff areas?	No
Drainage condition	Good
Drainage notes	Trench grating is intact, level and in good condition. Trench grating channel not holding water.
Drainage photos	
 <p>GRADED DRAINAGE PIT & TRENCH GRATE SE CORNER COURT 6</p>	 <p>COURTS 4-6 DRAINAGE OUTFALL SE CORNER COURT 6</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Lighting – COURT 6	
Does the enclosure have lighting?	Yes
Total number of lit courts per enclosure	3
Lighting infrastructure type	Galvanized steel poles
Lighting infrastructure location	N & S corners and mid enclosure N & S ends.
Light fittings	Varies, 2 per SW cnr tower, 4 per S mid enclosure tower, 1 per NW cnr tower, 2 per NE mid enclosure tower.
Lighting infrastructure design	Fair, position of mid enclosure S end lights unlikely to achieve required lux levels.
Lighting infrastructure rating	Fair
Lighting infrastructure life span	5+ years
Lighting notes	Light towers covered with padding to 2m. A lighting lux level test should be undertaken to determine if lux levels are appropriate.
Lighting photos	
 <p>LIGHT TOWER NE CORNER COURT 6</p>	 <p>LIGHT TOWER NE CORNER COURT 6</p>

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Accessibility – COURT 6	
Court enclosure accessibility	Access to the enclosure via formed paths. No trip hazards observed. Ramped access not required.
Path material	Brick/synthetic grass.
Main gate dimensions	1450mm
Accessibility notes	The enclosure can be accessed from brick paving leading to synthetic grass surface passageway. Maintain clear passageway for disabled access by fixing furniture in place.
Accessibility photos	
	
ACCESS RESTRICTIONS TO COURTS 4 - 6 DUE TO SEATING	
Maintenance & Risk management – COURT 6	
Court	Undertake regular maintenance of courts including mould/mildew removal.
Drainage	Nil
Infrastructure	Improve access to court by maintaining a clear passageway to the access gate.
Lighting	Conduct a lighting lux level test.
Safety issues – COURT 6	
Are there any critical safety Issues	Yes. Relocate existing drinking fountains/hose bibs (located next to net posts) outside court runoffs.
Enclosure recommendations	



EXISTING LIGHT LEVELS REPORT

FOR

City of Yarra
Edinburgh Gardens Tennis Courts

4th July, 2019

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Overview

Endura Light was contracted to assess the current light level at the tennis Courts in Fitzroy's Edinburgh Gardens as a preliminary step toward planning a lighting upgrade for the site. Endura Light visited the site and conducted light level assessments from 5.45pm on 1st July 2019.

Lighting for the courts is provided from 9 poles with positions as marked by the red dots below.



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Lux Level Requirements

Australian Standard 2560.2.1: 2003 sets out guidance for Tennis Court lighting across 3 categories

- Recreational and residential
- Club competition and commercial
- International and national

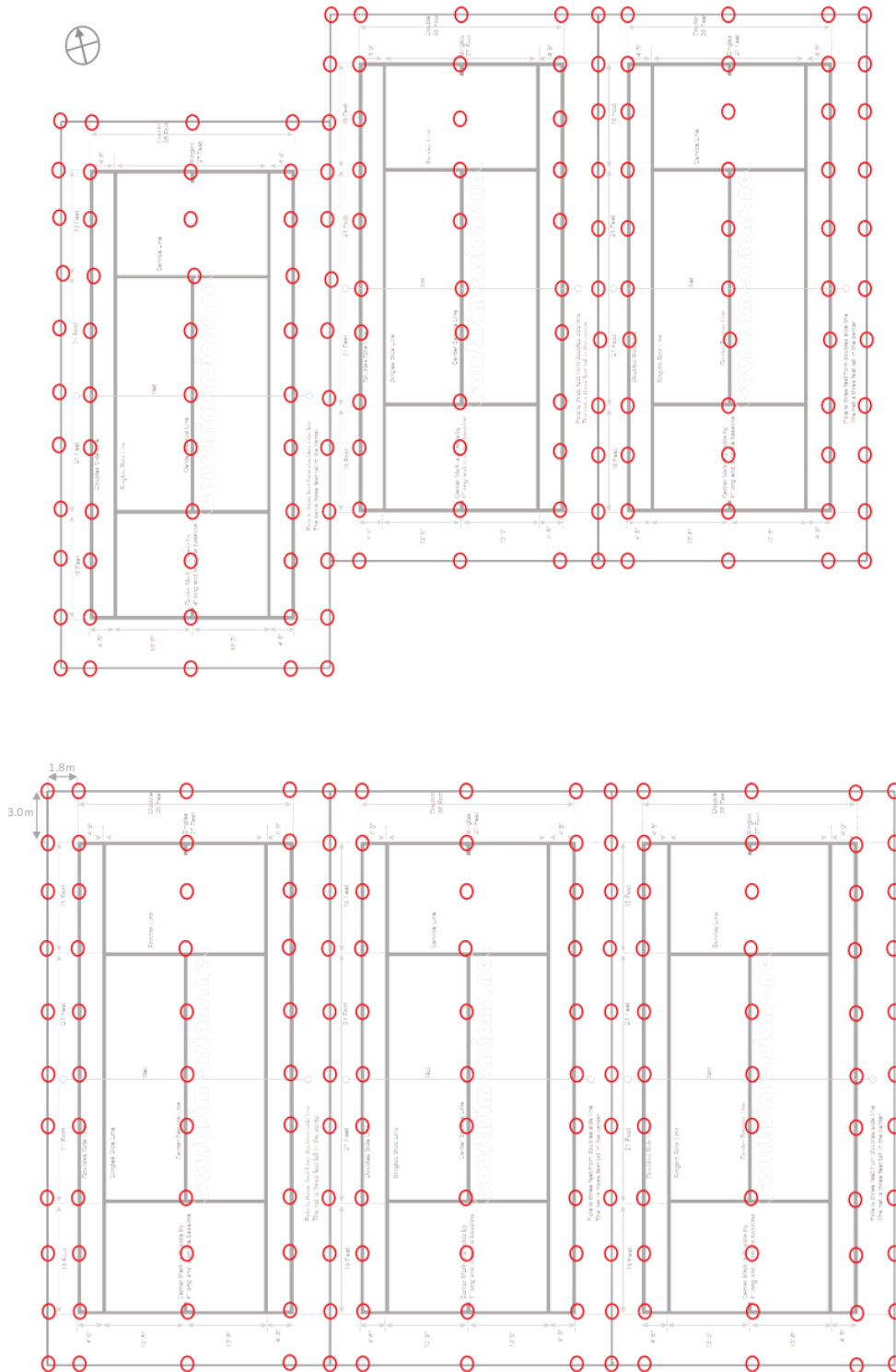
The Standard sets out maintained horizontal illuminance minimums, minimum uniformity and glare ratings for both the Principal Playing Area and Total Playing Areas.

As the courts at Edinburgh Gardens have only minimal court surface outside the Principal Playing Area the site assessment conducted measured light levels only within the Principal Playing Area. The applicable values for the PPA at 1.5m above ground level for Club competition and commercial are:

- 350 lux maintained average horizontal illuminance
- 0.6 U₁ uniformity (minimum to average illuminance ratio)
- 0.4 U₂ uniformity (minimum to maximum illuminance ratio)

Equipment & Method

Light readings were taken after dark in order to only measure artificial light from the installed LED fixtures. Readings were taken with a calibrated Testo Sense Testo 540 Lux Meter at 1.5m above ground level in a regular grid consistent across each court. Due to the close proximity of the “tramlines” from one court to the next, a single set of readings along this common boundary between the two PPA’s is applicable to both courts.



Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



Measured Light Readings

The following lux readings were recorded on the reference grid as marked by the red circles on the court diagram:

				512	506	320	165	148	167	324	253	98
				850	800	413	215	190	208	376	402	330
465	495	560	837	722	680	530	192	175	206	333	332	249
604	622	714	740	585	530	300	141	150	177	263	256	185
650	709	724	583	450	350	165	95	95	117	118	141	122
550	637	545	425	200	166	123	65	75	58	152	152	136
373	462	323	278	280	275	162	91	79	105	137	144	119
188	258	216	265	340	385	255	140	106	165	160	173	149
280	292	312	438	490	490	350	210	143	178	206	205	154
373	429	576	688	691	638	410	268	196	221	262	259	180
427	522	739	866	840	806	570	280	246	238	306	320	255
499	594	710	842	851								
441	562	652	861	856								

369	602	721	331	369	389	477	214	192	208	366	402	210
538	602	668	906	761	677	349	254	269	281	425	428	365
488	599	798	802	778	481	412	229	248	275	433	362	290
473	575	792	721	693	556	401	223	207	220	362	285	260
456	547	704	609	588	665	348	188	167	178	256	237	181
309	479	402	557	522	760	270	161	159	153	219	202	156
377	431	612	630	592	571	275	189	188	187	271	194	165
359	432	684	791	769	752	450	232	241	233	338	237	197
411	480	727	892	869	898	553	287	285	261	375	288	251
385	509	726	848	874	838	503	303	261	247	408	351	269
121	266	298	553	642	625	362	185	213	230	333	143	115

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



These measurements can be summarised with the following statistics by court, spatially corresponding with the data table and diagram above:

	Court 1	Court 2	Court 3
Av Lux	539	339	194
Max	866	850	402
Min	188	65	58
U ₁	0.35	0.19	0.30
U ₂	0.22	0.08	0.14
	Court 4	Court 5	Court 6
Av Lux	582	436	260
Max	906	898	433
Min	121	159	115
U ₁	0.21	0.36	0.44
U ₂	0.13	0.18	0.27

The values in red text do not meet the minimum standards for Club Competition outlined in Australian Standard 2560.2.1: 2003. As can be seen from this statistical summary, four of the six courts do meet the minimum illuminance requirements, but none meet the uniformity standards.

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



*To take action to reduce electricity bills, maintenance costs
AND greenhouse gas emissions,
contact Endura Light.*

John Downie
03 8376 6376
0412 737 000
john@enduralight.com.au
164 Christmas St, Fairfield, VIC 3078
www.enduralight.com.au

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

APPENDIX D HAZARDOUS MATERIALS REPORTS

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Division 6 Hazardous Materials
Assessment
Edinburgh Gardens
Alfred Crescent
Fitzroy North, Victoria

The City of Yarra

May 2019

Report to be provided separately



5 Burwood Road

Hawthorn VIC 3122

T: (03) 9508 0100

F: (03) 9509 6125

E: admin@prensa.com.au

ABN: 12 142 106 581

Job No: 31099 : Client No: Y0001

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

Preliminary Soil Contamination
Assessment
Edinburgh Gardens
Fitzroy North, Victoria

City of Yarra

June 2019

Report to be provided separately



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Job No: 31099 Client No: Y0001

Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan

**Soil Management Plan
Edinburgh Gardens
Fitzroy North VIC 3068**

City of Yarra

June 2019

Report to be provided separately



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Attachment 1 - Brunswick Street Oval Precinct - Needs Analysis and Concept Plan



11.3 Management of Plane Trees

Reference: D19/135809

Authoriser: Director Planning and Place Making

Purpose

1. To respond to the Council resolution from the 12 December 2018 regarding the management of plane trees across Yarra.

Background

2. Council requested that a report be prepared to address a number of issues.
3. The resolution stated:

“That in noting the City of Yarra Street Tree Policy and the Urban Forest Strategy, Council:

- (a) also notes that plane trees constitute 16.2% of Yarra’s current tree stock (12% of which are London Plane Trees);*
- (b) seek a report to the late March/April 2019 meeting cycle on the management of London and other species of plane trees within the City of Yarra; and*
- (c) request that the report include:*
 - (i) a desired percentage target for all plane tree species across the tree stock within Yarra;*
 - (ii) a recommendation on how the desired target will be achieved and the timelines therein; and*
 - (iii) The latest evidence which demonstrates whether the Platanus species of Plane trees is less irritating in terms of public health, and any other environmental advantages or other advantages, than the London Plane tree species.*
- (d) that having regard to the high present and future costs of maintaining existing plantings of Plane trees in residential streets that the report additionally include:*
 - (i) an assessment of the timeframe for progressively replacing existing Plane trees in locations where their exceptional height and extensive root systems require constant ongoing maintenance in order to limit the damage to Council infrastructure (footpaths and kerbs), lopping and pruning around power lines, and the cracking and subsidence caused to nearby properties as the soil dries out; and*
 - (ii) recommendations of appropriate alternative species that may be more suited than Plane trees to residential streets and historic heritage areas, which could progressively replace Plane trees to reduce maintenance costs and limit public liability claims as well as creating a suitably shady canopy.”*

4. The Urban Forest Strategy was adopted in 2017 and is the overarching document to provide a clear charter for the future custodianship of Yarra’s street and park tree population.
5. Trees provide a range of benefits, to name a few:
 - (a) Reduce the impacts of heat through their canopy cover and contribute to improved liveability;
 - (b) Connect biodiversity locations and provide localised biodiversity habitat;
 - (c) Sequester carbon, particulate matter and other air pollutants;

- (d) Reduce the severity of localised flooding by intercepting stormwater;
 - (e) Encourage pedestrian and cycling activity, which can contribute to more sustainable transport use; and
 - (f) Reduce energy in buildings: a 10% increase in deciduous tree cover can reduce heating and cooling costs by 5-10% (UFS).
6. In order to respond to the Council resolution, an external arboricultural expert was engaged to prepare a Plane Tree Review (see Attachment) to address the issues raised and these findings form the basis of this report.

Characteristics of Plane Trees

- 7. The arborist consultant indicated the following characteristics of Plane trees.
- 8. There are between 8-10 Plane tree species around the world. The London Plane tree is the most widely used species, as is the case in Yarra where there are currently approximately 2,500 London Plane trees.
- 9. The London Plane Tree typically grows as a single trunk tree to 20-30 metres tall with horizontal branching and a rounded habit.
- 10. The Plane tree (*Platanus spp.*) has been used extensively across Australia as a large amenity and ornamental tree with the advantages of being a tree of great size and longevity.
- 11. The Plane tree has a range of other advantages including:
 - (a) Moderate shade to allow grass or other plants to grow underneath;
 - (b) Tolerance of pollution;
 - (c) Tolerance of difficult soil conditions; and
 - (d) Tolerance of pruning.
- 12. Plane trees contribute significantly to the mitigation of heat island effect due to their large canopy size and subsequent shading. Due to their size and root system all plane trees do, at times, cause damage to property and road assets (see paragraph 27 below).
- 13. In general, all of the species of Plane tree are known to cause bronchial problems, similar to hay fever for some people, primarily due to the hairs and down shed from the young leaves and fruit more so than allergic reaction to the pollen.
- 14. There is no definitive documented evidence to indicate that different species of Plane trees have less allergenic effects than each other.
- 15. The high concentrations of these tend to be a problem to some people particularly during August - October.
- 16. It affects most seriously any people working with or disturbing the foliage, such as people pruning or carrying out other work on trees.
- 17. Studies indicate that allergenic effects of Plane trees are not generally present at times of the year outside of August to October.
- 18. It should be noted that many other species of trees and grasses (primarily wind pollinated species) can cause allergenic reactions.
- 19. The worst allergenic offenders from the plant kingdom are the grasses and weed species which are particularly problematic species in Melbourne due to the location of extensive open grasslands in the north coupled with the north prevailing winds.(see attachment from Tree Logic).

Plane Trees in Yarra



20. There are 20,854 public street trees in the City of Yarra and many more in parks. London Planes account for 12% (approximately 2,500) of the total street tree population. Combining other Plane tree species gives a total of 16.2% of the total street tree population in Yarra.
21. Plane trees are the most common street tree in Yarra second to the English Elm at 5%.
22. Yarra does not have any specific programme for the removal of Plane tree species, however, they are removed as required based on the criteria outlined below.
23. The City of Yarra's Street Tree Policy states the criteria for the consideration of the removal of any tree regardless of species. The policy reasons for possible removal include, but are not limited to:
 - (a) Trees that are dead, dying or unsafe;
 - (b) Minimisation or elimination of risk to the public;
 - (c) Trees that are the subject of public liability claims;
 - (d) Trees that are in inappropriate locations due to tree size, structure or root network;
 - (e) Trees that are adversely impacting on vehicle and/or pedestrian safety;
 - (f) Trees that are causing damage to public or private infrastructure;
 - (g) Trees that are identified for removal following consultation as part of a street tree planting program;
 - (h) Trees that are identified as weed species; and
 - (i) Trees that are causing excessive renewal and maintenance costs to surrounding infrastructure.

NB. Removal of any tree requires careful consideration of all of these criteria, and any other matters raised. Removal is not necessarily the outcome as other remedial action may be possible, and appropriate.

24. The Street Tree Policy also states that Council will not support individual requests to have trees removed, or subjected to additional pruning, in order to:

- (a) Reduce or eliminate leaf litter or tree debris;
- (b) Improve private amenity;
- (c) Increase car park numbers;
- (d) Reduce overshadowing and/or preservation of solar access; and
- (e) Preserve lines of sight to advertising boards.

25. The relevant section of the Street Tree Policy states:

Objective 4 – Recognise and contribute to Natural and Built Heritage

4. Actions

4.1 Develop replacement plans for senescent heritage trees.

4.2 Develop a Street Tree Strategy to reflect precinct character and areas of environmental and built heritage.

Expected Outcomes:

Existing 19th and 20th Century heritage trees are protected or replaced via appropriate species selection.

A variety of both native and exotic species will be maintained and planted.

Native and indigenous species will be planted near waterways and ecological corridors.

An increase in avenue-style planting where appropriate with species that complement the built heritage of the streetscape.

26. Yarra statistics over the past 5 years for street tree damage claims to property (Table 1), indicate that the number of Plane tree claims (9) are equal to other claims for all other trees (9). The claim cost for all Plane trees equates to 38% of the total claims paid.

27. Table 1. Yarra's Property Damage from Trees

Year	Plane tree property damage incidents	Other species property damage incidents	Totals
2014/15	18	28	46
2015/16	19	16	35
2016/17	31	30	61
2017/18	21	34	55
2018/19	33	25	58
Total Incidents	122	133	255
Percentage of Incidents	48%	52%	100%
Claims	9	9	18
Claim Cost	\$63K	\$166K	\$229
% of claim costs	38%	62%	100%

- 28. All species of trees, regardless of size, incur some ongoing costs for maintenance (e.g. pruning) and at times, damage to infrastructure. Generally the larger the tree the greater the costs, so any tree of a substantial size that could replace a Plane tree would still incur the same level of cost.
- 29. For any municipality to provide and maintain a canopied green tree environment, costs need to be factored into budgets to cover the ongoing maintenance and infrastructure expenses inherent in the existence of such a setting.
- 30. These costs need to be considered along with the various benefits that trees provide to the municipality and beyond.

31. Yarra's Urban Forest Strategy has a target for the canopy cover to increase by 25% by 2040 which represents an increase from 17% to 21.25%.
32. Yarra has a number of mature Plane tree lined streets that showcase the statuesque and grandiose form of the species. These streets exhibit canopies that interlock together and form shady, green avenues and provide high amenity and assist in heat island mitigation.
33. Any reduction in the population of Plane trees and their replacement with alternate species would result in a lesser level of canopy coverage than Plane trees and not desirable.
34. This would impact on Council's ability to meet the Urban Forest Strategy target of an increase of 25% canopy coverage.
35. Any proposed removal of mature Planes within Yarra would elicit a range of responses, but generally it is considered that there would be resistance unless strong justification and evidence could be proven.
36. It is also noted that during the design phase for the Lennox St/Victoria St intersection in 2017, options were presented to Council for the management of the existing mature Plane tree at this site. Council voted to retain this tree rather than removing and replacing it with a smaller, alternative species.
37. Further the current proposed Plane tree removals along Nicholson Street, due to the Route 96 tram stop works, are generating a number of concerns and negative responses in relation to these removals. N.B. Replacement trees are occurring with 3-4 different species trees being replanted to every one Plane tree removed.
38. It is also noted that Plane trees currently provide a large scale of tree and tolerance to urban conditions that cannot be readily replicated with any other species within Yarra.
39. It is noted that the implementation of the Urban Forest Strategy has regard to the various aspects of tree plantings and also plan for the replacement of trees and avenues with limited life expectancy.

Plane Trees as a Proportion of the Tree Network

40. The *Urban Forest Strategy* is the overarching policy document which provides the strategic direction for Councils street tree planting programme.
41. The Strategy vision includes "*A more liveable City supported by a healthy and growing urban forest*".
42. This strategy proposes, as a guide, that no one tree species should represent more than 5-10% of the population in order to minimise the risk of pest and disease incursions.
43. The implementation will seek that the Plane tree population target of 10% of the total tree population is worked towards over the next 5 years.
44. It is noted that the 10% target is notional only, and is a broad target only based on seeking a diverse base of species for ecological reasons (see the Tree Logic report).

Managing Plane Trees

45. An estimation of the time that would be required for a target of 10% Plane tree population has been calculated in Table 2. These figures are based on projections using current practice and are not actuals.

46. Table 2. Future % of Plane trees compared to the total street tree population in Yarra

	Total net tree gain	Total number of street trees	Decrease in Plane tree numbers – (future estimate only) (= new plantings minus removals)	Total number of Plane trees	(%) of Plane trees
2017/18		20,854		3,378	16.2
2018/19	1008	21,862	19-51 = -32	3,346	15.3
2019/20 *	1350	23,212	Approx. -35	3,311	14.3
2020/21 *	1410	24,622	Approx. -37	3,274	13.3
2021/22 *	1370	25,992	Approx. -40	3,234	12.4
2022/23 *	1420	27,412	Approx. -38	3,196	11.7
2023/24 *	1380	28,792	Approx. -45	3,151	10.9
2024/25 *	1420	30,212	Approx. -40	3,111	10.3
TOTAL	9,358	30,212	-267	3,111	10.3

*Increase in Budget for 19/20 of an additional \$200k assumed to continue for the future years

47. The key points to note from Table 2 include:

- (a) by increasing the number of the total tree population with alternate species to Planes, then the percentage of Planes will reduce over a period of time;
- (b) if the current level of funding continues into the future and the street tree planting programme maintains the current rate as per Table 2, then the timeframe required to achieve the target of 10% of Plane tree species in streets across Yarra will be achieved in 2024/25;
- (c) this target of 10% will be achieved through the planting of an additional 9,358 trees, almost exclusively of alternate species to Planes over the next 6 years commencing this financial year; and
- (d) during the past year (2018/19), 51 Plane trees were removed and only 19 were planted out of a total of 1,008 new trees plantings.

48. Minimal numbers of new plantings of Plane tree species are proposed into the future. These plantings will only occur where there is sufficient space to grow to their full potential without causing infrastructure damage and where only minimal maintenance is required.

49. The priority for these new Plane tree plantings will be where there is an existing significant streetscape of Planes particularly in high profile/prominent streets such as arterial roads and existing established avenues.

Recent Examples of Removal and Replacement Plantings in Plane Tree Lined Streets

Scotchmer to Reid section of Rae Street, Fitzroy North (PPM capital project) (2019).

50. The extensive Plane tree avenue in Rae St runs from Park Street to Alexandra Parade (approximately 1.3km). There is angle parking on one side of the street and parallel parking on the other.

51. In the Scotchmer to Reid section the tree stock consisted of 25 Plane trees and 1 Elm. The arborists identified that 8 trees (7 Planes and 1 Elm) required replacement.

52. The replacement strategy was to plant Planes (*Platanus orientalis* var. *insularis* x 4) on the angle parking side where they could be positioned as far away from the channel as possible and maples (*Acer* 'Autumn Blaze' x 6) on the parallel parking side.

53. This approach reduced the Plane tree numbers from 25 to 21 in this short section.
Wellington Street (centre of road section Alexander Parade to Johnston Street) (2018).
54. Twelve Plane trees (*Platanus orientalis* 'Digitata') were planted in the centre road to infill gaps in an existing avenue of 13 Plane trees.
55. The rationale behind this planting was that Wellington Street is considered to have a significant character and canopy cover due to the existing Plane tree avenue with the majority of stock in good condition with a long life span into the future. Therefore the retention of the Plane tree avenue was considered important by the office.
56. Wellington Street is identified as a significant avenue and the scale and grandeur of Plane trees was considered appropriate.
Wellington Street, Clifton Hill (Hodgkinson Street to Alexandra Parade)
57. In June 2019 the upgrade of the centre median planting included removal of 11 x Plane trees in poor condition and replacement with a native tree species: 14 x *Melia azedarach* (White Cedar).
58. The five remaining Plane trees were retained because they were assessed to be healthy and with a broad canopy cover. This section of Wellington St has a different character to the section south of Alexandra Parade, consisting of small residential properties, and a school and church.
59. The planted centre median is also unique to this section. The new native low planting and introduction of native trees in the centre median reinforces the unique character of this section.
Birkenhead Street Fitzroy North (2016)
60. This upgrade involved removal of 15 x Planes and 1 x Ash in poor condition and in undesirable locations.
61. The replacement strategy was to replace with 9 x Plane trees (*Platanus insularis*) within the angle parking where trees could be positioned as far away from the channel as possible. Maples (*Acer* 'Autumn Blaze') x 12 were planted within the parallel parking sections and kerb extensions
William Street, Abbotsford (2014)
62. This upgrade involved removal of 20 x Plane trees which were in poor condition and positioned poorly in relation to services lighting and parking. The replacement strategy was to replace all of these trees with an alternative species: 15 x Maples (*Acer* 'Autumn Blaze').
Bendigo Street, Richmond (2013)
63. Five London Plane trees were removed from the footpath where they were causing property damage. They were replaced with 11 x *Platanus x acerifolia* 'Liberty' on the roadway. There is a very strong avenue of Plane trees in Bendigo Street, and even though property damage was starting to occur, residents were very sensitive about removal of any trees.
Alternative Tree Selection to Plane Trees
64. Ultimately the principles that are applied to all tree planting in Yarra is to plant *the right tree for the right location*.
65. An alternate species selection to replace Plane trees when they are removed has been developed. Consideration has been given to various tree sizes to assist in selecting trees for the various street typologies and constraints across the City.
66. The list overleaf is not exhaustive and other species may be appropriate. The recommended tree selections take into consideration:
(a) Pending climate change predictions;

- (b) Existing rainfall averages;
- (c) General soil types; and
- (d) Species/cultivars or their propagules that are currently available in Australia.

City of Yarra Plane Tree Replacement Palette					
Size	H x S (m)	Botanical name	Common name	Type	Notes
Small	8 x 5	Acer platanoides 'Crimson	Crimson Sentry Norway Maple	exotic	deciduous
	8 x 6	Pyrus betulaefolia 'Southworth' Dancer	Ornamental Pear	exotic	deciduous
	8 x 8	Acer monspessulanum	Montpelier Maple	exotic	deciduous
Medium	10 x 6	*Acer x freemanii 'Autumn Blaze'	Sentry	exotic	deciduous
	10 x 6	*Fraxinus pennsylvanica 'Urbdell'	Urbdell Ash	exotic	deciduous
	10 x 6	*Hymenosporum flavum	Native Frangipani	native	evergreen
	10 x 6	*Tristanopsis laurina 'Luscious'	Water Gum	native	evergreen
	10 x 7	*Corymbia eximia	Yellow bloodwood	native	evergreen
	10 x 8	Acer campestre 'Elsrijk'	Elsrijk Hedge Maple	exotic	deciduous
	10 x 8	*Pistacia chinensis	Pistacio	exotic	deciduous
	10 x 8	*Quercus acutissima	Saw Tooth Oak	exotic	deciduous
Large	10 x 10	Celtis australis	European Nettle Tree	exotic	deciduous
	11 x 6	*Cupaniopsis anarcardioides	Tuckeroo	native	deciduous
	11 x 6	*Zelkova serrata 'Green Vase'	Green Vase Japanese Zelkova	exotic	deciduous
	12 x 5	*Magnolia grandiflora 'Exmouth'	Bullbay Magnolia	exotic	evergreen
	12 x 8	*Jacaranda mimosifolia	Jacaranda	exotic	deciduous
	12 x 8	Ulmus minor x parvifolia 'Frontier')	Frontier Elm	exotic	evergreen
	12 x 8	*Ulmus parvifolia	Chinese Elm	exotic	deciduous
	12 x 8	*Waterhousea floribunda	Weeping Lilly Pilly	native	evergreen
	12 x 9	*Quercus phellos	Willow Leafed Oak	exotic	deciduous
	12 x 10	*Melia azedarach 'Elite'	White Cedar	native	deciduous
	13 x 10	Ulmus parvifolia 'Emer II' Allee)	Allee Chinese Elm	exotic	evergreen
	15 x 8	*Eucalyptus melliodora	Yellow box	native	evergreen
	15 x 8	*Eucalyptus mannifera	Red Spotted Gum	native	evergreen
	15 x 9	Acer platanoides 'Emerald Queen')	Emerald Queen Norway Maple	exotic	evergreen
	15 x 10	Fraxinus pennsylvanica 'Cimmzam' Cimmarron	Cimmarron Green Ash	exotic	evergreen
	15 x 10	*Angophora costata	Smooth-barked Apple	native	evergreen
	15 x 10	*Zelkova serrata	Japanese Zelkova	exotic	deciduous

* Tree species currently planted in Yarra as replacements for Plane trees

External Consultation

67. An external arborist consultant prepared a report to address the issue raised in regards to the management of Plane trees. The consultant, Stephen Frank, BAppSci (Hort.), from Tree Logic Pty Ltd is a highly experience arborist and his clients include local councils, schools, universities, golf clubs and commercial projects.
68. He has expertise in the art and science of tree assessment with a focus on policy development and strategic approaches to urban forest management. He is regularly used as consultant on such diverse projects as Avenues of Honour, Urban Forest Strategies, tree assessments, expert witness and a regular speaker at conferences.

Internal Consultation (One Yarra)

69. Internal consultation was conducted with key internal stakeholders. These included:
- (a) Urban Design;
 - (b) Street Tree Planner;
 - (c) Manager City Strategy;
 - (d) Coordinator Streetscape and Natural Values;
 - (e) Arborist;
 - (f) Open Space; and
 - (g) Coordinator Open Space and Design.
70. Further, the Urban Forest Strategy provides a context to the management of the City's tree population.

Financial Implications

71. Future plantings and tree management are currently funded through existing Council budgets in both the Planning and Place Making and City Works Directorates for both new street plantings and infill plantings.

Economic Implications

72. Tree lined streets add to improved character, amenity and brand of the municipality which encourages more people into the area to work, live and visit.

Sustainability Implications

73. The target, as outlined in the *Urban Forest Strategy*, to achieve no more than 10% of any one species will ensure that the Plane tree population reduces in percentage over time as new species are planted through the tree planting programme of an additional 1,300-1,400 trees per year. NB This is a notional target only based on ecological aspects of seeking a diverse species basis in case of any particular disease that occurs (see attachment).

Social Implications

74. A flourishing and well managed urban forest provides a variety of social and liveability benefits. These include:
- (a) positive impacts on health and well-being;
 - (b) encourages pedestrian and cycling activity; and
 - (c) contributes to amenity thereby encouraging people to spend more time outside.
75. There are some human health impacts on some segments of local communities through allergies from Plane trees. This is the case across all municipalities with Plane trees. (see Attachment)

Human Rights Implications

76. There are no known human rights implications.

Communications with CALD Communities Implications

77. NA

Council Plan, Strategy and Policy Implications

78. There are various relevant strategies, being:
- (a) Council Plan 2017-2021: incorporates the Municipal Public Health and Wellbeing Plan;
 - (b) The Urban Forest Strategy 2017;
 - (c) City of Yarra Street Tree Policy;

- (d) Living Melbourne: our metropolitan urban forest (endorsed by Council 2019);
- (e) Asset Management Strategy;
- (f) Open Space Strategy, and
- (g) Strategic and Operational Risk aspects.

79. The management of trees requires a number of considerations amongst these strategies.

Legal Implications

- 80. The risk team was consulted on the development of the *Urban Forest Strategy*.
- 81. The focus of the strategy of the *right tree in the right location* is a multipronged approach, including a risk management focus. This is a key factor for new plantings having particular regard to the UFS principles, and also in the consideration of any removal requests and assessments. Trees that are causing significant damage are considered for removals and decisions are made on removal or other mitigating actions such as root barriers.

Option

- 82. Yarra's current practices for street tree planting will ensure that the targets as proposed in the *Urban Forest Strategy* will be met over the medium term.
- 83. Widespread removal of Plane trees is not considered necessary, or appropriate, having regard to the diverse suite of Council policies, whilst acknowledging some health aspects for some community members over a few months of the year.

Conclusion

- 84. The percentage of Plane tree population throughout the streets of Yarra will decrease into the future with the planting program of alternate tree species and the removal of some existing Plane trees, where necessary due, for instance, to them causing particular damage.
- 85. Minimal new plantings of Planes is occurring and this will continue, with a net reduction in Plane tree numbers each year due to a greater number of removals than new plantings.
- 86. The target of 10% of Plane trees across street trees in Yarra is consistent with the Urban Forest Strategy and the Street Tree review document and will be achieved by 2024/25. The implementation of the UFS from precinct planning will work through necessary aspects.
- 87. In this context, with the current rate and variety of new street tree plantings for the next 6 years, this will produce a 10% target of Plane tree species across street tree plantings in Yarra.
- 88. Further it is noted that there will be minimal numbers of Plane tree species planted in the future, mainly only in key locations for particular effect.
- 89. The attached consultant arborist report outlines the aspects of allergens from Plane Trees, but also highlights allergies also occurs with some other species including grasses; and in Victoria due to location and climatic reasons, causes hay fever in certain seasons.
- 90. The organisation will continue to implement the vision and principles of the Urban Forest Strategy and are using other species in plantings, consistent with the *right tree in the right location* key criteria.

RECOMMENDATION

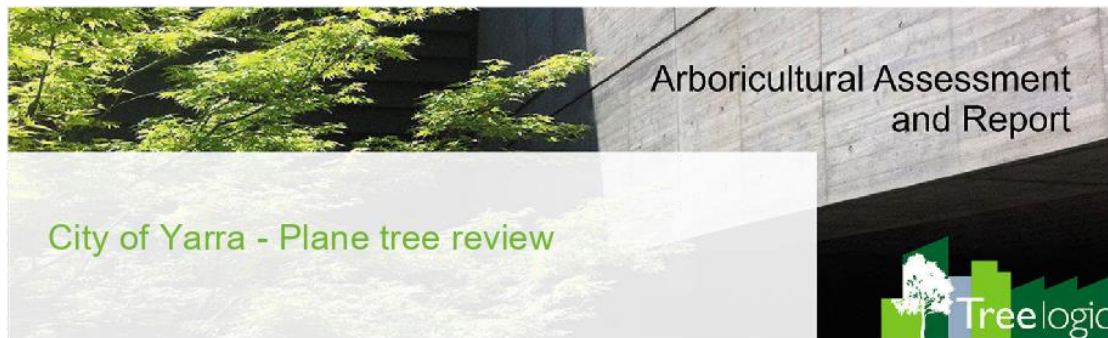
1. That Council:
 - (a) note the Officer report and the Tree Logic attachment regarding Plane trees;
 - (b) note that the target percentage in the Urban Forest Strategy of no species being more than 5-10% of total tree stock is largely for ecological reasons in case of the incursion of any disease;
 - (c) note that Plane trees in the municipality do provide a very significant positive impact to canopy cover but that the Plane tree species does at times cause property damage and does cause some health issues to some persons in the months of August to October;
 - (d) notes that the target of 10% Plane tree population in Yarra is likely to be achieved by 2024/25 through the increase in tree plantings largely with other species;
 - (e) notes that new plantings of Plane trees will only occur in key locations, with a net reduction in Plane tree numbers each year due to a greater number of removals than new plantings; and
 - (f) notes the alternate tree species to Plane trees for street planting, but not limited to those listed in the Tree Replacement Palette, will be planted throughout the streets of Yarra in new locations and also where existing Plane trees have been removed and it is not considered desirable to be replaced with a Plane tree.

CONTACT OFFICER: Susan Stanes
TITLE: Senior Coordinator Design and Place Making
TEL: 9205 5589

Attachments

- 1 [↓](#) Plane Tree Review - Tree Logic 2019

Attachment 1 - Plane Tree Review - Tree Logic 2019



18th April 2019 | Tree Logic Ref. 009946

Prepared for Susan Stanes | Senior Coordinator Design and Place Making | City of Yarra

Prepared by Stephen Frank – Manager Consulting, Tree Logic Pty. Ltd.

Email: stephen.frank@treelogic.com.au

Scope of works

The aim of the arboricultural consultancy is to provide information to address issues raised in Council resolution 12.3.

Information being sought:

- Overview of recommended species diversity levels for tree species in urban landscapes. Some indication of an industry standard for a recommended percentage of Plane trees for the City of Yarra (The City of Yarra Urban Forest Strategy states that 16.2% of all trees within the City are plane trees and 12% of London Planes).
- The latest evidence which demonstrates any adverse health effects from London plane trees and to what extent
- Any evidence of lesser effects from other plane tree species
- Recommendations of appropriate alternative species that may be more suited than plane trees to residential streets and historic heritage areas, which could progressively replace Plane trees to reduce maintenance costs and limit public liability claims as well as creating a suitably shady canopy.

The review and arboricultural advice will take into consideration the policy and strategic direction of tree management within the City as identified in the City of Yarra Street Tree Policy 2014 and the Urban Forest Strategy 2017.

Introduction

Overview of London Plane Tree

The London Plane tree (*Platanus × acerifolia*), is a hybrid cross between American sycamore (*P. occidentalis*) and Oriental planetree (*P. orientalis*). The original cross may have occurred as early as the 1640s, after which this tree became widely planted in London and other major European cities because of its perceived tolerance for urban pollution. London Plane typically

Tree Logic Pty Ltd Unit 4, 21 Eugene Terrace Ringwood VIC 3134

Tree Report | Tree trials

1

Attachment 1 - Plane Tree Review - Tree Logic 2019

grows as a single-trunk tree to 20 to 30 metres (less frequently to 36 m) tall with horizontal branching and a rounded habit. Trunk diameter typically ranges from 1 to 2.5 metres.

The signature ornamental feature of this tree is its brown bark which exfoliates in irregular pieces to reveal creamy white inner bark. Mature trees typically display mottled white bark that facilitates identification from great distances. The large 3-5 lobed medium to dark green leaves (10-23 cm wide) have coarse marginal teeth. The under-surfaces of the leaves and the young parts of the plant are often clothed with an evanescent or more or less persistent felt of stellate of simple hairs (trichomes). In autumn, foliage typically turns an undistinguished yellow-brown.

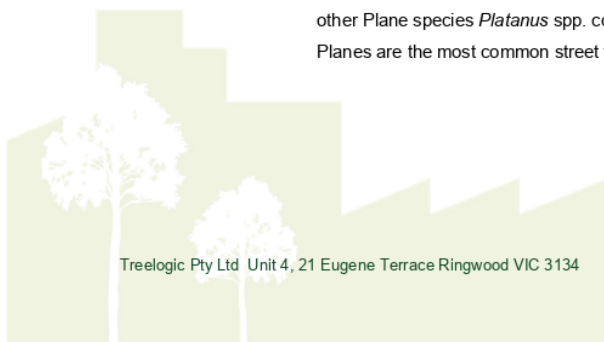
Small, non-showy, monoecious flowers appear in small rounded clusters in April. Male flowers are yellowish and are held on short stalks on branchlets of the previous year and female flowers are reddish in clusters growing on short stalks on older branchlets. During its flowering season, the released pollen can attain high levels, for example, up to 14% of total pollen in some areas of Spain (Asam, Hofer, Wolf, Aglas, & Wallner, 2015).

Female flowers give way to fuzzy, long-stalked, spherical fruiting balls (to 4 cm diameter) that ripen to brown in March and often remain on the tree over winter, breaking up or falling off the following spring. Fruiting balls appear in pairs. Each fruiting ball consists of numerous, densely-packed, tiny seed-like fruits (achenes). A tuft of long bristly pappose hairs is attached to the base of each seed that assist the wind dispersal of the seed.

The plane tree (*Platanus* spp.) in Australia has primarily been used as a large amenity and ornamental tree. In Melbourne it is a regular and common component of larger urban parks, many streets, and is regularly used in many other forms of landscaping where a large tree can be used. It is similarly used as an urban parkland and street tree in cities throughout the temperate regions of the world.

The plane tree has many advantages as an ornamental tree including great size and longevity where these are required. Other advantages include a moderate shade that is enough to allow grass or other plants to grow below it, tolerance of pollution, tolerance of difficult soil conditions, and tolerance of pruning, including bad pruning. One of the parents of London Plane is *P. occidentalis* (American Sycamore) which can tolerate weeks of flooding, even complete submersion of seedlings, provided that the water is aerated. This also indicates the species has good tolerance of compacted sites, i.e. low oxygen levels. The tree has good tolerance of changes to its growing environment and loss of root system. Due to its tolerances the plane tree is one of the most successful urban trees which have subsequently seen it used extensively around the world.

There are 20,854 public street trees in the City of Yarra and many more park trees. London Planes account for 12% (approximately 2,500) of the total street tree population; combining other Plane species *Platanus* spp. comprise 16.2% of the total street tree population. London Planes are the most common street tree in Yarra.



Attachment 1 - Plane Tree Review - Tree Logic 2019

Appropriate diversity guidelines

There is a clear understanding that communities should plant a variety of tree species. Since the 1800's, there is a chronological order of events where a major pest or disease has devastated a population of urban trees (primarily in the Northern Hemisphere), which should make the requirement to state the importance of diversity as redundant. It is generally understood that diversity of tree species used in urban landscapes will increase the resiliency of the urban forest. Tree diversity within an urban forest landscape provides functional, aesthetic benefits as well as biological/ ecological advantages. "A common tenet of popular ecology is that high species diversity contributes to the stability of ecosystems by reducing hazards of catastrophic loss of a particular species" (Richards, 1983). However, there is much evidence from plant ecological studies that relationships between diversity and stability cannot be as simply expressed as this premise suggests.

Street tree species do not occur as a monoculture to the extent found in agricultural crops or forest plantations; nor are monocultures logical over the range of street conditions encountered over a municipality. Most urban tree populations around the world are dominated by a relatively few species that have proven adaptable and useful under austere conditions, and Planes are certainly in that group.

Achieving an appropriate diversity of tree species is one important factor in achieving a sustainable urban forest. However, there should be a suite of management tools utilised to manage and sustain a healthy, vibrant urban forest that responds to a community's requirements.

There are guidelines or rules that aim to set target levels for taxon diversity within a street tree population. Santamour (1990) suggests that there should be no more than 30% of any one family, 20% of any one genus, or 10% of one species in an urban tree population. This is the typically used numerical limit placed on tree diversity within a municipality in Australia.

This rule was predicated on the significant losses of elm to Dutch Elm Disease (DED) during the 1950's and 60's, however the implementation of contemporary approaches to pest and disease management, sanitation cutting and appropriate plant spacing, would have reduced the losses and impact on the landscape (Richards, 1983). Watson (2018) also suggests that regardless of suggested percentage diversity targets, damage from a single invasive pest with a wider host range can still be extensive.

Miller and Miller (1991) recommended that "liberal use" of a species should not exceed 10%. Jaenson et.al. (1992) suggested that city foresters should use species percentages derived from rapid, sample surveys to "reassess their recommended species lists to achieve a 5%-10% ceiling on any one tree species".

These simple numerical limits have no scientific basis. Regardless of percentage, a species might be considered overused if it is often planted where other proven species are likely to be better suited (Richards, 1993). It is hardly a criticism to use a proven species for critical/high profile planting sites; particularly where species form iconic avenues within a city. A logical



Attachment 1 - Plane Tree Review - Tree Logic 2019

process would be to use these proven species to where they are believed to provide the most benefit or best available choice and encourage suitable alternatives elsewhere. This would result in a reduced planting rate for a common species, but its relatively high success rate will maintain its prominence in the population (Richards, 1993).

"Street tree diversity should relate to the range of conditions and objectives in a community rather than to simple numerical standards" (Richards, 1993). The urban environment can be a stressful place for trees which limits the palette of species suitable for cultivation; typically, there is less diversity of species and shorter-lived species growing in streets than what is growing within public open space and urban parks.

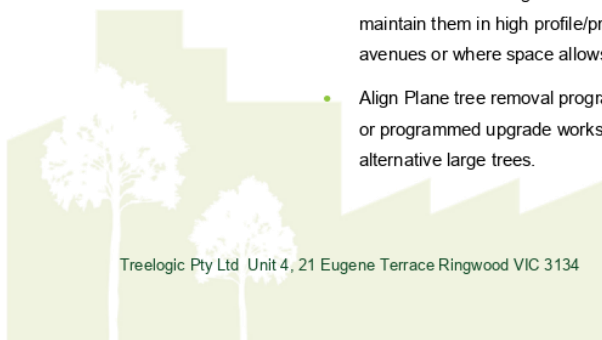
The concept of species diversity should not be at the cost of species prominence, urban adaptability, canopy cover and management resource allocation.

Establishing diversity targets should consider factors such as scale, land use and site characteristics. Diversity goals should be set as high as realistically possible but with the understanding that urban environments are typically difficult with limitations on the number of species that perform well, and those that do should not be replaced by underperforming or untried species (Watson, 2018).

I believe that the accepted level of species diversity will evolve based on the continuum of the dynamic nature of tree removal and replacement works taking into consideration the changes in species/variety availability, changes to environmental or planting sites and changes to community expectations. Setting strict diversity numbers are unrealistic and typically not achievable, due to community concerns about tree removal, and under current management regimes and resourcing allocations.

Based on the Yarra Council resolution to investigate the management of Plane trees within the context of tree diversity guidelines, I would offer the following suggestions:

- Aim to reduce the Plane population to less than 10% of the total street tree population (approximately 1,300 Plane trees) over the next 5-years.
- Undertake an audit of the Plane tree population within the City to ascertain streets where:
 - A total removal and replacement program could occur based on the removal criteria outlined in the policy.
 - Existing Plane trees can be replaced with an alternative species when they are removed; results a slower turnover of the Planes within a street.
- Remove problematic Plane trees that meet any of the removal criteria.
- Consider rationalising the use of Plane trees in every street, such as within local roads and maintain them in high profile/prominent sites such as arterials, existing established avenues or where space allows.
- Align Plane tree removal programs with other street infrastructure maintenance programs or programmed upgrade works to enable design solutions to be incorporated to support alternative large trees.



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- Educate the community as to approach being taken by Council and the alternatives been sought.

Existing policies and strategic directives

Removals and replacements should be based on the policy directives and the Urban Forest Strategy 2017, where it is opined that 'London plane trees are currently over represented in Yarra streets compared to best practice.'

The City of Yarra Street Tree Policy has elements that would be supportive of rationalising Plane tree populations.

Objective 2 – Improve the Quality of Street Trees

2. Actions

- 2.2 Select trees that are less likely to have an adverse impact on surrounding Infrastructure.

Objective 3 – Increase diversity of street tree species

3. Actions

- 3.1 Trial new tree species to broaden the available palate of trees available for planting across the Municipality.

Objective 5 - Integrated Streetscape Design

5. Actions

- 5.1 Coordinate street tree planting with other Council services that have an impact on the amenity and management of streetscapes and associated infrastructure.

Tree removal criteria

Street tree removal and replacement criteria as listed in the City of Yarra Street Tree Policy 2014. Consistent with Objective 1 of the Street Tree Policy, Council's preference is for trees to be retained wherever possible.

Effective management of street trees requires street trees to be removed from time to time to limit risk to person and/or infrastructure, and reduce life cycle costs or to provide a street tree canopy for current and future residents,

Reasons for removal include, but are not limited to:

- Trees that are dead, dying or unsafe;
- Minimisation or elimination of risk to the public;
- **Trees that are the subject of public liability claims;**
- **Trees that are in inappropriate locations due to tree size, structure or root network;**



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- Trees that are adversely impacting on vehicle and/or pedestrian safety;
- **Trees that are causing damage to public or private infrastructure;**
- Trees that are identified for removal following consultation as part of a street tree planting program;
- Trees that are identified as weed species; and
- **Trees that are causing excessive renewal and maintenance costs to surrounding infrastructure.**

The reasons listed in bold are assumed to be more apparent with large Plane trees in the City.

However, consideration needs to be given to adhering to Objective 1 – Net Increase in the number of street trees and overall street tree canopy. The Plane trees across the City would be providing substantial canopy coverage with associated environmental benefits.

Other Councils approaches to Plane tree management

In terms of changing community expectations and in conjunction with associated management issues with a growing population, Plane trees are coming under more scrutiny and Councils are pondering their longer-term viability and overall dependence on the genus. This is particularly the case with the City of Melbourne, where they are no longer planting Plane trees into new landscapes and will retain them only in key areas such as Elizabeth Street, Swanston Street, Bourke Street and Collins Street, the rest of the CBD will be gradually changed as and when trees die. The City of Melbourne will be reducing the plane tree population over time.

To a lesser extent, the City of Stonnington are reviewing the use of Plane trees along their main roads and considering rationalising Plane tree avenues if other considerations are met.

The City of Port Phillip is about to embark on a policy direction for the management of their Plane tree populations taking into consideration similar management issues that the City of Yarra is experiencing. An outcome is to develop a management approach that could rationalise their use in line with diversity targets.

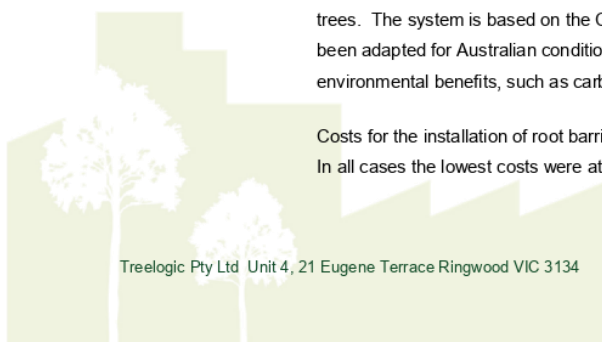
A cost/benefit approach to tree removal decision making

A cost benefit approach could be adopted to aid tree removal decisions.

Seven case studies of existing streets with recognised tree root issues was undertaken in an inner-city municipality in 2016 to develop up strategies and costings for how they could be managed. This involved a range of typical street typologies found in the study city.

The first step was to establish a dollar value of the existing trees. The i-Tree Eco Structural Tree Value (see <https://www.itreetools.org/eco/>) was used to calculate an estimated value for the trees. The system is based on the Council of Tree and Landscape Appraisers method that has been adapted for Australian conditions. The value considers the amenity value as well as the environmental benefits, such as carbon sequestration and pollution uptake, in the calculation.

Costs for the installation of root barriers were taken from supplied information on existing costs. In all cases the lowest costs were attributed to each example.



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Bear in mind that the maintenance costs do not include the processing of requests, multiple inspections, and that the barrier may not solve the issue or be a one-off solution.

Table 1. Comparison of values for case studies

Street	Dominant species	Individual tree value (i-Tree)	Collective tree value (i-Tree)	Avg. tree root barrier cost
Street No. 1	Liquidambar	\$7,131	\$684,576.00	\$4,477.50
Street No. 2	Claret Ash & Callery pear	\$1,362.50 (average)	\$76,300.00	\$3,230.00
Street No. 3	London Plane	\$8,648 (P/L side), \$11,647 (Non P/L side)	\$1,183,108.00	\$5,970.00
Street No. 4	London Plane	\$9,598 (P/L side), \$10,259 (Non P/L side)	\$944,199.00	\$5,373.00
Street No. 5	London Plane	\$2,490 (P/L side), \$3,385 (Non P/L side)	\$168,780.00	\$2,709.00
Street No. 6	London Plane	\$4,869	\$141,201.00	\$6,740.00
Street No. 7	<i>Melaleuca</i> spp., Callery Pear, Claret Ash	\$3,168 (avg)	\$316,800.00	\$2,783.00
		Total value of trees in the case studies	\$3,514,964.00	

In the examples of Street No. 2 (assessed section) and to a lesser degree Street No. 5, the case studies found that the estimated value of the trees was less than the estimated costs for a typical root barrier. This type of analysis could allow Council to make a cost/benefit analysis regarding the management of the trees. In this study it suggested that it may be worthwhile investigating design options and/or removal and replacement programs for these two streets.

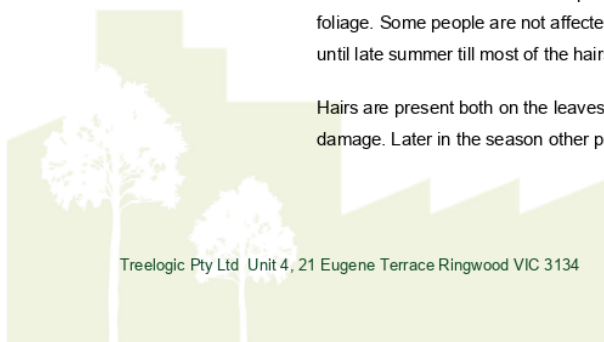
Allergy problems

Most species of Plane are known to cause bronchial problems, similar to hay-fever with some people. This is primarily due to the hairs and down shed from the young leaves and fruit more so than allergic reaction to pollen production. Sercombe, et al, (2011) found that *Platanus* bioaerosols exist in high concentrations between August and November in inner-urban Sydney but were not associated with seasonal symptoms. *Platanus* trichomes (fine hair outgrowths) from foliage and fruits are inhaled and may constitute a respiratory irritant.

These trichomes are a problem particularly in spring and early summer. It affects most seriously any people working with or disturbing the foliage, such as people pruning or carrying out other work on the trees. *Platanus orientalis* has produced conjunctival and nasopharyngeal irritation in tree workers from its leaf hairs.

It has also been known to cause problems with people in areas adjacent to the disturbed foliage. Some people are not affected. Pruning work on these trees sometimes must be halted until late summer till most of the hairs are shed and staff are able to work on it again.

Hairs are present both on the leaves and on the fruit to protect the young tissue from sunlight damage. Later in the season other protection develops in the mature leaves (mostly from



Attachment 1 - Plane Tree Review - Tree Logic 2019

pigments in the leaf), and the hairs are shed to ensure that it photosynthesises at maximum efficiency. The bronchial reaction is due to irritation of the mucal membranes by the leaf hairs. The victim is usually fully recovered the following day, and it is not believed to cause any long-term health problems. Plane trees are sometimes included in listings of poisonous plants because of this reaction.

The propensity for plane trees to cause allergic reactions has been documented in Australian medical journals. "Hayfever and asthma occurring in a male individual, who pruned a plane tree, was attributed to downy material which was found on the leaves and 'seed balls' during the summer. Other trees did not affect him nor did plane trees at other times of the year. Scratch tests with a watery suspension of the downy material from the leaves produced positive reactions" (Zacharin 1933).

The most relevant allergens from the *Platanus x acerifolia* pollen have been determined. A major allergen, specific of this pollen, and named Pla a 1, has been purified and characterized (Asturias, et al 2002). The periods for pollen production would be from August to October with peak periods during September.

The following graph indicates the periods of greatest pollen production from plane trees through the year. Graph from Nitiu and Mallo (2002).

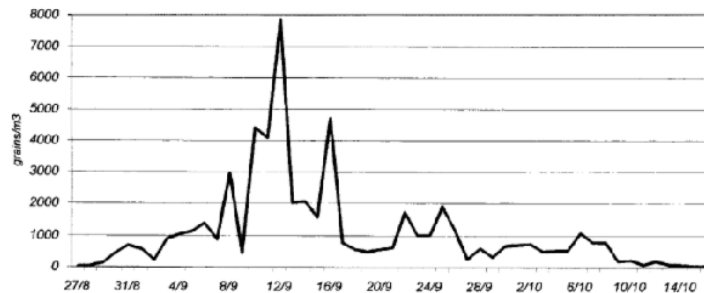
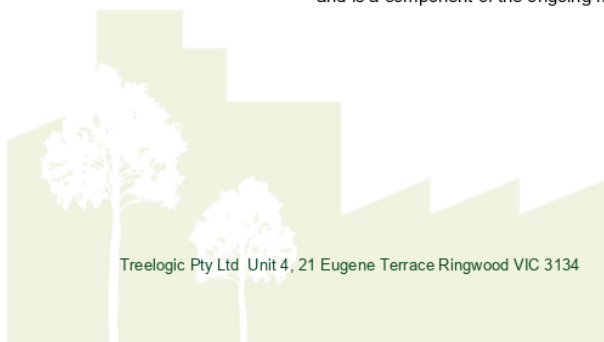


Figure 7. Pollen calendar of *Platanus* spp. expressed as rates of daily concentrations.

Figure. Pollen Calendar of *Platanus* spp.

It should be noted however that many other species of tree (primarily wind pollinated species) can cause allergenic reaction. The worst offenders from the plant kingdom are the grasses and weed species and these are particularly problematic species in Melbourne due to the location of extensive open grassland to the north and prevailing wind patterns.

Respiratory concerns associated with the various Plane tree species and cultivars will continue and is a component of the ongoing management of these trees in urban landscapes.



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Alternative species

The following tree species and cultivars could be considered as suitable replacements for *Platanus* spp. in the City of Yarra. Consideration has also been given to various tree sizes to assist in selecting trees for the various street typologies and constraints across the City.

The tree selections should consider:

- Pending climate change predictions
- Existing rainfall averages
- General soil types
- Species/cultivars or their propagules are currently available in Australia.

Tree selections for City of Yarra – alternatives to Plane trees

Small trees 3-8 metres in height

Name: Montpellier Maple (*Acer monspessulanum*)

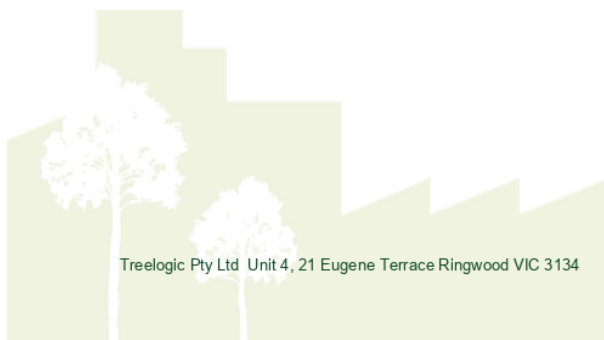
Height: 6-8 metres

Width: 5-8 metres



Description:

Small tree with oval to rounded form. The leaves can be variable, but typically three-blunt lobes, shiny dark green. Foliage is typically thick, leathery, turning yellow in autumn. The flowers are yellow-green and held in pendulous flower clusters. The flowers appear simultaneously with the new leaves. The fruit is a samara (winged seed) with many being sterile.


Montpelier Maple is tolerant of dry conditions. It is intolerant of saline and sodic soils. It will grow in full sun to part shade.






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<p>Name: Crimson Sentry Norway Maple (<i>Acer platanoides</i> 'Crimson Sentry')</p> <p>Height: 7-8 metres</p> <p>Width: 4-5 metres</p> <p>Description:</p> <p>Broadly columnar in form with a dense canopy of dark purple leaves with five sharp lobes. Leaves turn from purple to golden-brown autumn foliage.</p> <p>Moderate to high tolerance of dry conditions. Very tolerant of a wide array of soils. Adapts to extremes in soils; sand, clay, acid to alkaline.</p>	
<p>Name: Ornamental Pear (<i>Pyrus betulaefolia</i> 'Southworth' 'Dancer'™)</p> <p>Height: 5-8 metres</p> <p>Width: 4-7 metres</p> <p>Description:</p> <p>Small tree with vase form becoming oval to rounded. Silver-grey maturing to shiny, mid-grey foliage turning yellow in autumn. Profuse white flowers in spring. Different in form/texture to other pears. Adapts to most soil types and has high to moderate drought tolerance.</p>	

Medium trees 9-15 metres in height

<p>Name: Elsrijk Hedge Maple (<i>Acer campestre</i> 'Elsrijk')</p> <p>Height: 8-10 metres</p> <p>Width: 5-8 metres</p> <p>Description:</p> <p>An oval to widely conical shaped tree with a dark, dense crown.</p> <p>Small dark green leaves, colouring yellow in autumn. Bark grey-black, lightly ridged and furrowed.</p> <p>Adapts to a wide range of soils, from poorly drained clays to well drained sand (except dry infertile sandy soil). Will tolerate drought, air pollution and soil compaction. Grows well in cut-outs in hard-paved areas.</p>	
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<p>Name: European Nettle Tree (<i>Celtis australis</i>)</p> <p>Height: 10-15 metres</p> <p>Width: 6-12 metres</p> <p>Description:</p> <p>Smooth grey bark. Alternating leaves are narrow and sharp-toothed on margins. Dark green and rough above, pubescent, grey-green below. Foliage turns yellow in autumn. Small, green flowers, either singly or in small clusters followed by a small, dark-purple berry-like drupe.</p> <p>Adapts to most soils. Prefers light well-drained, sandy, and loamy soils, including those nutritionally poor; it can tolerate drought but not shade.</p>	
<p>Name: Allee Chinese Elm (<i>Ulmus parvifolia</i> 'Emer II' Allee)</p> <p>Height: 12-15 metres</p> <p>Width: 8-12 metres</p> <p>Description:</p> <p>Vase-shaped to broad domed tree with ascending branches. Small, glossy, dark green leaves. The trunk is irregularly fluted, and the bark exfoliates in puzzle-like patterns exposing rich shades of grey, green, brown and orange-brown.</p> <p>Adaptable to most soils and can cope with extreme conditions. Tolerates compaction and a restricted root zone.</p> <p>Allee is resistant to elm leaf beetles and Dutch elm disease. Structural, formative pruning is important to develop a strong central leader. Since growth is relatively fast, frequent, light pruning's are recommended over infrequent, severe pruning's.</p> <p>Also use: <i>Ulmus parvifolia</i> 'Todd'</p>	
<p>Name: Frontier Elm (<i>Ulmus minor</i> x <i>parvifolia</i> 'Frontier')</p> <p>Height: 10-12 metres tall by 5-10 metres</p> <p>Width: 5-10 metres</p> <p>Description:</p> <p>'Frontier' develops a vase or pyramidal shape with ascending branches. Moderate to fast growth rate.</p> <p>Alternate leaves with toothed edges; glossy dark green reportedly turning, to red-burgundy in autumn, which is unusual for elms. Seldom flowers and fruits.</p> <p>Bark is relatively smooth, grey-green in colour and marked with orange lenticels.</p> <p>As with most trees, the Frontier Elm will perform best in well-drained, moist soils. However, it is very adaptable to a range of soil types including poorly drained (The Morton Arboretum, 2018) and paved areas. Tolerant of alkaline soils.</p> <p>Tolerant of heat and drought. Very tolerant of urban conditions.</p> <p>The Frontier Elm has good resistance to Dutch elm disease (DED) and moderate resistance to elm leaf beetle.</p> <p>Will become available through Metropolitan Trees.</p> <p>Image from Van den Berk Nurseries.</p>	

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Large trees >15 metres in height

Name: Emerald Queen Norway Maple (*Acer platanoides* 'Emerald Queen')

Height: 15-18 metres

Width: 8-10 metres

Description:

Large, oval to rounded canopy.

Lightly leathery, leaf has a light-pink colour when it unfurls, but later turns shiny green. Tree has brilliant yellow autumn colour.

The tree is easily transplanted, with moderate to fast growth rate. It is adapted to a wide variety of soils (including alkaline). Successfully grows in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common. Suitable for paved areas & cutouts.

Image from Van den Berk Nurseries.



Name: Autumn Blaze Freeman Maple (*Acer x freemanii* 'Autumn Blaze')

Height: 15-20 metres

Width: 9-12 metres

Description:

Narrow-domed to broad-pyramidal tree with ascending branches. Like *A. rubrum*, but more tolerant of drier sites.

The bark is smooth grey. The bright green, 5-lobed dissected leaves have red stems and a greyish underside. In autumn the foliage turns deep orange-red to intense red. The autumn colour persists quite a long time before the leaf falls. Although the plant is female, fruits rarely form.

A. x freemanii, 'Jeffersred' flourishes on most soils if they are not too limy. Easily grown in average, medium to wet, well-drained soils in full sun to part shade. Established trees have some tolerance for drought conditions. Successfully grows in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common. Suitable for paved areas & cutouts



Name: Cimmarron Green Ash (*Fraxinus pennsylvanica* 'Cimmzam' Cimmarron™)

Height: 12-18 metres

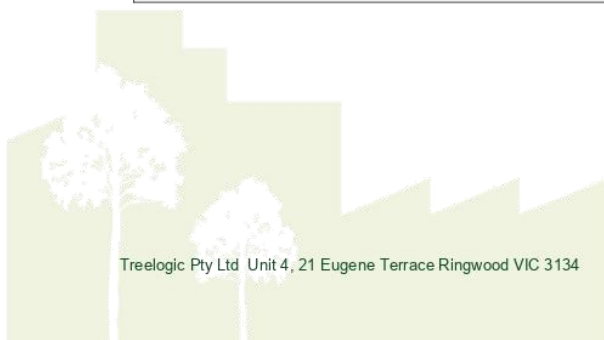
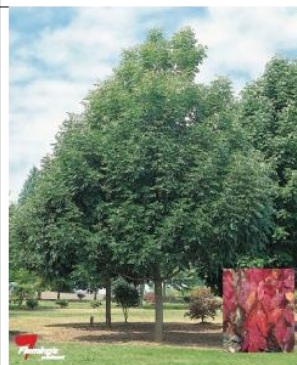
Width: 8-12 metres

Description:

Pyramidal (while young), narrow domed to rounded tree with dense, lustrous foliage, which turns burgundy to red in autumn; which it can hold well into autumn. Attractive dark grey bark which becomes deeply furrowed. Reportedly seedless variety.

An impressive, ornamental feature tree which provides great summer shade and is capable of withstanding relatively extreme climatic conditions, being tolerant of frost as well as drought.

Suitable for a range of conditions, including clay and compacted soils. Transplants readily.




Tree Logic Pty Ltd. Unit 4, 21 Eugene Terrace Ringwood VIC 3134

Tree Report | Tree trials

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<p>Name: Urbanite Green Ash (<i>Fraxinus pennsylvanica</i> 'Urbidell' Urbanite™)</p> <p>Height: 12-18 metres</p> <p>Width: 8-10 metres</p> <p>Description:</p> <p>Broadly conical to narrow-domed crown with strong branch architecture and little-to-no seed set. Dense, lustrous foliage turns pale yellow to deep bronze in autumn. Attractive dark grey-brown bark which becomes deeply furrowed as it matures.</p> <p>Prefers well-drained, moist soils, however, it is very adaptable to poor soils, rocky soils, various soil pHs, compacted soils, wet sites, dry sites, pollution, and salt spray; an extremely urban tolerant cultivar (as the cultivar name suggest). Transplants readily.</p>	
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Stephen Frank

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Manager Consulting

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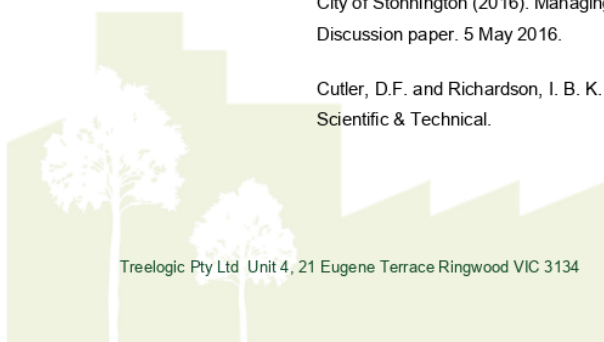
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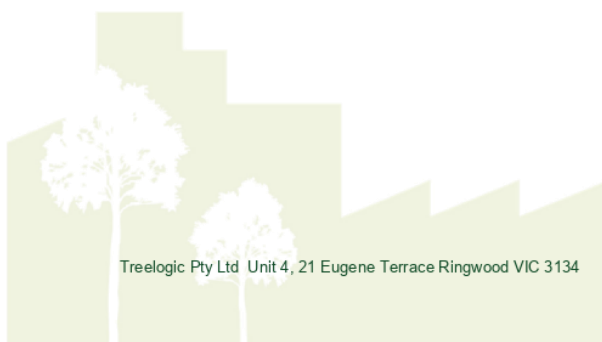
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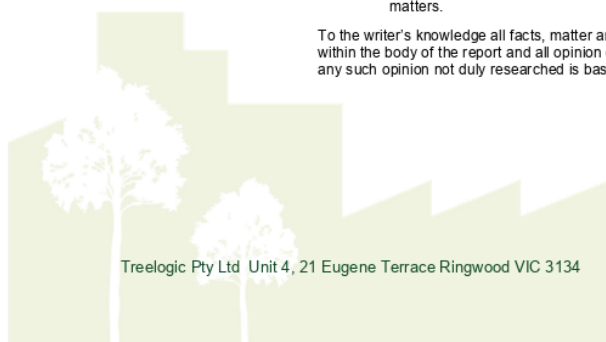
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11.4 Proposed Discontinuance of Road adjacent to 25 Balmain Street, Cremorne

Reference: D19/133975

Authoriser: Director Corporate, Business and Finance

Purpose

1. This report seeks Council's authority to commence statutory procedures pursuant to the *Local Government Act 1989* (**Act**) to consider discontinuing the road abutting the property known as 25 Balmain Street, Cremorne, being the whole of the land contained in certificate of title volume 2422 folio 238 (**Road**).

Background

2. The Road is shown as lot 1 on the title plan attached as Attachment 1 to this report (**Title Plan**). And is shown as the area outlined red on the plan attached as Attachment 2 to this report (**Site Plan**). Also known on Council's Road Register as Road number 1087.
3. Tank Ventures Pty Ltd (**Owner**) is the registered proprietor of the properties known as; 25 Balmain Street, Cremorne shown outlined blue on the Site Plan, being the land contained in certificate of title volume 10536 folio 255, and 128 Cubitt Street, Cremorne, shown outlined green on the Site Plan, being the land contained in certificate of title volume 8727 folio 553. Together the (**Adjoining Properties**).
4. The Road abuts, and forms part of the Vacant Land at 25 Balmain Street, Cremorne. Building permit BA15/00494 for the demolition of the dwelling and front fence was issued in September 2015.
5. The Owner has requested that Council discontinue the Road and sell the Road to the Owner (**Proposal**).
6. The Owner has agreed to pay Council's costs and disbursements associated with the proposed discontinuance of the Road, together with the market value as determined by the Act for the transfer of the discontinued Road to the Owner.

Discussion

Road

7. The Road is known to title as a 'road'. The Road is therefore a 'road' for the purposes of the Act which Council has the power to consider discontinuing.
8. Upon being discontinued, the road will vest in Council.
9. The Road is listed on Council's register of Public Roads as Council Road No. 1087. It is considered that the Road is no longer reasonably required for general public use pursuant to section 17(4) of the *Road Management Act 2004* as:
 - (a) the road was fenced (gated) for security purposes along the southern boundary for many years, public access to the road was restricted;
 - (b) the road is fenced into the property at 25 Balmain Street, Cremorne and now forms part of the vacant land parcel;
 - (c) the Adjoining Properties do not require the Road for access to the public road network; and
 - (d) no properties other than the Adjoining Properties abut the Road.

Adjoining Owners

10. As the Owner is the registered proprietor of all of the Adjoining properties, consent was not required.

Site Inspection

11. A site inspection of the Road was conducted by DML Land Survey Pty Ltd on the 30 July 2018. The site inspection report notes that;
 - (a) the Road is constructed of gravel;
 - (b) the Road is enclosed within the property at 25 Balmain Street, which is a vacant parcel;
 - (c) there is no evidence of any vehicular or pedestrian traffic on the Road;
 - (d) the Road provides access to a door at the rear of the property at 128 Cubitt Street, Cremorne;
 - (e) the property at 128 Cubitt Street, Cremorne has carriageway rights over the Road;
 - (f) there is some encroachment into the eastern boundary of the Road by the brick wall at the western boundary of 128 Cubitt Street, Cremorne;
 - (g) there is a large drainage pit within the Road, and downpipes running down the eastern wall of 128 Cubitt Street, Cremorne.
 - (h) the Road is not required for public access.
12. A copy of the site inspection report is attached as Attachment 3 to this report.

Public/Statutory Authorities

13. The following statutory authorities have been advised of the proposal and have been asked to respond to the question of whether they have any existing assets in the Road which should be saved under section 207C of the Act: City West Water, Melbourne Water, CitiPower, United Energy, Multinet Gas, Telstra, Optus, APA Gas, AusNet and Yarra City Council.
14. City West Water, Melbourne Water, CitiPower, United Energy, Multinet Gas, Optus, APA Gas and AusNet Services have advised that they have no assets in or above the Road and no objection to the Proposal.
15. In an email dated 20 May 2018, Telstra advised that they have assets within the area of the Road but have no objection to the Proposal, provided that a detailed site plan is obtained from Dial-Before-You-Dig to determine the exact location of any Telstra assets.
16. On the 14 August 2018, a copy of the site plan was obtained from Dial-Before-You-Dig, showing no Telstra assets contained in the Road.
17. Copies of the correspondence from Telstra and the site plan are contained in Attachment 4 to this report.
18. In an email dated 31 May 2018, Council advised that easements may be required in respect of the downpipes discharging stormwater runoff into Balmain Street, to ;
 - (a) maintain the function of any existing property drains discharging into the Road;
 - (b) to facilitate future development of abutting properties; and
 - (c) maintain the function of existing underground third party utility services (if present).
19. In an email dated 20 December 2018, Council confirmed that as the Road will be fully encompassed by a development and therefore repurposed, it no longer requires an easement over the Road.
20. Copies of the correspondence from council are contained in Attachment 5 to this report.

Public Notice

21. Before proceeding with the discontinuance, Council must give public notice of the Proposal in accordance with section 223 of the Act. The Act provides that a person a person may, within 28 days of the date of publication of the public notice, lodge a written submission regarding the Proposal.

22. Where a person has made a written submission to Council requesting that he or she be heard in support of the written submission, Council must permit that person to be heard before a meeting of Council, giving reasonable notice of the day, time, and place of the meeting.
23. After hearing any submissions made, Council must determine whether the Road is not reasonably required as a road for public use, in order to decide whether the Road should be discontinued.

Internal Consultation (One Yarra)

24. No internal consultation is required for this report.

Financial Implications

25. There are no financial implications arising from this report.

Economic Implications

26. The Owner has agreed to acquire the Road for its market value (plus GST) as determined by the Act.
27. In addition to the market value of the Road (plus GST), the Owner has agreed to pay Council's costs and disbursements associated with the Proposal.

Sustainability Implications

28. There are no sustainability implications arising from this report.

Social Implications

29. There are no social implications arising from this report.

Human Rights Implications

30. There are no human rights implications arising from this report.

Communications with CALD Communities Implications

31. All notices and correspondence issued in respect of this proposal will contain a reference to Yarralink Interpreter Services.

Council Plan, Strategy and Policy Implications

32. There are no Council plan, Strategy or Policy Implications.

Legal Implications

33. If the Road is discontinued and sold to the Owner, Council will require the Owner to consolidate the title to the former road with the title to the Owners' property at 25 Balmain Street, Cremorne, within 6 months of the date of transfer of the Road to the owners, at the Owners' expense.

Other Issues

34. There are no other issues.

Options

35. There are no options associated with this report.

Proposal

36. It is proposed that Council should:
 - (a) commence the statutory procedures pursuant to clause 3 of Schedule 10 of the Act to discontinue the Road adjacent to 25 Balmain Street, Cremorne, and transfer to the Owner the discontinued Road; and
 - (b) Consider removing the Road from Council's register of Public Roads as it is no longer reasonably required for public use for the reasons set out in this Report.

RECOMMENDATION

1. That Council, acting under section 17(4) of the *Road Management Act 2004*, resolves that the road abutting 25 Balmain Street, Cremorne, which is shown as lot 1 on the plan contained in Attachment 1 to this Report, being the whole of the land contained in certificate of title volume 2422 folio 238 (**Road**), be removed from Council's register of Public Roads on the basis that the Road is no longer reasonably required for general public use for the following reasons:
 - (a) the Road was fenced (gated) for security purposes along the southern boundary for many years, public access to the road was restricted;
 - (b) the road is fenced into the property at 25 Balmain Street, Cremorne and now forms part of the vacant land parcel;
 - (c) the Adjoining Properties do not require the Road for access to the public road network; and
 - (d) no properties other than the Adjoining properties abut the Road.
2. That Council, acting under clause 3 of schedule 10 of the *Local Government Act 1989* (**Act**):
 - (a) resolves that the required statutory procedures be commenced to discontinue the road adjacent to 25 Balmain Street, Cremorne, which is shown marked lot 1 on the title plan attached as Attachment 1 to this report (**Road**);
 - (b) directs that, under sections 207A and 223 of the Act, public notice of the proposed discontinuance be given in 'The Age Newspaper' The Local Newspaper, Council's Social Media and displayed on site;
 - (c) resolves that the public notice required to be given under sections 207A and 223 of the Act should state that if the Road is discontinued, Council proposes to sell the Road to the adjoining owner for market value (plus GST) as determined by the Act; and
 - (d) authorises Bill Graham, Council's Coordinator Valuations to undertake the administrative procedures necessary to enable Council to carry out its functions under section 223 of the Act in relation to this matter.

CONTACT OFFICER: Bill Graham
TITLE: Coordinator Valuations
TEL: 9205 5270

Attachments

- 1 [↓](#) Title Plan
- 2 [↓](#) Site Plan
- 3 [↓](#) Site Inspection Report
- 4 [↓](#) Telstra Correspondence
- 5 [↓](#) YCC Correspondence

Attachment 1 - Title Plan

TITLE PLAN		EDITION 1		TP		
Location of Land Parish: JIKA JIKA Township: - Section: - Crown Allotment: - Crown Portion: 3 (PART) Title Reference : VOL.2422 FOL.238 Last Plan Reference: Lot 1 on TP938653J			Notations DEPTH LIMITATION DOES NOT APPLY			
Easement Information				THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY. Checked by: Assistant Registrar of Titles Date		
LEGEND A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)						
Easement Reference	Purpose	Width (Metres)	Origin			Land Benefited/In Favour of
BALMAIN STREET						
CUBITT STREET						
		ORIGINAL SCALE SHEET SIZE 1:100 A4		REF: 2018-167 TITLE PLAN		

Attachment 2 - Site Plan



Attachment 3 - Site Inspection Report



Maddocks

Ref: MAN:MY:7513063

Maddocks
Lawyers
Collins Square, Tower Two
Level 25, 727 Collins Street
MELBOURNE 3000

Yarra City Council
Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne

DATE OF INSPECTION:

30/07/2018

PHOTOGRAPHS OF THE ROAD: Attached at the end of this report

IS THE ROAD OPEN AND AVAILABLE FOR USE BY THE PUBLIC? Yes ☐ No ☒

WHAT OBSTRUCTIONS ARE OVER OR IN THE ROAD?

Fencing	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Vegetation*	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rubbish	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Services*#	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Other*	<input type="checkbox"/> Yes	<input type="checkbox"/> No	(# Including fire hydrants/plugs.)		

* Provide Details:

The subject Road is currently occupied to be included as part of the vacant Lot at No.25 Balmain Street. The existing warehouse at No.130-134 Cubitt Street has a rear access door opening onto the subject Road as well as a number of windows within the walls abutting the Road. The properties at No.130-134 Cubitt Street have carriageway rights over the subject Road as per their title diagram (LP34335). There exists a large drainage pit within the subject Road and a couple downpipes run down the eastern abutting wall from No.130-134 Cubitt Street. The subject Road directly abuts a brick warehouse to the east and north at No.130-134 Cubitt Street and is not fenced on the western boundary. The Road has been exclusively fenced in with No.25 Balmain Street by a cyclone fence along the southern boundary, abutting Balmain Street.

THE MATERIAL WITH WHICH THE ROAD IS CONSTRUCTED:

<input type="checkbox"/> Nil	<input type="checkbox"/> Bitumen
<input type="checkbox"/> Bluestone	<input checked="" type="checkbox"/> Other _____ Gravel

EVIDENCE OF THE ROAD BEING USED:

<input checked="" type="checkbox"/> Nil	<input type="checkbox"/> Gates opening onto the road
<input type="checkbox"/> Tyre marks	<input type="checkbox"/> Garages opening onto the road
<input type="checkbox"/> Worn grass	<input type="checkbox"/> Other _____

TYPE OF TRAFFIC:

<input type="checkbox"/> Pedestrian	<input type="checkbox"/> Vehicular	<input type="checkbox"/> Animal	<input checked="" type="checkbox"/> Nil
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[7513063; 21952239_1]

Attachment 3 - Site Inspection Report



Maddocks

WHAT IS THE ROAD PROVIDING ACCESS TO?

☒ Adjoining properties @

☐ Reserve/Park

☐ Main Road

☐ Shops

☐ Other _____
@ Specify which properties**No.25 Balmain is a vacant Lot and the Road in enclosed within this properties area.****No.130-134 Cubitt Street has a rear access door opening onto the subject Road.**

DETAILS OF OTHER SUITABLE MEANS OF ACCESS NEARBY.

No.130-134 Cubitt Street has direct access and frontage to Cubitt Street.**No.25 Balmain Street has direct access and frontage to Balmain Street.**

DETAILS OF FENCES, BUILDINGS AND/OR LANDSCAPING PLACED ON OR OVER ANY PORTION OF THE ROAD BY ABUTTING PROPERTY OWNERS, AND THE EXTENT OF SUCH ENCROACHMENT.

There does exist some encroachment into the Road by the old brick wall of the warehouse running along the eastern boundary from No.128-134 Cubitt Street.

IS THE ROAD REQUIRED FOR PUBLIC ACCESS?

Yes

☐ No


OTHER OBSERVATIONS:

Signed: _____ Date: 13/08/2018

Title/Position: Licensed Surveyor Company: DML Land Surveys Pty Ltd.

ATTACH ADDITIONAL PAGES IF THERE IS NOT ENOUGH SPACE ON THIS FORM

Attachment 3 - Site Inspection Report



Maddocks

ANNEXURE A – Photographs

[7513063; 21952239_1]

Attachment 3 - Site Inspection Report



P0 Box 136, Lower Plenty 3093
E: enquiries@dmlsurveys.com.au
www.dmlsurveys.com.au
M: 0422 741 385
ABN 65 540 850 590 ACN 148 149 688

AERIAL PHOTO & PHOTO POSITIONS



SUBJECT ROAD FOR PROPOSED DISCONTINUANCE IS SHOWN WITH PINK HATCHING ON ABOVE AERIAL PHOTO. NUMBERED PHOTO POSITIONS SHOWN IN GREEN.

Attachment 3 - Site Inspection Report

PHOTO 1



Attachment 3 - Site Inspection Report

PHOTO 2



Attachment 3 - Site Inspection Report

PHOTO 3



Attachment 4 - Telstra Correspondence



Date: **20/05/18**

Your Ref: M.FID3133927

Our Ref: **MF227058-1**

Telstra Plan Services

Level 18, 275 George Street
Brisbane, QLD 4000

Postal Address:
Locked Bag 3820
Brisbane, QLD 4001

Email: F0501488@team.telstra.com

Melanie Young
Melanie.Young@maddocks.com.au

Dear Melanie,

Re: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne [MADDOCKS-M.FID3133927]

Thank you for your communication dated **18/05/18** in respect to the locations specified above.

Telstra's plant records indicate that there are **Telstra assets in the vicinity**. Subject to your compliance with the below conditions, **Telstra have NO OBJECTIONS** to the proposed closure.

We note that our plant records merely indicate the approximate location of the Telstra assets and should not be relied upon as depicting a true and accurate reflection of the exact location of the assets. Accordingly, if you haven't already done so please contact Dial Before You Dig for a detailed site plan and a list of Telstra Accredited Plant Locators (APL) to establish the exact location of Telstra assets (phone 1100 or visit www.1100.com.au).

The network located by a Telstra Accredited Plant Locators may ensure the network is located within the proposed closure.

In the event Telstra's assets require relocation, please engage **Telstra's Asset Relocation** team to obtain a quote to relocate the assets from the location in question. The relocation of the assets would be carried out at your cost, however the relocation would ensure that the land/s and its projected use would not be hindered or restricted by easements. The existing network on this road cannot be built over.

Please phone 1800 810 443 (opt 1) or email F1102490@team.telstra.com to arrange for asset relocation at the property.

As these assets comprise an essential component of the Telstra network, we take this opportunity to highlight Telstra's rights and requirements to ensure that they are understood. The following is stated for your information:

(1) Telstra's existing facilities are grandfathered under the 1997 Telecommunications Act. This enables such facilities to legally occupy land in perpetuity for the duration of that facilities use.

(2) Part 1 of Schedule 3 of the Telecommunications Act 1997 authorises a carrier to enter land and exercise any of the following powers:

- inspect the land
- install a facility
- maintain a facility

Attachment 013628A02 Issue 2 4th of November 2010

TELSTRA CORPORATION LIMITED (ABN 33 051 775 556) | Level 18, 275 George Street Brisbane QLD 4001 | Phone 1800 810 443 | Fax 07 3027 9740

Attachment 4 - Telstra Correspondence

In the case of installation and planned maintenance a notification will be afforded and such work will generally proceed during business hours. However, from time to time, certain activities need to be carried out without delay in order to protect the integrity of the network. Such activities may require vehicular access without notice and at any time of the day or night. 24/7 access for maintenance must be maintained.

(3) If at any time in the future it becomes necessary, in the opinion of the carrier because of a subdivision of any land to remove, or alter the position of a facility, the carrier may enter the land and do anything necessary or desirable for that purpose. The person who proposes to subdivide the land is liable to pay the carrier the reasonable cost of anything reasonably done by the carrier in this regard.

(4) If at any time in the future it becomes necessary, in the opinion of the carrier or the land owner to remove, or alter the position of any Telstra assets, the carrier may enter the land and do anything necessary or desirable for that purpose. If the land owner is contemplating carrier relocation of these assets, then the land owner is liable to pay the carrier the reasonable cost of anything done in this regard.

(5) All individuals have a legal "Duty of Care" that must be observed when working in the vicinity of Telstra's communication plant. It is the constructors/land owner's responsibility to anticipate and request the nominal location of Telstra plant in advance of any construction activities in the vicinity of Telstra's assets. **All enquires for plant locations should be made through Dial Before You Dig's freecall "1100" enquiry number. On receipt of plans, notwithstanding the recorded location of Telstra's plant, the constructor/land owner is responsible for potholing and physical exposure to confirm the actual plant location before site civil work begins.** Telstra reserves all rights to recover compensation for loss or damage caused by interference to its cable network or other property.

Telstra would also appreciate due confirmation when this proposed acquisition proceeds so as to update its **Cadastre** records. Information regarding acquisition of the land would be of benefit to us and should be directed to the following location:

Telstra - Cadastre Updates
PO Box 102
Toormina NSW 2452
Attention: - Sally Cameron
F1103453@team.telstra.com
F1103452@team.telstra.com

Please pass all information contained in this communication to all parties involved in this proposed process. Any difficulties in meeting the above conditions, or questions relating to them, please do not hesitate to contact Telstra Plan Services; email F0501488@team.telstra.com

Yours sincerely,



Stephen Dryley-Collins

For
Manager – Brian O'Shea
Telstra Plan Services

Attachment 4 - Telstra Correspondence

DUTY OF CARE

IT'S HOW
WE CONNECT

TELSTRA CORPORATION ACN 051 775 556

IMPORTANT:

When working in the vicinity of telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. The 5 P's to prevent damage to Telstra assets are listed below. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

(The following pages contain more detail on each step below and the contact details to seek further advice. AS5488-2013 is the Australian Standard for the Classification of Subsurface Utility Information.)

1 PLAN:

The essential first step in preventing damage -

You must have current Telstra plans via the DBYD process. Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013. This means the information is indicative only, not a precise location. **The actual location may differ substantially from that shown on the plans - refer to steps 2 & 3 to determine actual location prior to proceeding with construction.**

2 PREPARE:

The essential second step in preventing damage -

Engage a Telstra Accredited Plant Locator. To be able to trace and identify individual subsurface cables and ducts requires access to Telstra pits and manholes. Only a Telstra Accredited Plant Locator (TAPL) is authorised to access Telstra network for locating purposes. A TAPL can interpret plans, validate visible assets and access pits and manholes to undertake electronic detection of underground assets prior to further validation. All Telstra assets must be located, validated and protected prior to commencing construction. If you are not authorised to do so by Telstra, you must not access Telstra network or locate Telstra network. All Telstra Accredited Plant Locators are required to have DBYD Locator Certification.

3 POTHOLE:

The essential third step in preventing damage -

All Telstra assets must be positively identified (i.e. validated), by physically sighting them. For underground assets this can be done by potholing by hand or using non-destructive vacuum extraction methods (Refer to 'validation' as defined in AS5488-2013 QL-A). **Underground assets located by electronic detection alone (step 2), are not deemed to be 'validated' and must not be used for construction purposes.** Some TAPL's can assist with non-destructive potholing for validation purposes. **If you cannot validate the Telstra network, you must not proceed with construction.** Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

4 PROTECT:

The essential fourth step in preventing damage -

Telstra assets must be protected to avoid damage from construction activities. Minimum working distances around Telstra network must be maintained. These distances are provided in this document. Telstra can also provide advice and assistance in regards to protection – refer to the following pages.

5 PROCEED:

Only proceed when the above steps have been completed.

Attachment 4 - Telstra Correspondence

STEP 1 - PLAN**Dial Before You Dig / Telstra Plans**

The actual location of Telstra assets may differ substantially from that shown on the plans. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for the accuracy shown on the plans. Steps 2 and 3 must also be undertaken to determine actual location of network.

- Telstra DBYD plans are not suitable for displaying Telstra network within a Telstra exchange site. For advice on Telstra network within a Telstra exchange site contact Telstra Plan Service on 1800 653 935.
- Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.
- Telstra plans or other details are provided only for the use of the applicant, its servants, agents or Telstra Accredited Plant Locators. The applicant must not give the plans or details to any parties other than these, and must not generate profit from commercialising the plans or details.
- Please contact Telstra Plan Services immediately should you locate Telstra assets not indicated on these plans.
- Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.
- Please ensure Telstra plans and information provided remains on-site at all times throughout the inspection, location and construction phase of any works.
- Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.
- **Emergency situations - receiving Telstra plans** Telstra's automated mapping system (TAMS) will provide a fast response for emergency situations (faster than an operator can provide manually via a phone call - see below for fast response requirements). Automated responses are normally available 24/7.
 - To receive a fast automated response from Telstra your request must -
 - Be a web request lodged at DBYD (www.1100.com.au). The request will be then forwarded to Telstra.
 - Contain your current email address so you can receive the automated email response.
 - Be for the purposes of 'mechanical excavation' or other ground breaking DBYD activity. (Requests with activity types such as conveyancing, planning & design or other non-digging activities may not be responded to until the next business day).
 - Be for an area less than 350 metres in size to obtain a PDF map (over 350 metres will default to DWF due to size) this does not include congested CBD areas where only DWF may be supplied.
 - Be for an area less than 2500 metres in size to obtain a DWF map (CBD's less)
- **Data Extraction Fees.** In some instances a data extraction fee may be applicable for the supply of Telstra information. Typically a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Plan Services.
- **Electronic plans - PDF and DWF maps** If you have received Telstra maps via email you will have received the maps as either a PDF file (for smaller areas) or DWF file (for larger area requests). All requests over approximately *350m or in congested CBD areas can only be supplied in DWF format. There are size limits on what can be provided. (* actual size depends on geographic location of requested area). If you are unable to launch any one of the softcopy files for viewing and printing, you may need to download and install one or more of the free viewing and printing products such as Adobe Acrobat Reader (for PDF files) or Autodesk Design Review (for DWF files) available from the internet

- **Pdf files** - PDF is the default softcopy format for all requests for areas up to approx *350m in length. (*depends on geographic location of request). The PDF file is nominally formatted to A3 portrait sheet however it can be printed on any size sheet that your printer supports, e.g. either as the full sheet or selected areas to suit needs and legibility. (to print a selected area zoom up and print 'current view') If there are multiple layers of Telstra network you may receive up to 2 sheets in the single PDF file attachment supplied. There are three types or layers of network normally recorded - local network, mains cables or a combined layer of local and mains (usually displayed for rural or semi-rural areas). If mains cable network is present in addition to local cables (i.e. as separate layer in a particular area), the mains will be shown on a separate sheet. The mains cable information should be read in conjunction with the local cable information.

Attachment 4 - Telstra Correspondence

- DWF files – DWF is the default softcopy format for all requests for areas that are over 350m in length. Maximum length for a DWF automated response is approx 2500m - depending on geographic location of request (manually-processed plans may provide larger coverage). The DWF files differ from PDF in that DWF are vector files made up of layers that can be turned on or off and are not formatted to a specific sheet size. This makes them ideal for larger areas and for transmitting electronically.
 - **How to view Telstra DWF files –**
Telstra DWF files come with all layers turned on. You may need to turn individual layers on or off for viewing and printing clarity. Individual layer names are CC (main cable/conduit), DA (distribution area network) and sometimes a combined layer - CAC. Layer details can be viewed by either picking off the side menu or by selecting 'window' then 'layers' off the top menu bar. Use 'layers' to turn individual layers off or on (double click or right click on layer icon).
 - **How to print Telstra DWF files –**
DWF files can be printed on any size sheet – either their entirety or by selected areas of interest. Some DWF coverage areas are large and are not suited to printing legibly on a single A4 sheet - you may need several prints if you only have an A4 printer. Alternatively, an A3, A1 or larger printer could be used. To print, zoom in or out and then, by changing the 'print range' settings, you can print what is displayed on your screen to suit your paper size. If you only have a small printer, e.g. A4, you may need to zoom until the text is legible for printing (which is why you may need several prints). To print what is displayed on your screen the 'view' setting should be changed from 'full page' to 'current view'. The 'current sheet' setting should also be selected. You may need to print layers separately for clarity and legibility. (Details above on how to turn layers on or off)
 - **How to change the background colour from white to black (when viewing) Telstra DWF files –**
If using Autodesk Design Review the background colour can be changed by selecting 'Tools' then 'options' then 'sheet'. Tick the box 'override published paper colours' and select the colour required using the tab provided.

STEP 2 – PREPARE

Telstra Accredited Plant Locator (TAPL):

Utilising a TAPL is an essential part of the process to identify network and to trace subsurface network prior to validating. A TAPL can provide plan interpretation, identification and electronic detection. This will assist in determining the position of subsurface assets prior to potholing (validating). Some TAPL's can also assist in validating underground detected network. Electronic detection is only an indication of the existence of underground network and can be subject to interference from other services and local conditions. Electronic detection must not be used solely to determine location for construction purposes. The electronic (indicative) subsurface measurements must be proven by physically sighting the asset (see step 3 – Pothole).

- All TAPL's locating Telstra network must be able to produce a current photo ID card issued by Telstra. A list of TAPL's is provided with the Telstra Dial Before You Dig plans.
- All TAPL's in addition to the Telstra photo ID card must also have current DBYD Locator Certification with ID card.
- Telstra does not permit external parties (non-Telstra) to access or conduct work on Telstra network. Only Telstra staff, Telstra contractors or locators whom are correctly accredited are authorised to work on or access Telstra manholes, pits, ducts, cables etc. This is for safety as well as for legal reasons.
- The details of any contract, agreement or retainer for site assistance to locate telecommunications plant shall be for you to decide and agree with the Telstra Accredited Plant Locator engaged. Telstra is not a party to any contract entered into between you and a Telstra Accredited Plant Locator.
- Payment for the site assistance will be your responsibility and payment details must be agreed before the engagement is confirmed.
- Telstra does not accept any liability or responsibility for the performance of or advice given by a Telstra Accredited Plant Locator. Accreditation is an initiative taken by Telstra towards the establishment and

Attachment 4 - Telstra Correspondence

maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

- Neither the Telstra Accredited Plant Locator nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Telstra Accredited Plant Locator or its employees.

- Electronically derived subsurface measurements (e.g. depths/alignments by locating devices)**

All locator provided measurements for Telstra assets must have the AS5488-2013 quality level specified - (e.g. QL-A, B, C or D). These quality levels define the accuracy of subsurface information and are critical for determining how the information is later used – for example if suitable for excavation purposes.

1) **An example of a subsurface measurement with no quality level specified – (i.e. not to be used)**

Telstra cover - 0.9m

*The measurement above has no AS5488-2013 quality level specified and **must not be provided by a locator or used for design or construction.** This is because it is not known whether the measurement is actual or derived (where 'actual' means validated and 'derived' means assumed and not validated, e.g. electronic or other). Typically damages occur by constructors incorrectly using unvalidated measurements as actual measurements.*

2) **An example of a subsurface measurement with quality level B specified –**

Telstra cover - 0.9m (QL-B)

Where (QL-B) complies with AS5488-2013 QL-B (for example an electronic location that complies with QL-B)

(Note QL-B means it has not been validated and must not be used for construction purposes around Telstra network, however it would assist further investigation to determine the actual location)

3) **An example of a subsurface measurement with the quality level A specified –**

Telstra cover - 0.6m (QL-A)

Where (QL-A) complies with AS5488-2013 QL-A (and is deemed suitable for excavation purposes). In this example the asset has been electronically located first, (QL-B) and then physically exposed (QL-A).

Note -Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers if unvalidated subsurface measurements are used for construction and subsequently result in damage to Telstra assets. Only measurements conforming to AS5488-2013 (QL-A) are deemed by Telstra to be validated measurements.

- Rural landowners** Where Telstra-owned cable crosses agricultural land, Telstra may provide on-site assistance with cable location. **You must contact Telstra Plan Services to determine eligibility and to request the service.**

Please note the following –

- If eligible, the location assistance must be approved and organised by Telstra. Telstra will not pay for a location that has not been approved and facilitated by Telstra (Telstra is not responsible for payment assistance when a customer engages a locator directly).
- The exact location, including depth of cables, must be validated by potholing, which may not be covered by this service.
- This service is nominally only available to assist private rural land owners.
- This service nominally covers one hour on-site only, private lead-in locations are for lead-ins 100m or longer. Any time required in addition to Telstra-funded time can be purchased directly from the assigned Telstra Accredited Plant Locator.
- This service does not apply to previously located network at the same location (i.e. it is a once off).
- This service does not apply to other carriers' cables (marked as 'OC' on Telstra plans).

Attachment 4 - Telstra Correspondence

STEP 3 – POTHOLE

Validation as defined in AS5488-2013 (QL-A).

After utilising a Telstra Accredited Plant Locator and prior to commencing construction, any electronically detected underground network must be positively identified (validated) by physically sighting it. This can be done by careful hand digging or using non-destructive water jet methods to expose the network.

Manual potholing needs to be undertaken with extreme care and by employing techniques least likely to damage cables. For example, align shovel blades and trowels parallel to the cable rather than digging across the cable. Some Telstra Accredited Plant Locators are able to provide or assist with non-destructive potholing methods to enable validation of underground cables and ducts.

If you cannot validate the underground network then you must not proceed with construction. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Important note: The construction of Telstra's network dates back over many years. Some of Telstra's pits and ducts were manufactured from asbestos-containing cement. You must take care in conducting any works in the vicinity of Telstra's pits and ducts. You must refrain from in any way disturbing or damaging Telstra's network infrastructure when conducting your works. We recommend that before you conduct any works in the vicinity of Telstra infrastructure that you ensure your processes and procedures eliminate any possibility of disturbing, damaging or interfering in any way with Telstra's infrastructure. Your processes and procedures should incorporate appropriate measures having regard to the nature of this risk. For further information -

<http://ucm.in.telstra.com.au/about/media/emergencies-incidents/asbestos/index.htm?ssSourceSiteId=consumer-advice>

STEP 4 – Protect:

You must maintain the following minimum clearance distances between construction activity and the validated position of Telstra plant.

Jackhammers/Pneumatic Breakers	Not within 1.0m of actual validated location.
Vibrating Plate or Wacker Packer Compactor	Not within 0.5m of actual validated location of Telstra ducts. 300mm compact clearance cover before compactor can be used across Telstra ducts.
Boring Equipment (in-line, horizontal and vertical)	Not within 2.0m of actual validated location. Constructor to hand dig or use non-destructive water jet method (pothole) and expose plant.
Heavy Vehicle Traffic (over 3 tonnes)	Not to be driven across Telstra ducts (or plant) with less than 600mm cover. Constructor to check actual depth via hand digging.
Mechanical Excavators, Farm ploughing and Tree Removal	Not within 1.0m of actual validated location. Constructor to hand dig or use non-destructive water jet method (pot-hole) and expose plant.

- For blasting or controlled fire burning please contact Telstra Plan Services.
- If conducting roadworks all existing Telstra pits and manholes must be a minimum of 1.2m in from the back of kerb after the completion of your work.
- After the completion of any ground work in footways or roadway whereby the existing levels are being changed the depth of cover of the existing Telstra asset at the completion of work must not be less than the existing level before work commenced.

Attachment 4 - Telstra Correspondence

Regardless of whether the surface is being raised or lowered, any work impacting the depth of cover of Telstra underground assets should not commence before consultation with Telstra Network Integrity representatives, to discuss the possibility of 'protection' or relocation (including lowering of the asset)".

- For clearance distances relating to Telstra pillars, cabinets and RIMs/RCMs please contact Telstra Plan Services.
- If Telstra plant is situated wholly or partly where you plan to work (i.e. in conflict, where a pit or manhole would be in a driveway or other vehicle thoroughfare), then Telstra's Network Integrity Group must be contacted to discuss possible engineering solutions to protect Telstra assets.
Please phone 1800 810 443 or email NetworkIntegrity@team.telstra.com
- You are not permitted to relocate or alter or repair any Telstra assets or network under any circumstances.

It is a criminal offence under the *Criminal Code Act 1995* (Cth) to tamper or interfere with communication facilities owned by a carrier. Heavy penalties may apply for breach of this prohibition, and any damages suffered, or costs incurred by Telstra as a result of any such unauthorised works may be claimed against you.

Only Telstra and its contractors may access and conduct works on Telstra's network (including its plant and assets). This requirement is to ensure that Telstra can protect the integrity of its network, avoid disruption to services and ensure that the relocation meets Telstra's requirements.

- If Telstra relocation or protection works are part of the agreed solution, then payment to Telstra for the cost of this work shall be the responsibility of the principal developer, constructor or person for whom the work is performed. The principal developer or constructor will be required to provide Telstra with the details of their proposed work showing how Telstra's plant is to be accommodated and these details must be approved by the Regional Network Integrity Manager prior to the commencement of site works.
Please phone 1800 810 443 or email NetworkIntegrity@team.telstra.com
Further information -
<https://www.telstra.com.au/consumer-advice/digging-construction/relocating-network-assets>

Damage to Telstra's network must be reported immediately -

<https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>

- You will be held responsible for all plant damage that occurs or any impacts to Telstra's network as a result of your construction activities. This includes interfering with plant, conducting unauthorised modification works and interfering with Telstra's assets in a way that prevents Telstra from accessing or using its assets in the future.
- Telstra reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses.

FURTHER INFORMATION - CONTACTS

NATURAL DISASTERS

Natural Disasters include (amongst other things) earthquakes, cyclones, floods and tsunamis.

In the case of such events, urgent requests for plans or information relating to the location of Telstra network can be made directly to Telstra Network Integrity Team Managers as follows:

NSW – John McInerney 0419 485 795

NT/WA/QLD – Glenn Swift 0419 660 147

SA/VIC/TAS - David Povazan 0417 300 947

Attachment 4 - Telstra Correspondence

TELSTRA PLAN SERVICES - for all Telstra Dial Before You Dig related enquiries

Email - Telstra.Plans@team.telstra.com

Phone - 1800 653 935 (general enquiries, business hours only)

Accredited plant locator enquiries -	Mike	0477 377 036
	Glen	0477 365 666
Telstra easements -	Glen	0477 365 666

**Please note - to make a Telstra plan enquiry the plans must be current (within 60 days of issue). If your plans have expired you will need to submit a new request via DBYD prior to contacting Telstra Plan Services.*

Information for new developments (developers, builders, home owners)

Telstra Smart Communities - <https://www.telstra.com.au/smart-community>

Asset relocations

Please phone 1800 810 443 or email NetworkIntegrity@team.telstra.com

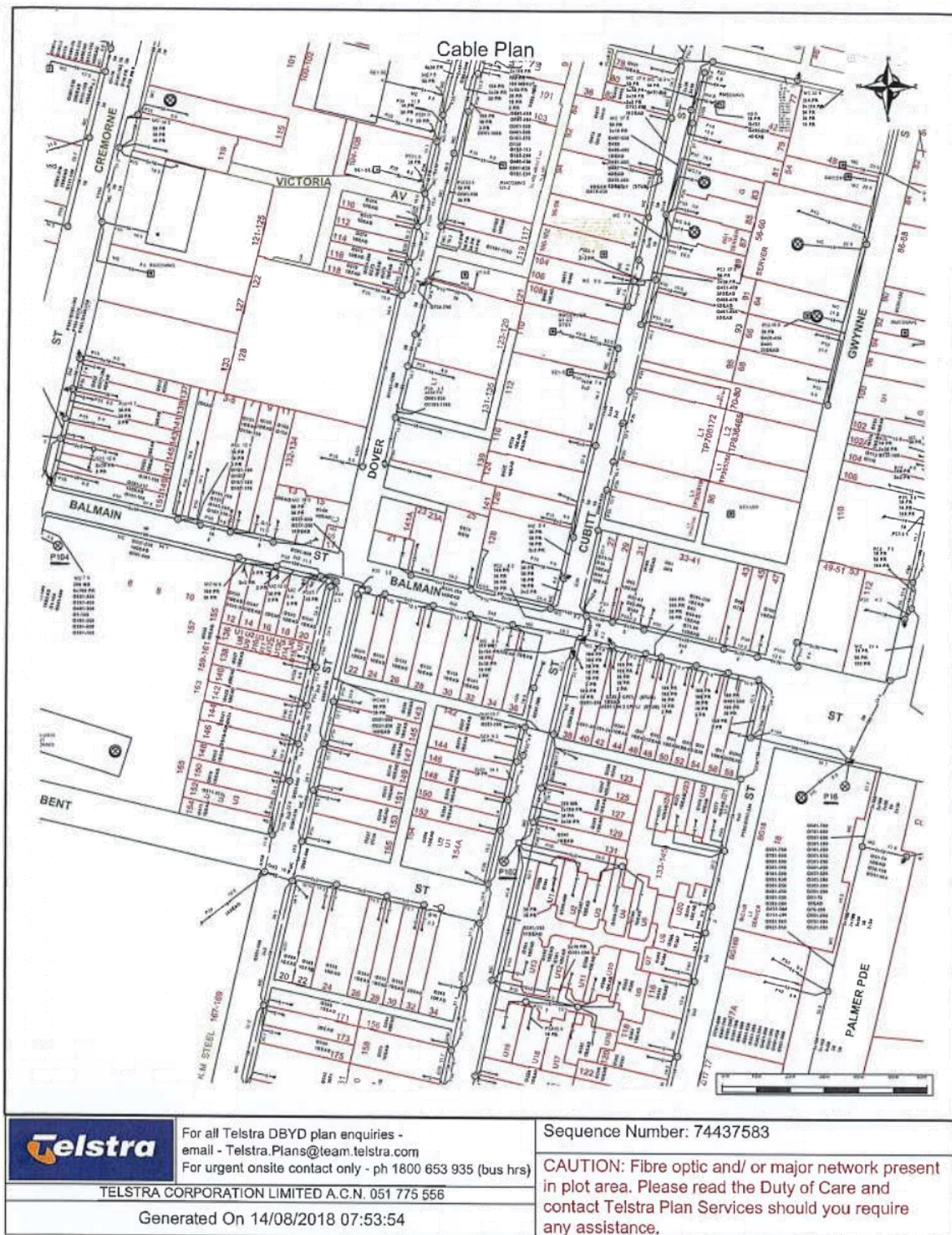
<https://www.telstra.com.au/consumer-advice/digging-construction/relocating-network-assets>

Telstra offers free Cable Awareness Presentations, if you believe you or your company would benefit from this offer please contact Network Integrity on 1800 810 443 or NetworkIntegrity@team.telstra.com

PRIVACY NOTE

Your information has been provided to Telstra by DBYD to enable Telstra to respond to your DBYD request. Telstra keeps your information in accordance with its privacy statement entitled "Protecting Your Privacy" which can be obtained from Telstra either by calling 1800 039 059 or visiting our website at www.telstra.com.au/privacy

Attachment 4 - Telstra Correspondence



The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

Attachment 4 - Telstra Correspondence



WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pol-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

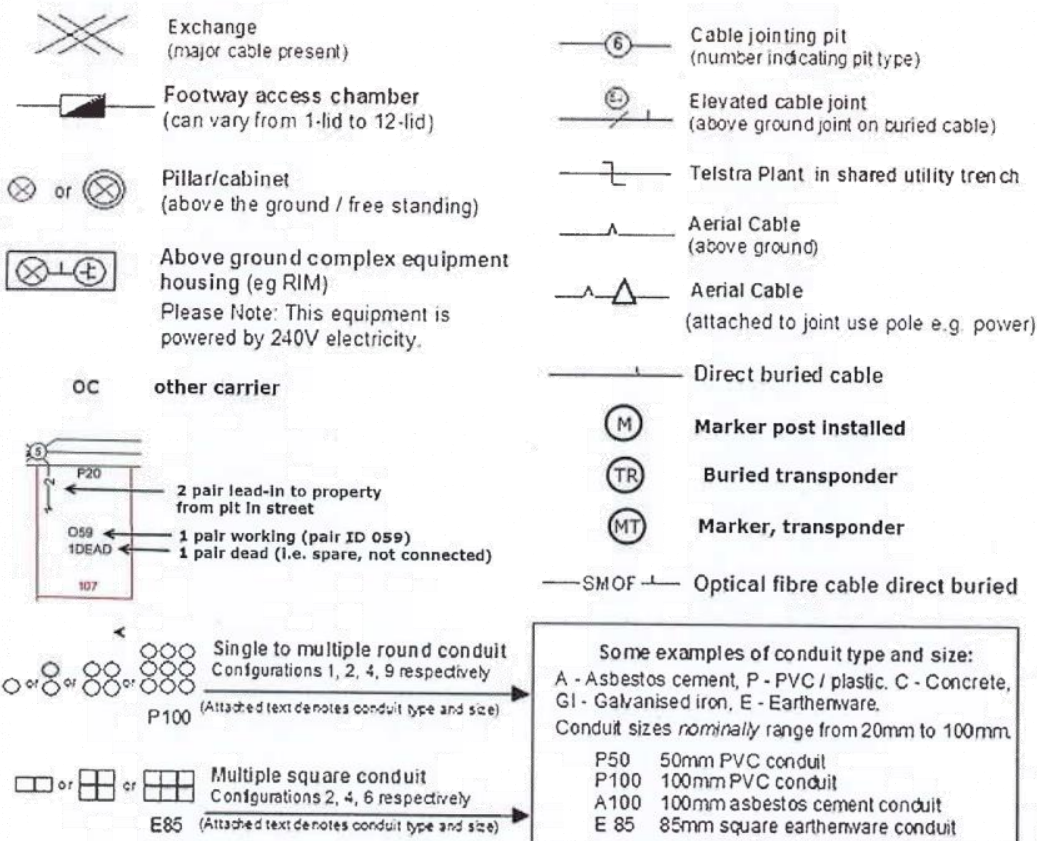
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Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

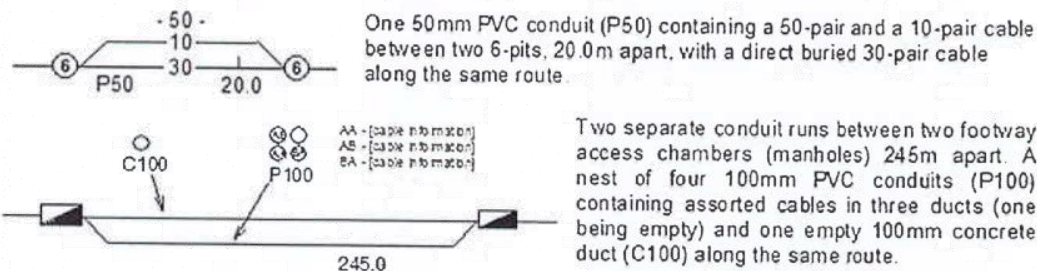
Attachment 4 - Telstra Correspondence

LEGEND

For more info contact a Telstra Accredited Locator or Telstra Plan Services 1800 653 935

IT'S HOW
WE CONNECT

Some examples of how to read Telstra plans:



WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works. The exact position of Telstra assets can only be validated by physically exposing it. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

TELSTRA CORPORATION ACN 051 775 556

Attachment 5 - YCC Correspondence

Joe Kozlowski

From: Psaros, Evan <Evan.Psaros@yarracity.vic.gov.au>
Sent: Thursday, 20 December 2018 1:08 PM
To: Joe Kozlowski
Cc: Jonathan Hourigan
Subject: RE: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne (Road) [MADDOCKS-M.FID3133927]

Joe,

Given that the existing Road will be fully encompassed by a development and therefore repurposed, Engineering Services have no objections to the proposal to discontinue the Road.

Please ensure that this is noted in conjunction with Danny Millican's response on 31 May 2018.

Regards

Evan Psaros
 Road Civil Engineer

City of Yarra PO Box 168 Richmond 3121
 T (03) 9205 5728
 E evan.psaros@yarracity.vic.gov.au W www.yarracity.vic.gov.au

From: Joe Kozlowski [mailto:Joe.Kozlowski@maddocks.com.au]
Sent: Thursday, 20 December 2018 12:27 PM
To: Psaros, Evan
Cc: Jonathan Hourigan
Subject: FW: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne (Road) [MADDOCKS-M.FID3133927]

Hi Evan,

Hope you are well. Just following up on our email below.

We look forward to receiving your response.

Kind regards,

Joe Kozlowski | Lawyer
 Property
 Direct +61 3 9258 3812
joe.kozlowski@maddocks.com.au

Maddocks

Collins Square | Tower Two, Level 25,
 727 Collins Street, Melbourne VIC 3008
maddocks.com.au

From: Joe Kozlowski
Sent: Thursday, 13 December 2018 11:42 AM
To: 'Evan.Psaros@yarracity.vic.gov.au' <Evan.Psaros@yarracity.vic.gov.au>
Cc: Jonathan Hourigan <Jonathan.Hourigan@maddocks.com.au>

Attachment 5 - YCC Correspondence

Subject: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne (Road) [MADDOCKS-M.FID2877146]

Dear Evan,

Thanks for your time on the phone earlier regarding the above matter.

We confirm that the applicant:

1. is the registered proprietor of all properties abutting the Road; and
2. intends to consolidate the title to the Road (if discontinued) with the titles to its abutting properties.

Please confirm that Council does not require any rights in the Road to be saved in its favour.

If you have any queries, please contact us.

Kind regards,

Joe Kozlowski | Lawyer
Property
Direct +61 3 9258 3812
joe.kozlowski@maddocks.com.au

Maddocks

Collins Square | Tower Two, Level 25,
727 Collins Street, Melbourne VIC 3008
maddocks.com.au

From: Millican, Danny [<mailto:Danny.Millican@yarracity.vic.gov.au>]
Sent: Thursday, 31 May 2018 4:41 PM
To: Sally Louey <Sally.Louey@maddocks.com.au>; Melanie Young <Melanie.Young@maddocks.com.au>
Cc: Psaros, Evan <Evan.Psaros@yarracity.vic.gov.au>
Subject: RE: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne [MADDOCKS-M.FID3133927]

Melanie/Sally

Council's Civil Engineering team has investigated the proposal to discontinue the road adjacent to Balmain Street, Cremorne as per your letter dated 18 May 2018.

Whilst it appears that no existing council drainage assets are present within the subject road, the land is currently being used as a legal point of discharge for abutting properties. It appears that downpipes are currently discharging stormwater runoff into or under the subject road, with an underground drainage pipe discharging stormwater into Balmain Street.

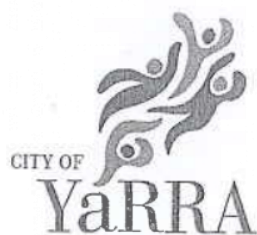
If the land is sold and used for another purpose, the current functions would likely be affected. Furthermore, this area of Cremorne is likely to be significantly developed over coming years, and the road/land could be used for legal point of discharge or other drainage purposes to facilitate future development.

This should be addressed during the discontinuance process.

Please note the following:

- All abutting/affected property owners are to be consulted and provide consent to any discontinuance and sale proposal.
- A drainage easement may need to be created to maintain the function of any existing property drains discharging into the subject laneway.

Attachment 5 - YCC Correspondence



- A drainage easement may need to be created to facilitate future development of abutting properties.
- An easement may need to be created to maintain the function existing underground third party utility services if they are present, or to facilitate future development of abutting properties.

If the noted points are addressed, Council Civil Engineering team has no objection to the proposal.

Regards,

Danny Millican
Acting Coordinator Civil Engineering
Traffic and Civil Engineering

City of Yarra
PO Box 168, Richmond, VIC 3121
Telephone: (03) 9205 5762
Email: Danny.Millican@yarracity.vic.gov.au
Web: www.yarracity.vic.gov.au

Please consider the environment before printing this email

From: Sally Louey [<mailto:Sally.Louey@maddocks.com.au>] **On Behalf Of** Melanie Young
Sent: Friday, 18 May 2018 9:15 AM
To: Psaros, Evan
Subject: Proposed discontinuance of road adjacent to 25 Balmain Street, Cremorne [MADDOCKS-M.FID3133927]

Dear Evan

Please see attached.

Regards

Melanie Young | Lawyer
Property
Direct +61 3 9258 3649 | **Mobile** +61 4 27 895 238
Melanie.Young@maddocks.com.au



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11.5 Proposed Discontinuance of Road abutting 75-119 Cubitt Street, Cremorne

Reference: D19/135562

Authoriser: Director Corporate, Business and Finance

Purpose

1. This report seeks Council's authority to commence statutory procedures pursuant to the *Local Government Act 1989* (**Act**), to consider discontinuing the road abutting the properties known as 75-119 Cubitt Street, Cremorne, being part of the land contained in Conveyance Book 3 No. 358 (**Road**).

Background

2. The Road is shown as lot 1 on the title plan attached as Attachment 1 to this report (**Title Plan**), and is shown delineated red on the plan attached as Attachment 2 to this report (**Site Plan**).
3. Cremorne Co. Pty Ltd (Owner) is the title plan registered proprietor of the properties which abut the Road, known as 75-119 Cubitt Street, Cremorne, shown delineated blue on the Site Plan, and being the land contained in certificate of title:
 - (a) volume 8598 folio 294;
 - (b) volume 6281 folio 162;
 - (c) volume 5009 folio 633;
 - (d) volume 11475 folio 493;
 - (e) volume 9358 folio 742;
 - (f) volume 1615 folio 959;
 - (g) volume 6372 folio 209; and
 - (h) volume 11256 folio 574.
4. Together, the (**Owner's Properties**).
5. The Owner has requested that Council discontinue the Road and sell the Road to the Owner (**Proposal**).
6. The Owner has agreed to pay Council's costs and disbursements associated with the proposed discontinuance of the Road, together with the market value for the transfer of the discontinued Road to the Owner, as determined by the Act.

Road

7. The Road is known to title as a 'right of way' in Conveyance Book 3 No. 358, registered in the name of William Ryan and dated 31 October 1853 and is therefore a 'road' for the purposes of the Act, which Council has the power to consider discontinuing.
8. Upon being discontinued, the Road will vest in Council.
9. The Road is not listed on Council's Register of Public Roads.

Adjoining Owners

10. The Owner was required to seek consent to the proposal from G & H Lazarotto Pty Ltd. The owners of 33-41 Balmain Street, Cremorne (**33-41 Balmain Street**), being the registered proprietor of the land contained in certificate of title volume 9022 folio 073, shown delineated green on the Site Plan.
11. On 12 November 2018, the owner of 33-41 Balmain Street (**Adjoining Owner**) confirmed in writing that it does not object to the Proposal.

12. A copy of the correspondence from the Adjoining Owner is attached as Attachment 3 to this report.

Site Inspection

13. A site inspection of the Road was conducted by DML Land Surveys Pty Ltd on 8 February 2019. The site inspection report notes that:
 - (a) the Road is constructed of bitumen;
 - (b) the Road is currently exclusively used as a private car park located at 75-119 Cubitt Street, Cremorne;
 - (c) the properties at 75-119 Cubitt Street, Cremorne have access and frontage to Cubitt Street and Gwynne Street; and
 - (d) the Road is not required for public access.
14. A copy of the site inspection report is attached as Attachment 4 to this report.

Public/Statutory Authorities

15. The following public/statutory have been advised of the Proposal and have been asked to respond to the question of whether they have any existing assets in the Road which should be saved under section 207C of the Act: City West Water, Melbourne Water, CitiPower, United Energy, Multinet Gas, Telstra, Optus, APA Gas, AusNet Services, and Yarra City Council.
16. Council, Ausnet Services, Melbourne Water, CitiPower, United Energy, Multinet Gas, APA Gas, and Optus have advised that they have no assets in or above the Road and no objection to the Proposal.
17. On 19 November 2018, Telstra advised that it has no assets located within or above the Road, and no objection to the proposal, provided that the owner:
 - (a) calls Dial Before you Dig prior to any construction activities in the vicinity of Telstra's communication plant; and
 - (b) upon receipt of plans, obtains a Telstra accredited Asset Plant Locator to confirm the location of the plant.
18. A copy of the correspondence received from Telstra is attached as Attachment 5 to this report.
19. On 20 November 2018, City West Water advised that it had sewer assets in the Road. City West water has requested the following:
 - (a) a 2 metre wide sewerage easement is created over the Road in favour of City West Water;
 - (b) any proposed fence must be located a minimum of 1 metre from sewer manholes and/or inspection shafts; and
 - (c) any proposal to build over City West Water assets requires City West Water's prior written consent.
20. On 21 February 2019, City West Water withdrew its objection to the proposal on the basis that the Title Plan included an easement of sufficient size in favour of City West water over the Road.
21. Copies of the correspondence received from City West Water are attached as Attachment 6 to this report.

Public Notice

22. Before proceeding with the discontinuance Council must give public notice of the Proposal in accordance with section 223 of the Act. The Act provides that a person may, within 28 days of the date of publication of the public notice, lodge a written submission regarding the Proposal.

23. Where a person has made a written submission to Council requesting that he or she be heard in support of the written submission, Council must permit that person to be heard before a meeting of Council, giving reasonable notice of the day, time and place of the meeting.
24. After hearing any submissions made, Council must determine whether the Road is not reasonably required as a road for public use, in order to decide whether the Road should be discontinued.

External Consultation

25. A copy of the public notice will be given to the Adjoining Owner.

Internal Consultation (One Yarra)

26. No internal consultation is required for this report.

Financial Implications

27. There are no financial implications arising from this report.

Economic Implications

28. The Owner has agreed to acquire the Road for its market value (plus GST) as determined by the Act.
29. In addition to the market value of the road (plus GST), the Owner has agreed to pay Council's costs and disbursements associated with the Proposal.

Sustainability Implications

30. There are no sustainability implications arising from this report.

Social Implications

31. There are no social implications arising from this report.

Human Rights Implications

32. There are no human rights implications arising from this report.

Communications with CALD Communities Implications

33. All notices and correspondence issued in respect of this proposal will contain a reference to Yarralink Interpreter Services.

Council Plan, Strategy and Policy Implications

34. There are no Council plan, strategy or Policy Implications.

Legal Implications

35. If the Road is discontinued and sold to the Owner, council will require the Owner to consolidate the title to the former road with the title to the land in certificate of title volume 8598 folio 294, within 6 months of the date of transfer of the Road to the Owner, at the Owner's expense.

Other Issues

36. There are no other issues.

Options

37. There are no options associated with this report.

Proposal

38. It is proposed that: Council should commence the statutory procedures pursuant to clause 3 of Schedule 10 of the Act to discontinue the Road and transfer the discontinued road to the Owner.

RECOMMENDATION

1. That Council, Acting under clause 3 of schedule 10 of the *Local Government Act 1989* (**Act**):
 - (a) resolves that the required statutory procedures be commenced to discontinue the road abutting the properties known as 75-119 Cubitt Street, Cremorne, being part of the land contained in Conveyance Book 3 No. 358 (**Road**);
 - (b) directs that, under sections 207A and 223 of the act, public notice of the proposed discontinuance be given in 'The Age Newspaper,' the Local Newspaper, Council's Social Media, displayed on site and any adjoining owners.
 - (c) resolves that the public notice required to be given under sections 207A and 223 of the Act should state that if the Road is discontinued, Council proposes to sell the Road to the adjoining owner for market value (plus GST) as determined by the Act; and
 - (d) authorises Bill Graham, Council's Coordinator Valuations to undertake the administrative procedures necessary to enable Council to carry out its functions under section 223 of the Act in relation to this matter.

CONTACT OFFICER: Bill Graham
TITLE: Coordinator Valuations
TEL: 9205 5270

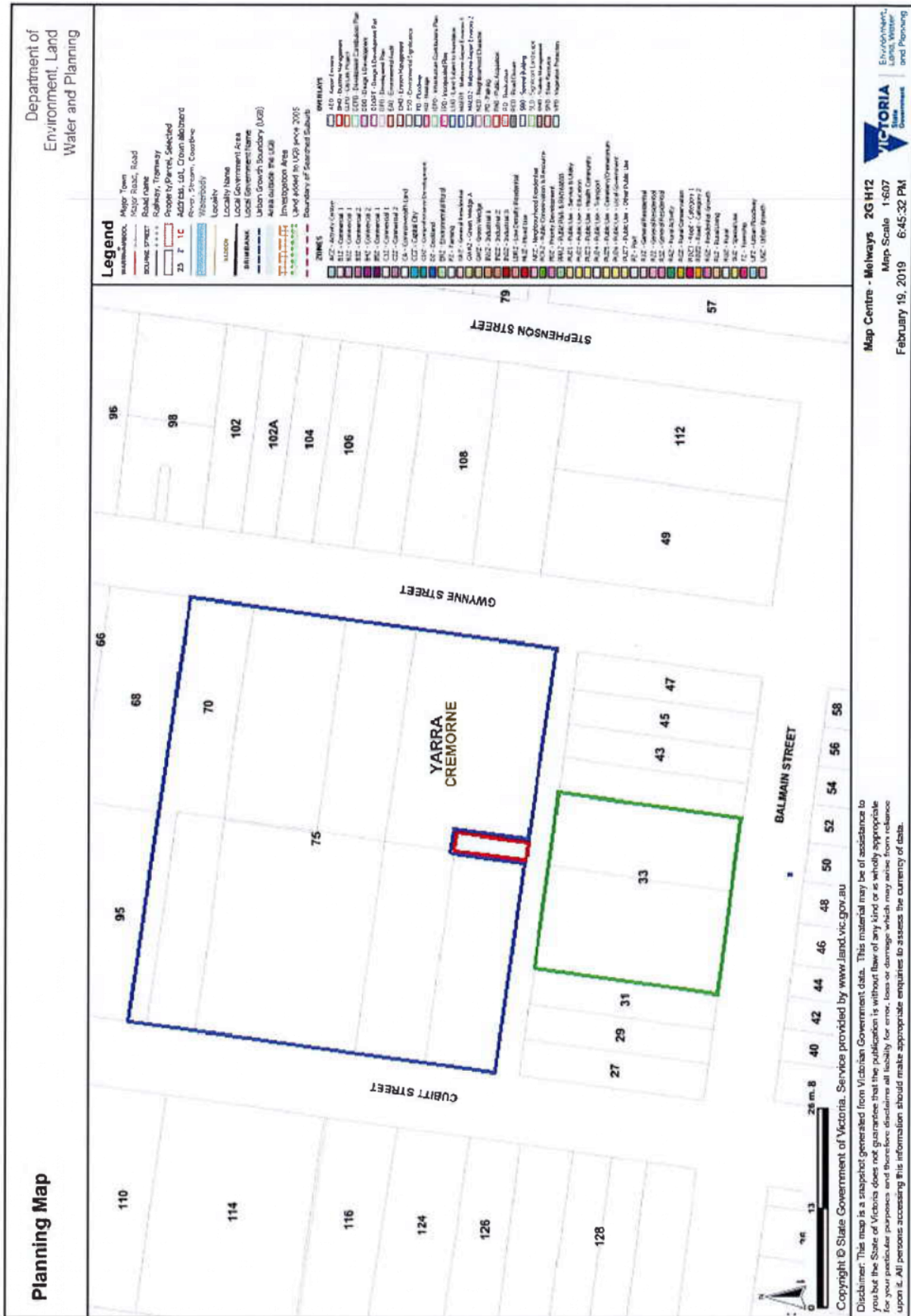
Attachments

- 1 [↓](#) Title Plan
- 2 [↓](#) Site Plan
- 3 [↓](#) Adjoining Owner Correspondence
- 4 [↓](#) Site Inspection Report
- 5 [↓](#) Telstra Correspondence
- 6 [↓](#) CWW Response

Attachment 1 - Title Plan

TITLE PLAN		EDITION 1		TP	
Location of Land Parish: JIKA JIKA AT RICHMOND Section: Crown Allotment: Crown Portion: 3 (PART) & 4 (PART) Last Plan Reference: Part of Road shown in Memorial Book 3 No.358			Notations DEPTH LIMITATION DOES NOT APPLY		
Easement Information				THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY. Checked by: Assistant Registrar of Titles Date	
LEGEND A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)					
Easement Reference	Purpose	Width (Metres)	Origin		Land Benefitted/In Favour of
E-1	AS PROVIDED FOR IN Sec.207C LGA 1989	SEE PLAN	Sec.207C LGA 1989		CITY WEST WATER CORP.

Attachment 2 - Site Plan



Attachment 3 - Adjoining Owner Correspondence

G & H Lazzarotto Pty Ltd

12 November, 2018

Dear Sir/Madam,

I confirm that G & H Lazzarotto Pty Ltd are the owners of the land identified by the green outline in the attached drawing and known as 33-41 Balmain Street, Cremorne.

I further confirm that we have no objection to the owner of the adjoining land coloured blue making application to City of Yarra for the purchase of the land identified by the red outline in the same attached drawing.

Regards,



Gino Lazzarotto

Director

G & H Lazzarotto Pty Ltd

765 Heidelberg Road

ALPHINGTON VIC 3068

Attachment 3 - Adjoining Owner Correspondence



Attachment 4 - Site Inspection Report



Maddocks

Ref: MAN:JTH:7618355

Maddocks
Lawyers
Collins Square, Tower Two
Level 25, 727 Collins Street
MELBOURNE 3000

Yarra City Council**Proposed discontinuance and sale of road abutting 75-119 Cubitt Street, Cremorne**

DATE OF INSPECTION: 08/02/2019

PHOTOGRAPHS OF THE ROAD: Attached at end of this report

IS THE ROAD OPEN AND AVAILABLE FOR USE BY THE PUBLIC? Yes ☐ No ☒

WHAT OBSTRUCTIONS ARE OVER OR IN THE ROAD?

Fencing	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Vegetation*	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Rubbish	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Services**	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Other*	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	(# Including fire hydrants/plugs.)		

* Provide Details:

The subject Road is currently used exclusively as part of the car park located at No.75-119 Cubitt Street. The subject Road is old general law land and is currently not under the operation of the Transfer of Land Act.

THE MATERIAL WITH WHICH THE ROAD IS CONSTRUCTED:

<input type="checkbox"/> Nil	<input checked="" type="checkbox"/> Bitumen
<input type="checkbox"/> Bluestone	<input type="checkbox"/> Other _____

EVIDENCE OF THE ROAD BEING USED:

<input type="checkbox"/> Nil	<input type="checkbox"/> Gates opening onto the road
<input checked="" type="checkbox"/> Tyre marks	<input type="checkbox"/> Garages opening onto the road
<input type="checkbox"/> Worn grass	<input type="checkbox"/> Other _____

TYPE OF TRAFFIC:

<input type="checkbox"/> Pedestrian	<input checked="" type="checkbox"/> Vehicular	<input type="checkbox"/> Animal	<input type="checkbox"/> Nil
-------------------------------------	---	---------------------------------	------------------------------

WHAT IS THE ROAD PROVIDING ACCESS TO?

<input type="checkbox"/> Adjoining properties @	<input type="checkbox"/> Reserve/Park
<input type="checkbox"/> Main Road	<input type="checkbox"/> Shops

[7618355; 23356015_1]

Attachment 4 - Site Inspection Report



Maddocks

☒ Other **The subject Road is currently used exclusively as part of the car park at 75-119 Cubitt St.**

@ Specify which properties

The subject Road is currently used exclusively as part of the car park at 75-119 Cubitt St.

DETAILS OF OTHER SUITABLE MEANS OF ACCESS NEARBY.

The subject Road is currently used exclusively as part of the car park at 75-119 Cubitt Street. 75 -119 Cubitt Street has access and frontage to Cubitt Street to the west, the Road to the south and Gwynne Street to the east

DETAILS OF FENCES, BUILDINGS AND/OR LANDSCAPING PLACED ON OR OVER ANY PORTION OF THE ROAD BY ABUTTING PROPERTY OWNERS, AND THE EXTENT OF SUCH ENCROACHMENT.

The Road is not fenced right around and therefore no encroachment exists.


☐
Yes

☒
No

IS THE ROAD REQUIRED FOR PUBLIC ACCESS?
OTHER OBSERVATIONS:

Signed: *22* Date: 18/02/2019
Title/Position: **Licensed Surveyor** Company: **DML Land Surveys Pty Ltd.**

Attachment 4 - Site Inspection Report


Maddocks

ANNEXURE A – Photographs

[7618355; 23356015_1]

Attachment 4 - Site Inspection Report



PO Box 136, Lower Plenty 3093
E: enquiries@dmlsurveys.com.au
www.dmlsurveys.com.au
M: 0422 741 385
ABN 65 540 850 590 ACN 148 149 688

AERIAL PHOTO & PHOTO POSITIONS



SUBJECT ROAD FOR PROPOSED DISCONTINUANCE IS SHOWN WITH PINK HATCHING ON ABOVE AERIAL PHOTO. NUMBERED PHOTO POSITIONS SHOWN IN RED.

Attachment 4 - Site Inspection Report

PHOTO 1



Attachment 4 - Site Inspection Report

PHOTO 2



PHOTO 3



Attachment 5 - Telstra Correspondence



Telstra Plan Services

Date **19/11/2018**

Your Ref: MAN:JTH:7618355

Our Ref: **MF241245-1**

Jonathan Hourigan

Jonathan.Hourigan@maddocks.com.au

Level 11, 275 George Street
Brisbane, QLD 4000

Postal Address:
Locked Bag 3820
Brisbane, QLD 4000

Email: F0501488@team.telstra.com

Dear Jonathan,

Re: Yarra City Council - Proposed discontinuance of road adjacent to 75-119 Cubitt Street, Cremorne (Road) [MADDOCKS-M.FID3244792]

Thank you for your communication dated **16/11/2018** in relation to the location specified above.

Telstra's plant records indicate that there are no Telstra assets within the area of the proposal. Subject to your compliance with the below conditions, **Telstra has NO OBJECTIONS** to the **road discontinuance**.

We note that our plant records merely indicate the approximate location of the Telstra assets and should not be relied upon as depicting a true and accurate reflection of the exact location of the assets. Accordingly, we note that all individuals have a legal "Duty of Care" that must be observed when working in the vicinity of Telstra's communication plant. It is the constructor's/land owner's responsibility to anticipate and request the nominal location of Telstra plant via **Dial Before You Dig "1100" number** in advance of any construction activities in the vicinity of Telstra's assets.

On receipt of plans, notwithstanding the recorded location of Telstra's plant, the constructor/land owner is responsible for obtaining a Telstra accredited Asset Plant Locator to perform cable location, potholing and physical exposure to confirm the actual location of the plant prior to the commencement of site civil work. Telstra reserves all rights to recover compensation for loss or damage caused by interference to its cable network or other property.

Telstra would also appreciate due confirmation when this proposed acquisition proceeds so as to update its Cadastre records. Information regarding acquisition of the land would be of benefit to us and should be directed to the following location:

VICTORIA

Telstra - Cadastre Updates

PO Box 61

Ballarat VIC 3353

Attention: - Team Leader

F1501634@team.telstra.com

F1103432@team.telstra.com

Please pass all information contained in this communication to all parties involved in this proposed process. If you have any difficulties in meeting the above conditions or if you have any questions relating to them, please do not hesitate to contact us at F0501488@team.telstra.com.

Attachment 5 - Telstra Correspondence

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Anthony Lebessis', with a stylized flourish at the end.

Anthony Lebessis

For

Manager – Brian O'Shea

Telstra Plan Services

F0501488@team.telstra.com

Attachment 6 - CWW Response



City West Water™

20 November 2018

MARINE NINCEVIC
MADDOCKS
COLLINS SQUARE, TOWER 2, LEVEL 25
727 COLLINS STREET
MELBOURNE VIC 3008

City West Water Corporation
ABN: 70 066 902 467

1 McNab Avenue
Footscray Vic 3011 Australia
Locked Bag 350 Sunshine Vic 3020
DX 30311 Sunshine

citywestwater.com.au

Telephone (03) 9313 8422

Facsimile (03) 9313 8417

Dear Marine,

Re: PROPOSED ROAD DISCONTINUANCE
Location: ROAD ADJACENT 75-119 CUBITT STREET, CREMORNE
CWW Reference: 18/455

I refer to your email received by City West Water (CWW) regarding the proposed Road Discontinuance at the above location and request for comment from CWW. Enclosed for your information are copies of CWW's requirements for working in the vicinity of water and sewer assets and a plan of the general area.

As you will see on the plan provided, the parcel of land proposed for Discontinuance contains an existing CWW sewer main. It is with respect to this asset that CWW currently objects to this proposal subject to the following:

1. A certified Title Plan must show a 2.0m wide Sewerage Easement centrally located over the sewer main in favour of CWW pursuant to Section 12(1) of the Subdivision Act. This plan must then be referred to CWW for consideration prior to offering a withdrawal of objection.
2. Any proposed fences must be located a minimum distance of 800mm clear of the centreline of existing CWW sewer mains.
3. Any proposed fence lines must be located a minimum distance of 1.0m from sewer manholes and/or sewer inspection shafts.
4. Any proposal to build over CWW assets will require CWW's written consent (i.e. Build-Over Application approval).

Naturally, extreme care must be taken when working in the vicinity of CWW assets and CWW will seek cost recovery for any damage caused to its assets that can be attributed to this proposal.

If you have any questions, please do not hesitate to contact me on 0407 528 605.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Mark Abraham'.

Mark Abraham
Technical Officer, Other Authorities Works

Attachment 6 - CWW Response



City West Water™

QES Management System
Issue Date: 18/10/2016

Protection of City West Water's Water and Sewer Assets Other Authorities Works

Important Information

This document has been provided by City West Water (CWW) as a reference for standard conditions and requirements when working in close proximity to CWW's existing water and sewer assets.

1. The assets referred to in this document are water and sewer assets owned and/or controlled by CWW. Please note that some assets shown on plans provided by CWW may belong to Melbourne Water, South East Water and Yarra Valley Water.
2. Due to the nature, depth and age of CWW's assets and records, it is impossible to ascertain the exact location of all underground assets. CWW does not guarantee and makes no representation or warranty as to the accuracy or scale of information provided.
3. If asset relocation or protection works are undertaken by CWW as part of the required solution, payment for the cost of this work shall be borne by the principal developer, council, client or contractor requiring these works.
4. Unless otherwise stated in this document, all water and sewerage works must be carried out in accordance with the most recent versions of the Water and Sewerage Codes of Australia (MRWA Editions).

Duty to Avoid Damage

1. It is the responsibility of the owner and any consultant engaged by the owner (including, but not limited to; architect, building surveyor, consulting engineer, contractor and the developer) to ensure that CWW's assets are protected from the impact of any works.
2. It is the responsibility of the owner or person/s constructing the works to:
 - a) obtain 'Dial Before You Dig' plans showing CWW's assets in the vicinity of the proposed works no more than 30 days prior to the commencement of works
 - b) locate all underground assets that may be damaged or interfered with by the proposed works via non-destructive digging or hand excavation prior to commencement of works
 - c) contact CWW's Officer for Other Authorities Works (OAW) via email at oaw@citywestwater.com.au if any of CWW's assets will be affected or interfered with in any way by the proposed works
3. If any damage is caused to CWW's assets as a result of works, or if any of CWW's assets are interfered with (including being built over, buried, altered or if any cover or support is removed) without CWW's consent, CWW will seek recovery for the costs of repairing such damage or interference.
4. There are statutory offences under the Water Act 1989 and the Road Management Act 2004 for damaging or interfering with CWW's assets and for building over or removing cover or support of CWW's assets without prior written consent. In the event that damage is caused to CWW's assets, please contact Faults & Emergencies on 132 642.

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Document IRD-178

Rev 6

Page 1/2

Attachment 6 - CWW Response



City West Water™

QES Management System
Issue Date: 18/10/2016

Standard Work Conditions & Requirements

1. When undertaking works in the vicinity of CWW's underground assets, the minimum clearances and cover in the table below must be maintained at all times:

Clearance	Conditions	
150mm	Water main ≤ DN375 Sewer main (any size)	Vertical clearance when crossing an asset
500mm	Water main > DN375	
300mm	Water main < DN225	Horizontal clearance when running beside an asset
600mm	Water main ≥ DN225 Sewer main (any size)	
600mm	Water and sewer	Depth of cover when operating hand-operated vibrating equipment (e.g. jackhammers/vibrating plates)
1000mm	Water main	Depth of cover when operating mechanical excavators and vibrating equipment (e.g. sheep's-foot roller)
1500mm	Sewer main	
300mm	Clearance from any proposed back of kerb to the outer wall of any CWW asset. Refer to note 4 below.	
Minimum cover over assets		
1200mm	VicRoads roadways (assessed on an individual basis)	
750mm	Major roadways (assessed on an individual basis)	
600mm	Sealed roadways	
450/600mm	Nature strip, reserve (Residential/Commercial)	

IMPORTANT: CWW's Officer for OAW must be contacted via email at least 14 days prior to any works in the vicinity of water mains 300mm or greater in diameter as additional work conditions may apply.

- All new and existing covers on CWW surface fittings must match the proposed finished surface levels.
- No new or existing hydrants are to be located within road pavements or crossovers. Hydrants must be converted below ground and relocated at least 1.0m clear of the roadway or crossover. Valves are not to be positioned within a kerb and channel under any circumstances.
- No CWW water main which is currently located in a nature/median strip is to be relocated underneath any pavement or kerb and channel without prior written approval from CWW.
- All works on CWW assets (including abandoned assets) must be undertaken by CWW or CWW accredited consultants and contractors listed at: www.citywestwater.com.au. All relevant CWW procedures and applications remain applicable.
- Should any of CWW's assets be exposed during the course of the works, 150mm of embedment material similar to existing (unless otherwise specified by CWW) must be placed around the pipe and the trench backfilled and compacted in accordance with requirements relating to asset location.
- CWW has a target for planned water supply interruptions to be completed in less than **150 minutes**. It is the expectation of CWW that consultants and contractors will assist in decreasing the interruption times and thus reducing the impact of works.

NOTE: If you feel that any of the above requirements cannot be met, please contact CWW's Officer for OAW via email for advice on how best to resolve the situation.

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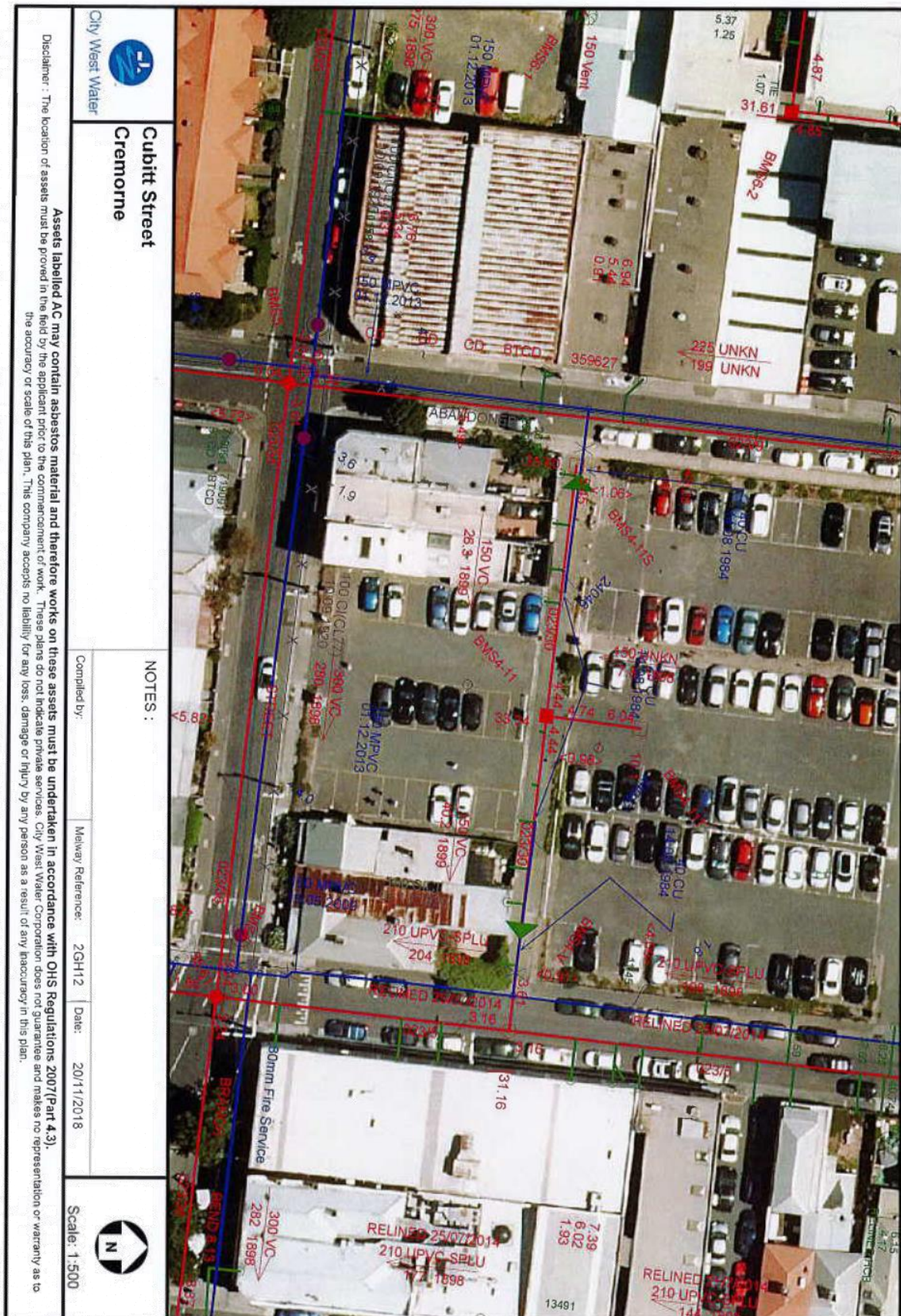
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Attachment 6 - CWW Response



Attachment 6 - CWW Response



City West Water™

21 February 2019

JOE KOZLOWSKI
MADDOCKS
COLLINS SQUARE, TOWER 2, LEVEL 25
727 COLLINS STREET
MELBOURNE VIC 3008

City West Water Corporation

ABN: 70 066 902 467

1 McNab Avenue
Footscray Vic 3011 Australia

Locked Bag 350 Sunshine Vic 3020
DX 30311 Sunshine

citywestwater.com.au

Telephone (03) 9313 8422

Facsimile (03) 9313 8417

Dear Joe,

Re: PROPOSED ROAD DISCONTINUANCE
Location: ROAD ABUTTING 75-119 CUBITT STREET, CREMORNE
CWW Reference: 18/455

I refer to your email proposed Title Plan received by City West Water (CWW) on 20/02/19 regarding the proposed Road Discontinuance at the above location.

Please note that CWW accepts the proposed Title Plan which identifies that the Road abutting 75-119 Cubitt Street, Cremorne will be encumbered by an easement in favour of City West Water (CWW) pursuant to section 207C of the *Local Government Act* (Vic).

Naturally, extreme care must be taken when working in the vicinity of CWW assets and CWW will seek cost recovery for any damage caused to its assets that can be attributed to this proposal.

If you have any questions, please do not hesitate to contact me on 0407 528 605.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Mark Abraham'.

Mark Abraham

Technical Officer, Other Authorities Works

11.6 Draft Heritage Strategy 2019-2030

Reference: D19/142787

Authoriser: Group Manager Chief Executive's Office

Purpose

1. To present a draft Heritage Strategy 2019-2030 (**Attachment 1**) for Council's consideration and approval for its public exhibition and community consultation.

Background

2. City of Yarra's existing Heritage Strategy ended in 2018.
3. In September 2018, Council appointed Extent Heritage Pty Ltd. to review the existing strategy and prepare a new heritage strategy for Yarra.

External Consultation

4. Preparation of the draft Heritage Strategy (the Strategy) has involved two stages of community consultations:
 - (a) Stage 1 - An online community survey in October- November 2018. Findings of the survey is provided in **Attachment 2**. This was promoted via social media, Yarra life eNews, through advisory groups and in person library sessions. Key community organisations were directly emailed and hard copy postcards provided at all neighbourhood houses and libraries; and
 - (b) Stage 2 - A workshop where representatives of local community groups, professional bodies such as Royal Historical Society and local heritage practitioners such as architects, developers and building professionals were advised of broad community feedback and invited to participate in a deeper discussion on the priority areas. Summary of the workshop is provided in **Attachment 3**.
5. Key community concerns have included:
 - (a) More control is needed around building heights and intensity of new development;
 - (b) More focus needs to be placed on social/cultural/arts - stories and creative sharing;
 - (c) There is concern around the trend towards facadism – the retention of only the fronts of buildings, with the corresponding loss of other built heritage fabric;
 - (d) Graffiti/vandalism is a problem in the municipality that effects its cultural heritage. There are also too many advertising signs in the built environment and impact on the heritage qualities;
 - (e) There is a need for more heritage related information and interpretative signage;
 - (f) The quality and consistency of information on the heritage of the municipality needs to be improved, as does the community's access to it;
 - (g) Greater provision of heritage advisory services to the community is necessary;
 - (h) Aboriginal heritage should be better recognised in the municipality;
 - (i) Natural heritage should be better recognised in the municipality; and
 - (j) There is a need for Yarra City Council (YCC) to strengthen its existing provisions and management framework to improve the overall response to heritage.
6. The workshop attended by representatives of key community organisations, developers and heritage practitioners identified the concept of a dedicated heritage department/unit a key desirable outcome to increased capacity to manage council's response to heritage. (Refer **Attachment 2**).

7. YCC officers managing different committees of the Council were advised about this workshop to seek participation from other committees.
8. Representatives of the Disability Advisory Committee had shown interest in attending the community group workshop, however they could not make it on that day.
9. Sustainability Advisory Committee through their committee meeting raised the issue about the need for guidelines for installation of solar panels in heritage areas and buildings.
10. A meeting was held with the representatives of Heritage Victoria and Department of Environment Land, Water and Planning who encouraged preparation of the heritage strategy based on the state guidelines.

Internal Consultation (One Yarra)

11. Individual and group meetings were held with various departments of the Council, involved in managing different aspects of heritage throughout different stages of the development of the draft Strategy.
12. Those departments have also provided their feedback on the initial list of implementation actions and associated time lines for their implementation.
13. Executives consent was sought on the draft priority list of actions.
14. A draft strategy was circulated to different departments and HAC members for their feedback before finalising this draft.

Financial Implications

15. Whilst there are no financial implications in exhibiting the draft strategy, the implementation of this Heritage Strategy upon its adoption would require regular budget commitment over coming years.
16. Understanding the process, responsibility and resource constraints faced in the implementation of the previous strategy, this draft Strategy proposes an overall implementation time frame of 10 years, so that based on the priority the resources can also be spread over a longer timeframe.
17. Council's budget for the year 2019-20 provides:
 - (a) \$ 60,000 towards heritage information, promotion and the cost for completion and printing of the new heritage strategy;
 - (b) \$80,000 contribution towards Victorian Heritage Restoration Fund. This funding is to help the owners of the heritage properties to restore the heritage elements of their building following the Victorian Heritage Restoration Fund criteria; and
 - (c) In addition to above, two new initiative bids have been approved - \$80,000 to prepare a framework for management of Yarra's own heritage assets. And \$60,000 to initiate a shared value heritage project.
18. The above provisions will implement some of the short term actions of this Strategy.
19. It is expected that implementation of this strategy in year two (financial year 2020-21) would also require similar budget of \$200,000-\$250,000 plus an ongoing contribution to the Victorian Heritage Restoration fund.
20. The implementation of the strategy also relies on additional staffing support in the area of heritage; which will be subject to new initiatives requests.
21. The implementation of actions relating to other departments would be managed through their regular services and the relevant departments would seek their own budgets as usual.

Economic Implications

22. The Strategy promotes conservation of heritage which would result in direct and indirect economic benefits for the community.

Sustainability Implications

23. Conservation of built, cultural and natural heritage aligns with the sustainability principles.

Social Implications

24. A number of implementation actions of the Strategy focus on improving the knowledge of local history and heritage within the local community and society.
25. Better management of YCC owned heritage assets would provide better places for community use.

Human Rights Implications

26. There are no known human rights implications of the draft strategy at this stage.

Communications with CALD Communities Implications

27. Public exhibition and consultation process would involve Yarra's standard practices relating to CALD elements.

Council Plan, Strategy and Policy Implications

28. The Strategy is consistent with the Council Plan 2017-2021 which includes:
- (a) Acknowledging and celebrating Aboriginal history (as a part of Strategy 2.3);
 - (b) Supporting empowering a more sustainable Council and Community (Strategy 3.2); and
 - (c) Protecting Yarra's heritage and neighbourhood character (Strategy 4.1) under which a main initiative (4.1.1) is to strengthen the protection of Yarra's heritage through the planning scheme, education, and resource provision.
29. The Strategy also links with many other strategies of the Council such as the Housing Strategy 2018, Property Strategy 2018, Economic Development Strategy 2015-2020, Yarra Libraries Strategic Plan 2017-2020, Multicultural Partnership Plan 2015-2018, Graffiti Management Framework 2015-2019, Yarra Open Space Strategy 2006, Arts and Culture Strategy 2016-2020, Access and Inclusion Plan 2018-2024 and Volunteers Strategy 2019-2023.
30. The vision and directions of this Strategy would also influence Yarra Planning Scheme policies and provisions and need to be considered while revising the existing provisions or preparing new policies and development controls.
31. The strategy is consistent with the Plan Melbourne and State Planning Policy Framework.

Legal Implications

32. The Strategy is consistent with the following legislations:

Commonwealth

- (a) Aboriginal and Torres Strait Islander Protection Act 1984;
- (b) Environment Protection and Biodiversity Conservation Act 1999;

State

- (c) Planning and Environment Act 1987;
- (d) Heritage Act 2017;
- (e) Aboriginal Heritage Act 2006 & Aboriginal Heritage Regulations 2018; and
- (f) Yarra River Protection (*Wilip-gin Birrarung murrnong*) Act 2017.

33. Implementation actions may also have other influences in specific cases such as *The Disability Discrimination Act 1992* for universal access of heritage buildings.

Overview of the Strategy

34. The Strategy recognises the strong presence of heritage in the City of Yarra.
35. The Strategy identifies key priorities that are important for developing and promoting a greater understanding of heritage within the community and recommends key actions and measures intended to achieve better protection and management of the City's heritage places and assets.
36. The scope of the Strategy has been broadened to include the natural heritage of the municipality, mirroring the holistic approach to heritage adopted nationally and internationally.
37. Understanding the processes, timeframes and resource implications to implement proposed actions this strategy has been prepared with a 10 year time frame.
38. The heritage vision of the municipality for this strategy is:

The City of Yarra is known as a place where our rich natural, Aboriginal, built and other cultural heritage is nurtured, protected and celebrated: It helps to define the city's identity, support its diverse living culture and is valued by current and future generations.

39. To achieve this vision the strategy suggests following key directions.

Knowing our Heritage

40. To improve our understanding of cultural heritage of Yarra by identifying places that are important to us and ensuring that information about them is comprehensive and publicly accessible.

Protecting and Managing our Heritage

41. To develop and promote a robust policy and management framework that makes heritage a primary consideration in all elements of planning and place-making. The Council will also lead by example and demonstrate best-practice heritage management of its own properties and assets.

Supporting our Heritage

42. To support our heritage through a proactive involvement of YCC and the community in the management, care and conservation of our heritage.

Promoting and celebrating our Heritage

43. To celebrate heritage as a community, enhancing its value for all.
44. Against four strategic directions eight 'Priority Areas' have been identified that together provide scope to address what are considered the most pressing heritage issues for the municipality. These are listed in the table below:

Strategic Direction	Priority Area
Knowing our heritage	<ol style="list-style-type: none"> 1. Improved Statements of Significance and Precinct Citations 2. Natural Heritage
Protecting and managing our heritage	<ol style="list-style-type: none"> 3. Strengthening existing provisions and management framework 4. Managing YCC's Own Heritage Assets
Supporting our heritage	<ol style="list-style-type: none"> 5. Heritage Advice 6. World Heritage
Promoting and	<ol style="list-style-type: none"> 7. Aboriginal Heritage

Celebrating our heritage	8. Heritage Promotion and Community Access to Information
--------------------------	---

45. The Strategy also includes an implementation plan which includes priority actions under each priority area.
46. Each of these actions has been assigned a timeframe of short term (0-5) years or long term (0-10) years, or it will be ongoing from now until the end of the Strategy's 10 year implementation time frame.

Other Issues

47. Preparation of this strategy indicates that many actions need to be delivered outside the existing service areas of the council. Those actions have been listed under the responsibility of Senior Advisor City Heritage.
48. The HAC have suggested that implementation of heritage strategy actions should be included in the KPI's of the relevant branch managers.

Options

49. Option 1: Councillors consider the Strategy and implementation actions and time frames and provide any feedback.
50. Option 2: Councillors adopt the draft Strategy for public exhibition and community consultation.

Conclusion

51. More than 70% of Yarra's properties are affected by Heritage Overlays which is the largest coverage of heritage by any municipality in Victoria.
52. Heritage has been a highly valued characteristics by the Yarra community and the community is looking for a best practice approach in the management of heritage in Yarra.
53. This draft strategy identifies priority areas and actions that are important for effective management of heritage in coming years.
54. It would be appropriate that Council considers the Strategy and adopts it for public exhibition and feedback.
55. The process of public exhibition of the Strategy should involve following steps:
 - (a) Information on Your Say Yarra web page;
 - (b) Information through Yarra Life E News-letter and social media;
 - (c) Email to HAC members, stakeholder groups, key community groups, historical societies, participants of the previous workshop and survey who have provided their email contacts;
 - (d) Information to the officers managing other communities of the Council;
 - (e) Information postcards will be placed in Yarra Libraries, and town halls; and
 - (f) A hard copy of the Strategy will be available to view at the information counters of Richmond and Collingwood Town Halls.
56. Upon completion of the public exhibition period, officers are likely present a return report to Council in October/November 2019; informing about the outcome of the public exhibition and a way forward.

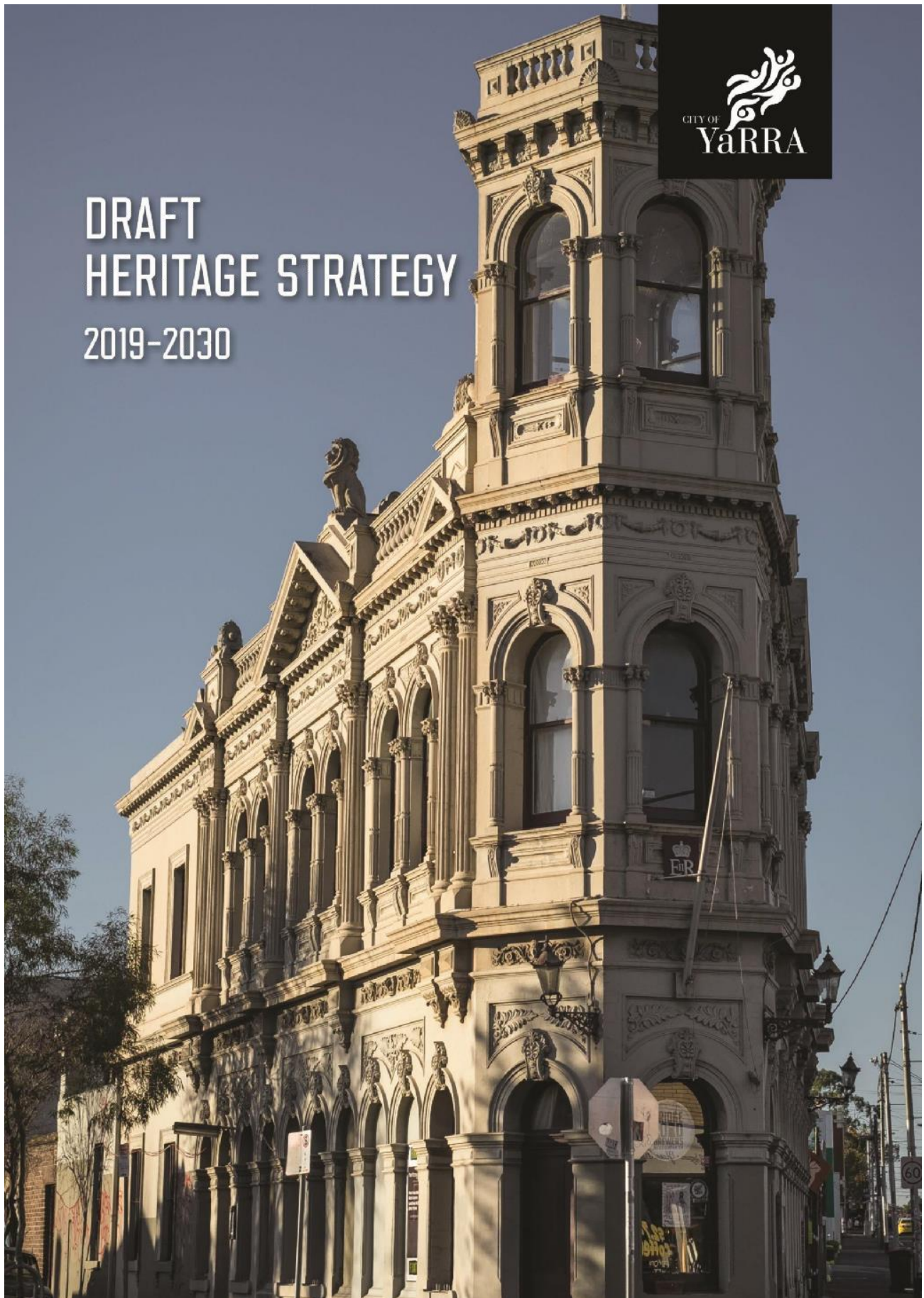
RECOMMENDATION

1. That Council:
 - (a) note the report;
 - (b) approve the draft Heritage Strategy 2019-2030 (Attachment 1) for purposes of public exhibition;
 - (c) note the public exhibition process as outlined in para 55 above; and
 - (d) note that following the public exhibition period, officers will present a further report together with advice on any public submissions received, for Council consideration and final determination on the Heritage Strategy in October/November 2019.

CONTACT OFFICER: Richa Swarup
TITLE: Senior Advisor City Heritage
TEL: 9205 5149

Attachments

- 1 [↓](#) Draft Heritage Strategy Aug 2019
- 2 [↓](#) Summary of On-line Community Survey
- 3 [↓](#) Summary of CoY Heritage Stakeholder Forum October- November 2018



Attachment 1 - Draft Heritage Strategy Aug 2019

ACKNOWLEDGEMENTS

City of Councillors and Staff
City of Yarra Heritage Advisory Committee
City of Yarra Community
Extent Heritage Pty.Ltd.

Yarra City Council acknowledges the Wurundjeri as the Traditional Owners of this country pays tribute to all Aboriginal and Torres Strait Islander people in Yarra and gives respect to Elders past, present and emerging."

Attachment 1 - Draft Heritage Strategy Aug 2019**Contents**

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Abbreviations and Acronyms**CoY** City of Yarra**YCC** Yarra City Council**HAC** Heritage Advisory Committee**ESD** Ecologically Sustainable Development**CMP** Construction Management Plan



Introduction

The City of Yarra (CoY) has a vibrant and multi-faceted heritage, shaped by its rich history and diverse community. The Wurundjeri people are the Traditional Owners of the land on which the CoY is situated. Today evidence of the various layers of the City's natural, cultural and urban history can be experienced throughout the municipality.

Yarra City Council (YCC) fully appreciates the importance of its role in the management of the City's significant heritage, and it is committed to work with the wider community to conserve and enhance this heritage while embracing positive change in the municipality.

Purpose

The City of Yarra Heritage Strategy ('the Strategy') is a key document that defines YCC's strategic approach to the management of heritage. It defines key priorities that are important for developing and promoting a greater understanding of heritage within the community and recommends key actions and measures intended to achieve better protection and management of the City's heritage places and assets.

Scope

The Strategy builds on the previous Strategy (2015-2019) that set out the responsibilities of YCC in identifying, assessing, documenting and protecting its cultural heritage, both pre-settlement and post-settlement. The scope of the new Strategy has been broadened to include the natural heritage of the municipality, mirroring the holistic approach to heritage adopted nationally and internationally.

The Strategy is applicable to all elements of heritage, from tangible features such as historical buildings and precincts, landscapes, streetscapes, archaeological sites, objects, collections and records, to intangible elements such as cultural practices, stories, traditions, folklore and other knowledge that is inherited over generations. The Strategy focuses on those aspects of the City's cultural and natural heritage for which YCC has direct responsibility or the opportunity to positively influence.

The actions developed to fulfil this responsibility respond to four key Strategic Directions in accordance with Heritage Victoria's *Municipal Heritage Strategies Guide for Councils*. These are:

- Knowing our heritage;
- Protecting our heritage;
- Supporting our heritage, and;
- Promoting and Celebrating our Heritage

Attachment 1 - Draft Heritage Strategy Aug 2019



A number of departments at YCC are involved in the management of heritage in the CoY. The Strategy recognises that actions that are 'business as usual' will be continued by various departments. Therefore this Strategy focuses only on the strategic actions that are important for proactively improving the management of heritage in CoY in the coming years and sets out an action plan that is both achievable and accountable over the life of the new Strategy. The strategy also identifies that the implementation of some heritage outcomes requires support from key external organisations and service authorities

Process

Development of the Strategy followed a consultative process in which YCC's Heritage Advisory Committee (HAC) has played an instrumental role. A subgroup from the HAC guided the structure and focus throughout the drafting process, and YCC also undertook several stages of wider community engagement. Internal departments responsible for different aspects of heritage management have provided input at different stages in the development of the Strategy to ensure that the implementation actions are achievable and so that they can be embedded in YCC's core business.

The development of the Yarra Heritage Strategy 2019-2030 has included the following steps:

- Review of the previous Heritage Strategy 2015-2018 and the implementation plan;
- Understanding the historical, legislative and policy, strategic and community context;
- Meetings with YCC's Heritage Advisory Committee;
- Liaison with YCC departments;
- Community survey, through YCC's web platform;
- Meetings and workshop with external stakeholders and interest groups;
- Discussion with YCC Executive; and
- Public Exhibition.

Timeframe

Timely implementation of the previous strategy has been challenging. Understanding the processes, time-frames and resource implications of the proposed actions this strategy adopts a 10 year implementation time frame with a proposal for the periodic review of the implementation plan after every four years.



Context

The CoY was formed following the 1994 amalgamation of the former cities of Collingwood, Fitzroy, Richmond, and parts of Northcote and Melbourne. It now incorporates the suburbs of Abbotsford, Burnley, Clifton Hill, Collingwood, Cremorne, Fitzroy, North Carlton, North Fitzroy, Princes Hill and Richmond, together with parts of Alphington and Fairfield. Areas of the municipality have been important gathering places for Aboriginal people for thousands of years. The CoY is bound by the Yarra River (traditionally known as 'Birrarung') on three sides. The river corridor has significant natural and cultural heritage values, especially for the region's Wurundjeri Traditional Owners.

The Historical Context

The Wurundjeri people of the Kulin Nation are the Traditional Owners of the place that we know today as the City of Yarra. Their relationship with the City extends back tens of thousands of years to when their creator spirit 'Bunjil' formed their people, the land and all living things. The Birrarung is a rich natural and now managed landscape that was and remains integral to Aboriginal people's sense of place. This is also true of other watercourses in the municipality, including the Merri Creek in particular.

Archaeological evidence of Aboriginal occupation can be found throughout the municipality, especially along its watercourses, together with scar trees. The banks of the Yarra River, once intensively used for industry, are now also highly valued green spaces for leisure and recreation.

The suburbs that are now part of the CoY initially developed from 1839 as residential areas to house the Colony's growing population. The establishment of industries along the Yarra River provided employment for the new arrivals in a period of rapid population growth. Industrial and commercial life grew and centralised around the early locales of Fitzroy, Collingwood, Abbotsford and Richmond.

The CoY includes some of Melbourne's earliest established suburbs, whose history remains evident in the significant nineteenth and early twentieth century architecture, subdivision pattern, street furniture, parklands, trees and other elements. Rows of cohesive streetscapes with single storey workers cottages and double storey terraces exist with middle class villas and landmark civic and religious buildings. The layout of the suburbs of Fitzroy, Richmond and Princes Hill is largely mid Victorian in design. However, the evidence of slum clearance in the form of 1960s–70s tower developments has dramatically changed the physical form of some of these areas. Abbotsford, Collingwood and parts of Richmond and Fitzroy developed largely as manufacturing areas with industry and residential development existing side by side. Following the Second World War, rapid growth and population change have brought diversity and physical transformation to the suburbs of Yarra.

The CoY also has a number of late Victorian and Edwardian shopping strips that exhibit consistent streetscapes of heritage facades and shop fronts. These centres contribute to the economic prosperity of the CoY. The population boom of the last two decades has added enormous pressure for redevelopment of underutilised ex-industrial and large sites, especially



in and around the shopping strips, and this has started to impact the character and feel of these places.

The municipal history of the CoY is reflected in its notable public and civic buildings, such as the Fitzroy Town Hall (1874), Collingwood Town Hall (1887) and Richmond Town Hall (1890). The Royal Exhibition Building and Carlton Gardens (located immediately adjacent to the CoY) witnessed the opening of the first Australian Parliament in 1901, as well as the great exhibitions of 1880 and 1888. It is important that the heritage of these places is celebrated and conserved.

The Legislative and Policy Context

Heritage places in Australia are protected by Federal, State and Local Government legislation or regulations. A list of the relevant legislation is attached in the reference section at the end of this report. The management requirements for such places depend on the level of their recognised heritage significance.

Local Government plays an important role in heritage conservation; from its identification and appropriate statutory protection, to the management of change in the urban environment and celebration of its diverse heritage. The Yarra Planning Scheme includes the vision and strategic directions for future planning and development of the municipality which are brought into effect through a number of planning provisions and the requirements of local planning policies (such as for built environment and heritage), zones and overlays such as Heritage Overlay, Design and Development overlay etc.

The Victorian Government has the main responsibility for managing and legislating for the protection and listing of State and Locally significant heritage. It also provides oversight and education through its relevant heritage agencies; Heritage Victoria and Aboriginal Victoria, and other agencies such as Parks Victoria are concerned with both the natural and cultural heritage of the State.

As independent statutory bodies, the Victorian Heritage Council and Aboriginal Heritage Council are respectively responsible for the Victorian Heritage Register (VHR) – that recognises places of state level heritage significance – and the Victorian Aboriginal Heritage Register (VAHR). The Commonwealth Government also has a responsibility for cultural and natural heritage through the National Heritage List and the World Heritage List.

Importantly, approximately 70% of properties in the CoY are included in the Heritage Overlay. These places include residential, commercial, industrial and civic buildings and are mostly located in one of the 54 heritage precincts in the CoY. The Heritage Overlay also applies to a number of parks and landscapes within the municipality. A substantial number of places are included in the Victorian Heritage Register by virtue of their State-level heritage significance. Abbotsford Convent is a significant asset in Yarra that has been recently included in the National Heritage List, while the UNESCO World Heritage listed Royal Exhibition Building and Carlton Gardens are located just outside the municipal boundary, with parts of Fitzroy in the south western corner of the municipality included in the World Heritage Environs Area buffer zone.

The State Government introduced the Yarra River Protection (*Wilip-gin Birrarung murrnong*) Act in 2017. There is a Yarra River 50 Year Community Vision prepared as a part of its

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implementation which has a focus on understanding and respecting the history of the river, celebrating the vital and continued role of the Traditional Owners its custodians and recognising its role in their culture. The State Government is currently preparing a Yarra Strategic Plan with priority actions for the coming years. Once this plan is finalised, actions relating to protecting and commemorating cultural heritage of the river will need to be developed to supplement the action plans in this Strategy, to provide an integrated and collaborative approach to heritage conservation, enhancement and interpretation.

Strategic Context

Plan Melbourne (2017-2050)

Plan Melbourne (2017-2050) is the State Government's long term planning strategy to manage growth and development in metropolitan Melbourne. While Plan Melbourne advocates for accommodating new housing in activity centres near places that offer good access to jobs, services and public transport, it relies on preserving Melbourne's uniqueness as one of the key principles for planning for the future, and specifies its heritage as one of the city's distinctive qualities.

Direction 4.4 of Plan Melbourne undertakes to:

"Respect Melbourne's Heritage as we build for the future".

It also includes the following policy goals to help implement this direction:

- *Recognise the value of heritage when managing growth and change*
- *Respect and protect Melbourne's Aboriginal cultural heritage*
- *Stimulate economic growth through heritage conservation*
- *Protect Melbourne's heritage through telling its stories.*

Council Plan 2017-2021

YCC's Council Plan 2017-2021 sets out priorities and direction for the Council until 2021, and one of its key objectives is that development and growth are managed to maintain and enhance the character and heritage of the city. This is supported by several strategies, including relating to acknowledging and celebrating Aboriginal history (Strategy 2.3) and supporting and empowering a more sustainable Council and Community (Strategy 3.2). Strategy 4.1 is "Protect Yarra's heritage and neighbourhood character", under which a main initiative (4.1.1) is to strengthen the protection of Yarra's heritage through the planning scheme, education, and resource provision.

Other Strategies of the Council

A number of service areas of YCC include the management of heritage amongst their responsibilities. A list of the various YCC strategies of that relate to heritage is provided in the Reference section.

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The Burra Charter

The *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* (2013)- the 'Burra Charter', and its practice notes provide conservation best-practice guidance and principles to inform decision making. More detailed information on the Burra Charter can be accessed at: <https://australia.icomos.org/>

As one of the three municipalities in Melbourne's Inner Metro Region (together with the Cities of Melbourne and Port Phillip) the CoY has been experiencing significant development pressure in activity centres, underutilised industrial sites and mixed use and employment precincts. In this scenario of growth and change it is important that Burra Charter principles of conservation are correctly applied to ensure a clear voice for heritage in planning and management decision making.

Achievements to Date

YCC and the Yarra community have been in the forefront of heritage identification and protection for many years, CoY having been one of the first municipalities in Victoria to systematically study its heritage and protect places of value.

A number of heritage studies have been undertaken in the past covering the entire municipality. The studies have also identified potential future heritage survey work to fill in the gaps. There are excellent local history collections in the CoY libraries, while Yarra's Arts and Cultural Services unit also maintains arts and objects of heritage significance. YCC has launched a web application (PastPort) to document Yarra's history and heritage through community participation.

To support the protection and management of CoY's heritage, the findings of its many heritage studies have been implemented into the planning scheme through the Heritage Overlay, covering buildings, precincts parks and gardens. YCC also has the responsibility to manage and maintain its own heritage buildings. YCC provides ongoing funding to the Victorian Heritage Restoration Fund (Yarra Restoration Fund) to provide financial assistance for restoration works, and also provides ongoing support to local historical societies.

Many departments of YCC are involved in the management of heritage in it many different aspects. A Heritage Advisory Committee (HAC) has been re-established to advise on strategic heritage matters, whilst YCC employs three part-time heritage advisors to provide advice on planning applications and has an in house Senior Advisor City Heritage to advise on significant and strategic heritage matters. At the community level there are many community-based organisations and advocacy groups involved in a broad range of heritage activities.

YCC has initiated an Aboriginal History of Yarra website and the Aboriginal Heritage Walking Trail to further the understanding of the Aboriginal history of the area. Interpretative signage exists for some streets and buildings within the municipality, and the CoY website and Yarra Libraries provide access to YCC's heritage studies and other relevant heritage information. YCC participates in heritage festivals and Open House Melbourne, and it has recently launched a community heritage awards to recognise and honour community members (individuals or groups) for their contribution to the protection and enhancement of Yarra's history and heritage.



Key Community Concerns and Directions

Various consultations in the past few years have indicated that heritage is one of the characteristics of Yarra that is most valued by the community. Local historical societies play an active role in documenting and promoting the history and heritage of Yarra, and there are also other community groups advocating for heritage protection and management.

The community engagement undertaken during the preparation of this Strategy identified a series of main themes that are important to the community for the future management of heritage in Yarra. These are that:

- More control is needed around buildings heights and intensity of new development;
- More focus needs to be placed on social/cultural/arts - stories and creative sharing;
- There is concern around the trend towards facadism – the retention of only the fronts of buildings, with the corresponding loss of other built heritage fabric;
- Graffiti/vandalism is a problem in the municipality that effects its cultural heritage. There are also too many advertising signs in the built environment and impact on the heritage qualities;
- There is a need for more heritage related information and interpretative signage;
- The quality and consistency of information on the heritage of the municipality needs to be improved, as does the community's access to it;
- Greater provision of heritage advisory services to the community is necessary;
- Aboriginal heritage should be better recognised in the municipality;
- Natural heritage should be better recognised in the municipality;
- There is a need for YCC to strengthen its existing provisions and management framework to improve the overall response to heritage; and
- Alterations to heritage properties to achieve universal access or improved sustainability – in particular through installation of solar panels, are recurring issues for YCC.

A workshop attended by representatives of key community organisations, developers and heritage practitioners identified a key desirable outcome to be increased capacity to manage heritage within YCC, with the concept of a dedicated heritage department/unit receiving significant support.

Challenges and Opportunities

Current challenges and opportunities have been identified based on the discussions with various stakeholders, including internal YCC departments involved in the management of heritage, and the Heritage Advisory Committee. The community concerns and feedback derived from community surveys, and stakeholder workshops have also been taken into consideration. Opportunities and challenges have been identified relative to the Strategy's Strategic Directions, and these are set out in the table below which provide the basis for the Strategic Priorities, later discussed in the report.

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Challenges	Opportunities
<i>Strategic Direction - Knowing our Heritage</i>	
<p>Challenges are:</p> <p>A large number of precinct heritage overlays, but a lack of awareness and understanding among the community.</p> <p>Need to ensure that Statements of Significance and mapping for many heritage places are accurate, consistent, up-to-date and in line with current standards.</p> <p>Need to review citations to identify places of historic and contemporary significance to Aboriginal people, intangible significance, social value etc. and to provide clear distinction between places of contributory and individual significant within precincts.</p> <p>The Thematic History of Yarra is very old. It needs to be reviewed and updated to make it more relevant and current.</p> <p>A lack of awareness about the thematic history of Yarra as it is not easily accessible.</p>	<p>Opportunities to:</p> <ul style="list-style-type: none"> Make information about the precincts and citations more accessible to the community. Improve the consistency and standard of documentation for heritage places to enable more efficient and effective management. The breadth of values recorded can also be increased to provide a more holistic record of Yarra's heritage.
<p>Previous heritage studies have not focussed on post-war heritage. This period needs to be further investigated, with places protected, so that this important part of the City's heritage is not lost.</p>	<ul style="list-style-type: none"> Expand the scope of the thematic history to explore additional themes, for example Aboriginal and natural aspects of heritage and the changes that recent development is producing. Use increased relevance to help raise awareness of the Thematic History, and access to it.
<p>There is a need for the natural heritage of Yarra, including trees of heritage significance, to be recognised and protected.</p>	<ul style="list-style-type: none"> Undertake further gap studies, for example focussing on post-war heritage. Develop a database of areas of natural heritage significance, including trees of heritage significance.
<i>Strategic Direction - Protecting and Managing our Heritage</i>	
<p>Challenges are:</p> <p>To conserve and protect the CoY's cultural and natural heritage, including maintaining its historic character, while also meeting the demands for high-density development.</p>	<p>Opportunities to:</p> <ul style="list-style-type: none"> Ensure that the planning vision of the municipality as well as heritage, urban design, activity centres built form and ESD policies have a stronger focus on heritage in YCC's current major review and rewrite of its planning scheme.
<p>Yarra is experiencing a high level of development pressure, particularly in its key heritage streetscapes. Development must be managed and issues such as facadism and over development addressed to avoid compromising the integrity of heritage streetscapes.</p>	<ul style="list-style-type: none"> Review activity centre precinct citations and provide greater clarity and surety to inform heritage management decisions. Update the citations through Planning Scheme amendments and prepare and introduce appropriate development controls.
<p>The local community is constantly indicating a need to improve the response of YCC's various service units towards heritage aspects such as in graffiti management, upkeep of gardens, trees, streetscape elements, bluestone laneways and signage.</p>	<ul style="list-style-type: none"> Review YCC's heritage management structure and framework so that heritage values are better recognised in its planning and place making framework.

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	<ul style="list-style-type: none"> Reference and link to other strategies and policies of the Council so that heritage aspects can be better managed. Lead by example by improving management of Council's own heritage assets.
Making heritage buildings meet contemporary requirements, including for environmental sustainability measures and disability access, is challenging.	<ul style="list-style-type: none"> Prepare innovative strategies and guidelines to promote adaptation and reuse of heritage places, making them ESD compliant and accessible to all.
<i>Strategic Direction - Supporting our Heritage</i>	
Challenges are: YCC's heritage advisors are currently operating at full capacity and are generally unable to be utilised by members of the community at the pre-application stage.	Opportunities to: <ul style="list-style-type: none"> Enable better heritage management decisions in the community through expansion of the heritage advisory service.
Large-scale redevelopment of old factories, warehouses and commercial areas is leading to the loss of historic fabric and change in the overall historic landscape.	<ul style="list-style-type: none"> Work collaboratively with landowners, developers and local heritage groups to develop sound heritage interpretation strategies to document and interpret places where change has been allowed. In so doing, maintain a link to the past for current and future generations.
Local historical societies and some local community groups are involved in documenting and promoting history and heritage. But their activities are limited by lack of resources.	<ul style="list-style-type: none"> Include a stream targeted towards heritage promotion in CoY's community grants program.
There is a general lack of awareness of heritage and planning principles amongst place owners, developers and the wider community, as well as YCC managers.	<ul style="list-style-type: none"> Improve the information base with topic based reference sheets, 'dos and don'ts', residents kit etc. Document oral histories and catalogue them so that they can be easily accessed by the community. Initiate in house training programs to develop better understanding of the application of Burra Charter principles and other aspects of heritage management within YCC.
<i>Strategic Direction - Promoting and Celebrating Heritage</i>	
Challenges are: Current heritage discourse in the CoY is largely focussed on historical built form, and there is a need to complement this with by improving the recognition and understanding of other aspects of heritage such as Aboriginal, social and natural heritage.	Opportunities to: <ul style="list-style-type: none"> Provide resources to promote new ways of seeing the heritage of the CoY through projects, events and interpretative strategies focussing on heritage aspects other than the historical built form.

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<p>It is difficult to keep the changing resident population engaged with heritage. This is especially true of certain demographics, including the youth of Yarra, the student population and recent immigrants.</p>	<ul style="list-style-type: none"> ▪ Prepare a Heritage Communication Strategy around regular updates on events and initiatives related to heritage. ▪ Use new technologies in the presentation and communication of heritage information. ▪ Enable Yarra Libraries to take a more proactive role in promoting heritage and display programs. ▪ Engage students in heritage which could lead to long-term appreciation of heritage values.
<p>Heritage is an aspect of the CoY enjoyed by the wider community. However there is a lack of shared responsibility in its promotion, maintenance and upkeep by the community.</p>	<ul style="list-style-type: none"> ▪ Support organisations such as historical societies who are making positive contributions to the promotion of heritage in Yarra. ▪ Develop partnerships with the developers where possible.

The Strategy

The Strategy recognises the strong presence and high importance of heritage in CoY and provides a long-term vision and practical and achievable direction to improve its management over the next ten years. It will be achieved through an Implementation Framework that supports an implementation plan of priority actions with achievable measures and timeframes.

Vision and Direction

The Council's vision for heritage in the CoY is as follows:

The City of Yarra is known as a place where our rich natural, Aboriginal, built and other cultural heritage is nurtured, protected and celebrated: It helps to define the city's identity, support its diverse living culture and is valued by current and future generations.

To achieve this vision the aim of the four Strategic Directions will be:

Knowing our Heritage

To improve our understanding of heritage of Yarra by identifying places that are important to us and ensuring that information about them is comprehensive and publicly accessible.

Protecting and Managing our Heritage

To develop and promote a robust policy and management framework that makes heritage a primary consideration in all elements of planning and place-making. YCC will also lead by example and demonstrate best-practice heritage management of its own properties and assets.

Supporting our Heritage

To support our heritage through a proactive involvement of YCC and the community in the management, care and conservation of our heritage.

Promoting and celebrating our Heritage

To celebrate heritage as a community, enhancing its value for all.

Strategic Priorities

Against the four Strategic Directions, eight 'Priority Areas' have been identified that together provide scope to address what are considered the most pressing heritage issues for the municipality.

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These Priority Areas are summarised in the following table.

Strategic Direction	Priority Area
Knowing our heritage	<ul style="list-style-type: none"> Improved Statements of Significance and Precinct Citations Natural Heritage
Protecting and managing our heritage	<ul style="list-style-type: none"> Strengthening existing provisions and management framework Managing YCC's Own Heritage Assets
Supporting our heritage	<ul style="list-style-type: none"> Heritage Advice World Heritage
Promoting and Celebrating our heritage	<ul style="list-style-type: none"> Aboriginal Heritage Heritage Promotion and Community Access to Information

With reference to the full range of activities identified as desirable, but recognising that not everything can be achieved immediately, the above priorities were identified by YCC's Heritage Advisory Committee and supported through community workshops and meetings with YCC Executives.

The above priority areas identified for the strategic direction inform the action plan. As the Strategy has a 10 year horizon, the activities need to be set within the context of an implementation plan.

Under the Strategic Direction of 'knowing our heritage', the need to improve the existing baseline of knowledge to ensure fully informed decision making has drawn attention to the need for **improved Statements of Significance and Precinct Citations**, whilst the inclusion of **natural heritage** in the new Strategy prompts the need to understand this aspect of heritage in the municipality better.

Under 'protecting and managing our heritage', improving mechanisms for heritage management requires first that areas that are currently in operation be functioning at an optimal level. Hence the focus should be on **strengthening existing provisions**, and on improving the **management framework**, with a single unit of department having oversight. YCC also seeks to set a good example in Yarra by ensuring that the **management of its own heritage assets** is effective and in line with best practice.

The Strategic Direction of 'supporting our heritage' is directly served by a focus on improving and expanding access to YCC's **heritage advice** services, to enable the wider community to

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undertake more informed and appropriate development in and around places of heritage significance. Parts of Yarra are adjacent to one of Victoria's two **World Heritage** places in the form of the Royal Exhibition Building, and this presents an excellent focal point through which to raise the profile of the broader cultural heritage in the municipality, which can only be to the benefit of its management.

As regards promoting and celebrating the heritage of the municipality, consultation has strongly identified the need to raise the profile of its **Aboriginal heritage**, whilst the general **promotion of heritage**, facilitated by **improved access to information**, is universally desirable.

Implementation Framework

The Strategy will be implemented through the following key steps.

Implement

While heritage management is part of the duty of care for all Council departments, the implementation of priority actions will be the responsibility of the assigned Lead Department.

The Implementation Plan section below includes a tentative timeframe for implementation of those actions. However, available funding may influence the detail, scale and timing of implemented actions.

YCC will also be engaging with the Heritage Advisory Committee to obtain their views and feedback on strategic heritage issues. New opportunities will be sought to create effective partnerships with community groups that are making positive contributions to promoting and supporting heritage in Yarra. This will include YCC actively seeking opportunities to engage and develop partnerships with historical societies, local groups, community and developers in protection, promotion and celebration of heritage.

Monitor

The progress and success of each individual action will be monitored by YCC's Senior Advisor City Heritage.

At the beginning of each year, departments with responsibility for actions under the Strategy will confirm with the Senior Advisor City Heritage which actions will be progressed in that year. They will also provide a six monthly update on the progress of the actions in hand and any likely delays. The Senior Advisor City Heritage will provide a six monthly update to the HAC about the progress of the Strategy actions.

The Senior Advisor City Heritage will prepare a formal report to Council on the key successes of the Strategy in progress, and any resulting challenges, annually.

Review

It is anticipated that the implementation table will be reviewed and revised every four years and reported to Council.

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Future actions will be determined by examining the success of the short term priority actions. New actions may be progressed during the lifetime of this Strategy, or they will become a priority for future iterations.

The Heritage Strategy will be reviewed after 10 years. The next review and update to this strategy should take place in 2030.

Business as Usual

It is important to acknowledge that many departments manage aspects of the municipality's heritage as part of their 'business as usual' activities, in line with legislation, established YCC policies and strategies and specific place management plans.

This work will continue in conjunction with the activities that arise from the Strategy.

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Implementation Plan

The following Implementation Plan comprises the Priority Actions that have been identified for each of the Priority Areas through the development of the Strategy. Each of these has been assigned a timeframe of short term (0-5) years or long term (0-10) years, or it will be ongoing from now until the end of the Strategy's 10 year implementation time frame.

Priority Actions

Knowing our Heritage

We will improve our understanding of heritage in our community by identifying places that are important to us and ensuring that information around those values is comprehensive and publicly accessible

PRIORITY AREA	PRIORITY ACTION	LEAD DEPARTMENT	TIMEFRAME	QUANTIFIABLE TARGETS
Improved Statements of Significance and Precinct Citations Goal: Develop a better understanding of heritage places and precincts and ensure clear information is available to the community.	1. Review statements of significance to understand which need updating, including whether there are places of post war significance that need to be included in the precincts. Based on the review develop a program for updating those statements.	Senior Advisor City Heritage (CEO Office)	Short term (0-5 years)	<ul style="list-style-type: none"> A review of statements of significance is completed to understand which ones need updating and a program for updating them is established.
			Long term (0-10 years)	<ul style="list-style-type: none"> Based on the program, statements of significance are progressively reviewed and updated.
		Strategic Planning Unit	Ongoing	<ul style="list-style-type: none"> Updated Statements of Significance are incorporated in the Planning Scheme as a part of the periodic Planning Scheme 'fix-up' amendments.
	2. Review and upgrade the precinct citations for Yarra's activity centres and sites that are being	Strategic Planning Unit	Short term (0-5 years)	<ul style="list-style-type: none"> As part of the preparation of built form frameworks and rezoning proposals, the review of precinct citations is

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	rezoned to allow for employment and housing growth.			completed for activity centres and land subject to amendment to allow for employment and housing growth.
			Ongoing	<ul style="list-style-type: none"> Statements of significance are updated in line with the review and included in the planning scheme.
	3. Develop better community - including YCC officer - understanding of heritage precincts through heritage walks, precinct information sheets, and by providing easy access to heritage citations on the YCC website for community to access and view.	Senior Advisor City Heritage (CEO Office)	Short Term (0-5 Years)	<ul style="list-style-type: none"> Access to precinct's heritage citations is provided through the YCC website. Eight additional heritage walks are completed and placed on the YCC website.
			Long Term (0-10 Years)	<ul style="list-style-type: none"> Information sheets for key heritage precincts, conveying information on heritage significance and character are developed.
Natural Heritage Goal: Natural heritage is important and needs more than just protection. Achieve recognition of natural heritage values within other strategies dealing with the natural environment and aboriginal and cultural aspects.	4. Review Thematic History of Yarra to ensure that it captures all the relevant historic themes – including relating to natural, Aboriginal and cultural heritage.	Senior Advisor City Heritage (CEO Office)	Short Term (0-5 Years)	<ul style="list-style-type: none"> The Thematic History of Yarra is reviewed and updated.
	5. Achieve recognition of heritage within other strategies dealing with the natural environment and Aboriginal and other cultural resources, including by more clearly explaining these aspects of heritage.	Biodiversity, Streetscapes, Natural Values Unit, Community Partnerships Unit, Open Space Unit and Arts and Cultural Services Unit.	Ongoing	<ul style="list-style-type: none"> The Heritage Strategy is cross referenced to all other relevant YCC strategies, and the relationship is explained in all. Mutual goals of the various strategies are identified as a focus for YCC efforts, especially in relation to natural heritage.

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	6. Develop a process/project to identify and protect objects and areas of natural heritage significance in Yarra including trees of heritage value.	Senior Advisor City Heritage (CEO Office) in collaboration with Biodiversity, Streetscapes and Natural Values and Open Space units	Short term (0-5 years)	<ul style="list-style-type: none"> Following a process of community participation and interdepartmental collaboration, natural objects and trees of heritage significance are identified and appropriate protection is provided to them.
	7. Prepare Yarra River interpretation project in collaboration with the community and Melbourne Water – link to Actions 20 & 26	Senior Advisor City Heritage (CEO Office) in collaboration with Community Partnerships, and Open Space units	Long Term (0-10 Years)	<ul style="list-style-type: none"> The Yarra River interpretation project is completed.

Protecting and Managing our Heritage

Our heritage is important to us and will be protected through a robust management framework that encourages heritage as a primary consideration in all elements of planning. YCC will lead by example and demonstrate best-practice heritage management

PRIORITY AREA	PRIORITY ACTION	LEAD DEPARTMENT	TIMEFRAME	QUANTIFIABLE TARGETS
Strengthening Existing Provisions and Management Framework Management frameworks across YCC departments acknowledge that heritage is a shared consideration and responsibility.	8. Strengthen YCC's Heritage Policy and municipal planning statement in the Yarra Planning Scheme so that they demonstrate a stronger emphasis in protecting and enhancing the significant heritage character of Yarra's neighbourhoods, industrial areas and activity centres.	Strategic Planning Unit	Short term (0-5 years)	<ul style="list-style-type: none"> The municipal planning statement, that demonstrates stronger emphasis on protecting and enhancing heritage significance of Yarra's neighbourhoods and activity centres, is included in the Yarra Planning Scheme. The planning policy framework on heritage is updated so that it includes a stronger emphasis on protecting and enhancing the significant heritage

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				character of Yarra's neighbourhoods, former industrial and commercial buildings and activity centres.
9. Prepare guidelines on:	<ul style="list-style-type: none"> How to manage installation of solar panels on heritage buildings; and Universal access to heritage buildings. 	Senior Advisor City Heritage (CEO Office) with Environment Unit and Aged and Disability Services	Short term (0-5 years)	<ul style="list-style-type: none"> Guidelines about how to manage installation of solar panels on heritage buildings and universal access to heritage buildings are prepared.
10. Council's Graffiti Management Framework takes into consideration heritage requirements.		Works Department (in collaboration with Community Partnerships)	Short term (0-5 years)	<ul style="list-style-type: none"> A program is prepared and graffiti removal of the council owned assets is managed in accordance with Heritage Victoria's guidelines. Council provides easy access to Heritage Victoria technical guides that relate to graffiti/paint removal, cleaning of walls etc. to the community.
11. Undertake a review of the heritage outcomes of selected recent developments and projects with a view to understand if there are any gap to improve performance of the Planning Scheme or a need for process improvement.		Senior Advisor City Heritage (CEO Office) in consultation with the members of the HAC	Short term (0-5 years) Then ongoing	<ul style="list-style-type: none"> Selected case studies of recent developments and projects are completed and findings are presented to the Executives.
12. Initiate an in-house training program for staff working in the area of heritage.		Senior Advisor City Heritage (CEO Office) with Organisational Development	Ongoing: Starts 2020	<ul style="list-style-type: none"> An in-house training program starts in 2020 and thereafter is implemented regularly.
13. Establish and resource a heritage department within YCC with a clear remit enshrined in policy and the strategy.		Senior Advisor City Heritage (CEO Office) with HR and Executives	Short term (0-5 years)	<ul style="list-style-type: none"> YCC approval is obtained and a heritage department is created with clear goals that respond to YCC's heritage policies and this Strategy.

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<p>Managing Council's Own Heritage Assets</p> <p>Goal: Bolster YCC's approach to heritage management for its own assets – 'lead by example'</p>	<p>14. Prepare a program for developing Conservation Management Plans and other guidance as appropriate for YCC's own heritage assets and ensure that CMPs link with the Building Asset Management Plans.</p>	<p>Senior Advisor City Heritage (CEO Office) in collaboration with Buildings and Asset Management Department</p>	<p>Short term (0-5 years)</p>	<ul style="list-style-type: none"> ▪ The preparation of Conservation Management Plans for all YCC owned individually significant sites starts in 2020 and continues consecutively for the next 5 years. ▪ CMPs for YCC owned significant sites are linked to the respective Building Asset Management Plans. ▪ A restoration/conservation guide is prepared to assist Departments in planning and managing typical upgrades and alterations to buildings and streetscapes, fit-outs, landscaping etc.
	<p>15. Prepare a framework, and obtain additional support, for managing YCC owned heritage assets including maintenance, restoration, alterations and upgrades such as disability access.</p>	<p>Senior Advisor City Heritage (CEO Office) in collaboration with Buildings and Asset Management Department, Traffic, Engineering, works Arts and Culture and Library Services and Construction Management</p>	<p>Short term (0-5 years)</p>	<ul style="list-style-type: none"> ▪ A framework for managing YCC owned heritage assets is prepared. ▪ Guidelines are prepared and service authorities, transport agencies and other relevant external stakeholders are informed about guidelines so that they respond to CoY heritage assets accordingly during their works in CoY. ▪ Additional resources to supplement local historical collections are sought. ▪ Existing oral history collections are fully catalogued.

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Supporting our Heritage

We support our heritage through a proactive involvement in its management, care and conservation

PRIORITY AREA	PRIORITY ACTION	LEAD DEPARTMENT	TIMEFRAME	QUANTIFIABLE TARGETS
Heritage Advice Goal: Improve access to heritage advice for the community.	16. Implement a regular (weekly) heritage planning advice service for the community.	Statutory Planning Unit	Ongoing	<ul style="list-style-type: none"> A service to provide a weekly heritage planning advice to the community is initiated, and information about the service is widely publicised to inform the community.
	17. Increase resources for heritage advisory services with a focus on employing in-house heritage advisors.	Senior Advisor City Heritage / Statutory Planning with Human Resource unit	Short term (0-5 years)	<ul style="list-style-type: none"> Additional resourcing is obtained for heritage advisory service – either in-house (see Action 12), or on the current model.
	18. Develop, publish and distribute heritage information sheets.	Senior Advisor City Heritage (CEO Office) - In collaboration with Statutory Planning and Communication Unit and other relevant departments	Short term (0-5 years)	<ul style="list-style-type: none"> Information sheets are prepared and made available to the community through YCC's counters/ website or libraries. These cover subjects such as standard documentation requirements for planning proposals on heritage properties, historical archaeology, natural heritage, universal access to heritage properties, solar panels in heritage areas and 'Dos and Don'ts' on heritage properties etc.

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World Heritage Goal: Continue YCC's commitment to protecting and enhancing World Heritage, and use this to raise the profile of heritage conservation in the community	19. YCC actively participates in the World Heritage Environs Area Committee and in the review of the World Heritage Environs Area Strategy Plan, as well as in identifying opportunity for place making and promotional strategies/activities.	Senior Advisor City Heritage (CEO Office)	Ongoing	<ul style="list-style-type: none"> YCC's participation in the World Heritage Environs Area Committee is continued including in: Undertaking reviews of the World Heritage Environs Area Strategy Plan; Developing place-making and/or promotional initiatives to promote the heritage of the World Heritage Environs Area within Yarra (e.g. along Gertrude Street); and Seeking opportunities to integrate these with Council's existing promotional programs.
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Promoting and Celebrating our Heritage

Celebrating heritage as a community, enhancing its value for all

PRIORITY AREA	PRIORITY ACTION	LEAD DEPARTMENT	TIMEFRAME	QUANTIFIABLE TARGETS
Aboriginal Heritage Goal: YCC will increase promotion and awareness of Aboriginal heritage	20. Partner with the Wurundjeri Community representatives to develop an Aboriginal heritage interpretation program to ensure greater appreciation of Aboriginal cultural heritage in the city, including the intersection of Indigenous and natural value. (Cross reference to Action 25)	Community Partnerships	Short Term (0-5 Years)	<ul style="list-style-type: none"> A committee is established, consisting of relevant YCC departments and Wurundjeri representatives, to identify sites of heritage significance requiring an Aboriginal Heritage Interpretation Strategy, and provide ongoing guidance on the interpretation of Aboriginal heritage in the CoY.
		Community Partnerships	Long Term (0-10 years)	<ul style="list-style-type: none"> An Aboriginal Heritage Interpretation projects is developed and projects are implemented gradually.

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				<ul style="list-style-type: none"> Printed promotional material (signage, leaflets etc.) is developed.
	21. Develop a database as an internal resource of Aboriginal heritage places, to complement VAHR records for the LGA by recognising places of historical or social value to the Aboriginal community, including from historical and recent times.	Community Partnerships and GIS units	Short Term (0-5 years)	<ul style="list-style-type: none"> A database of Aboriginal heritage places in the municipality is prepared.
	22. Invest in improving in-house Aboriginal heritage staffing resources.	Senior Advisor City Heritage (CEO Office) with Human Resources Unit	Long term (0-10 years)	<ul style="list-style-type: none"> A staff resource is identified/employed to service Aboriginal heritage aspects.
Heritage Promotion and Community Access to Information Goal: YCC diversifies its means of promoting heritage to ensure the widest reach within the community.	23. Prepare a Heritage Communications Plan to regularly update staff, residents and other community members about heritage programs, financial assistance and advice, <i>and to encourage community celebration of heritage</i> . The plan should include the capacity for regular review to ensure communication is tailored for the time and audience, and is actively and effectively delivered.	Communications Unit with Senior Advisor City Heritage (CEO Office)	Short Term (0-5 years)	<ul style="list-style-type: none"> A Heritage Communications Plan is prepared and implemented. Yearly reviews of the Heritage Communications Plan are undertaken to address any growing need.
	24. Continue to support Victorian Heritage Restoration Fund, and promotion of heritage through historical societies, community grants program, Open House Melbourne, Australian Heritage Festival and awards program.	Senior Advisor City Heritage (CEO Office), Community partnerships, Arts and culture	Ongoing	<ul style="list-style-type: none"> YCC contributions to the Victorian Heritage Restoration Fund, community grants, open house Melbourne and awards programs are continued.
	25. Promote preparation of a heritage interpretation strategies or projects for key areas / precincts or sites also taking into consideration land-owners' and developers' involvement in the redevelopment of heritage places. (Cross reference to Action 20)	Senior Advisor City Heritage (CEO Office)	Ongoing	<ul style="list-style-type: none"> Heritage Interpretation Strategies and projects are progressively prepared for significant sites and precincts of Yarra. Opportunities are sought for the use of new ways and technologies in promoting, interpretation and celebrating heritage.

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	26. Ensure active involvement of Yarra Libraries in improving heritage documentation and in promotion and education of heritage, including through additional resourcing.	Yarra Libraries	Ongoing	<ul style="list-style-type: none"> ▪ A regular display is scheduled of any YCC heritage initiatives, including new interpretation strategies, updated heritage studies and any heritage education information useful to the community. ▪ Oral histories are catalogued and can be easily accessed by the community.
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References

Legislations, Regulations and Policies

The relevant legislations, regulations and policies for the management of heritage in the municipality are listed below:

Commonwealth

- Aboriginal and Torres Strait Islander Protection Act 1984
- Environment Protection and Biodiversity Conservation Act 1999

State

- Planning and Environment Act 1987
- Heritage Act 2017
- Aboriginal Heritage Act 2006 & Aboriginal Heritage Regulations 2018
- Yarra River Protection (*Wilip-gin Birrarung murrn*) Act 2017
- State Planning Policy Framework

Local Policy and Strategies

- Yarra Planning Scheme including Heritage Overlay and local heritage and built form policies;

The Yarra Planning Scheme sets out the objectives, policies and planning controls for the use, development and protection of land and heritage in the City of Yarra.

- City of Yarra - Council Plan 2017-2021

The City of Yarra Council Plan for 2017-2021 outlines the importance of managing development and growth in such a way as to remain sensitive to the heritage of the city.

- Environment Strategy 2013–2017

The Environment Strategy 2013-2017 addresses both cultural and natural heritage.

- Housing Strategy 2018

The City of Yarra Housing Strategy 2018 report outlines community values and priorities, both of which relate to significant historical, heritage and natural spaces within the local areas. What is more, it outlines how increased housing and development needs to be managed in a way that is sensitive to said community values and heritage protections.

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- Property Strategy 2018

The City of Yarra Property Strategy report for 2018 builds on the Yarra Open Space Strategy 2006-2016, which addresses heritage values through three frameworks comprising of urban, natural and Aboriginal cultural heritage.

- Yarra Economic Development Strategy 2015–2020

The City of Yarra ECS 2015-2020 outlines the role heritage and the arts have to play in the City of Yarra's local tourism economy.

- Yarra Libraries Strategic Plan 2017-20

The Yarra Libraries Strategic Plan 2017-20 works to outline the curated library collections, which include heritage items and local history archives, whilst similarly addressing certain measures being taken to increase the digitisation of collections and the recording of oral histories.

- Multicultural Partnerships Plan 2015-2018

The City of Yarra Multicultural Partnerships Plan 2015-2018 works to outline the interrelationship between multiculturalism and the local area's cultural heritage identity. It outlines measures to be taken in order to combat racism, through the use of community events to highlight cultural heritage.

- Graffiti Management Framework 2015-2019

The City of Yarra Graffiti Management Framework 2015-2019 addresses measures undertaken to manage graffiti in the local area and draws on Heritage Overlays, and the distinction between vandalism and commissioned public art.

- Yarra Open Space Strategy 2006

The Yarra Open Space Strategy 2006 addresses cultural heritage values through an urban framework as well as a natural heritage framework. It similarly works to address Aboriginal cultural heritage.

- Arts and Culture Strategy 2016-2020

The City of Yarra Arts and Culture Strategy 2016-2020 addresses the interconnectedness between the City of Yarra's arts and culture scene, and the local area's much valued built heritage. It similarly seeks to prioritise Aboriginal arts and cultural heritage, and promote Aboriginal history through partnerships.

- Access and Inclusion Strategy 2018-2024

The Access and Inclusion Strategy 2018-2024 works to consider the preparation of a new Heritage Strategy, with universal access and infrastructure proposed for heritage buildings.

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- Volunteer Strategy 2019-2023

The Yarra Volunteer Strategy 2019-2023 is a framework to guide Yarra City Council in promoting, supporting and celebrating the active involvement of volunteering across the City of Yarra.

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Key Heritage Studies, Reviews and Amendments

The key heritage studies, reviews and amendments undertaken for the City of Yarra and its predecessor councils are listed below:

	Council	Local Study
1970s	City of Fitzroy	<ul style="list-style-type: none"> North Fitzroy Conservation Study (1978) South Fitzroy Conservation Study (1979)
	City of Northcote ¹	<ul style="list-style-type: none"> City of Northcote Urban Conservation Study (1979)
1980s	City of Collingwood	<ul style="list-style-type: none"> Collingwood Conservation Study (1985)
	City of Fitzroy	<ul style="list-style-type: none"> Fitzroy conservation study review (1989)
	City of Melbourne ²	<ul style="list-style-type: none"> North Carlton & Princes Hill Conservation Study (1982)
	City of Richmond	<ul style="list-style-type: none"> Richmond Conservation Study (1984)
Up to 1994	City of Richmond	<ul style="list-style-type: none"> Northern Suburbs Factory Study (1994)
After 1994 Amalgamations	City of Yarra	<ul style="list-style-type: none"> Amendment C6 (gazetted February 2001)
	(former) City of Fitzroy	<ul style="list-style-type: none"> Amendment C78
New format Planning Scheme (May 1999)		<ul style="list-style-type: none"> City of Yarra Heritage Gaps: An Overview (2004) City of Yarra Review of Heritage Overlay Areas (2005)
		<ul style="list-style-type: none"> City of Yarra Review of Heritage Overlay Areas (2004)
	City of Yarra	<ul style="list-style-type: none"> City of Yarra Heritage Gaps: An Overview (2004) Amendment C85 (2008, gazetted September 2010) City of Yarra Heritage Gaps: Stage 1 (2008) City of Yarra Heritage Gaps: Stage 2 (2009)
	(former) City of Collingwood	<ul style="list-style-type: none"> Amendment C6 (gazetted February 2001)
	(former) City of Melbourne	<ul style="list-style-type: none"> Amendment C43 (gazetted December 2005)
2010 to present		<ul style="list-style-type: none"> City of Yarra Gaps Study (2012)
		<ul style="list-style-type: none"> City of Yarra Heritage Gaps Review One (based on City of Yarra Heritage Gaps: Stage 2) (2012)
	City of Yarra	<ul style="list-style-type: none"> City of Yarra Heritage Gaps Review Two (2012)
		<ul style="list-style-type: none"> Amendment C149 (2012)

¹ That part of the former City of Northcote that now lies in the municipality of Yarra

² That former part of the City of Melbourne that now lies in the municipality of Yarra

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Council				Local Study
				<ul style="list-style-type: none"> Amendment C157 (2012) Amendment C163 (2012) Heritage Gap Study: Review of 17 Heritage Precincts (2014) Amendment C173 (2014) Heritage Gap Study: Review (2015) Amendment C198 (2015) Heritage Gap Study: Review of Johnston Street East (2016) Review of Activity Centre Heritage Overlay Areas (2017-18) Yarra's Aboriginal Partnerships Plan (Draft), (2018) Heritage GAP Study, Review of 17 Heritage Precincts, Context, Revised 2016 Thematic Study of Theatres in the City of Yarra, Context, 2017 Heritage Overlay Study , Queens Parade Trees, John Patrick Landscape Architects Pty Ltd, 2018
				<ul style="list-style-type: none"> Incorporated Plan Methodology Report (2014) Heritage citation 20-60 Trenerry Crescent, Abbotsford, GJM Heritage 2016 Heritage Citation 112-124 Trenerry Crescent, Abbotsford, GJM Heritage 2016 Heritage Gap Study, Review of Johnston Street East, Context, 2016 Queens Parade Built Form Heritage Analysis and Recommendations, GJM, 2017 Collingwood Built Form Review, Heritage Advice, GJM, 2018 Heritage Assessment 18-22 Derby Street, Collingwood, Athemion Consultancies, 2018 Memorandum of Advice, 33-45 Derby Street, Collingwood, GJM, 2018
				<ul style="list-style-type: none"> Heritage Gap Study: Smith Street South (2014)
				<ul style="list-style-type: none"> Heritage Gap Study: Review of Central Richmond
				<ul style="list-style-type: none"> Swan Street Built Form Heritage Review, GJM, 2017 Victoria Street and Bridge Road, Built Form Review, Heritage Assessments, GJM, 2018

Attachment 2 - Summary of On-line Community Survey

SUMMARY OF STAGE 1 CONSULTATION: October – November 2018

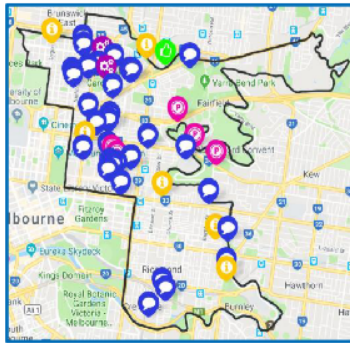
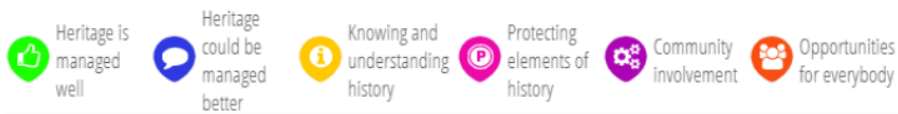
Stage1 Consultation: Online survey and in-person discussion opportunities including 3 library sessions

Promotion

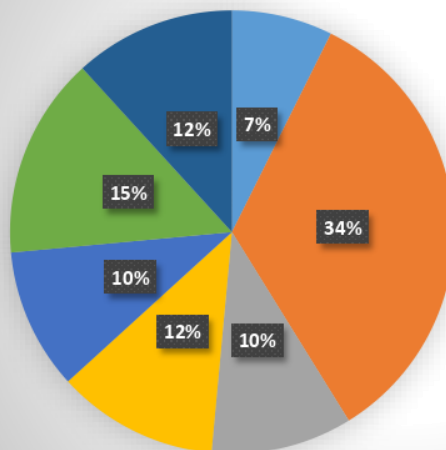
- Direct email
- Article in *Yarra Life* eNewsletter
- Promoted on social media
- Promotional postcards

Feedback

- Approximately 80 responses/ submissions/ in person sessions
- All suburbs represented
- All 4 Key directions represented



Main themes



- There is a need to manage Graffiti/ Tagging on heritage properties
- Over development and significant heights over heritage buildings needs to be avoided
- Aboriginal heritage needs to be recognised better
- Façadism and signs on heritage facades need to be avoided
- Natural heritage needs to be recognised and protected
- More focus needs to be placed on Social/cultural/Arts - Oral Histories, education and creative story sharing
- Better access to heritage information and interpretative signage needed

Attachment 2 - Summary of On-line Community Survey

Attachment 3 - Summary of CoY Heritage Stakeholder Forum October- November 2018

Meeting Notes



2019 Yarra Heritage Strategy – Stakeholder / Industry Forum

Time: 6-8pm
Date: Tuesday, 19 March 2019
Location: Richmond Town Hall

Facilitator – Chris Robinson, Capire Consulting Group

Heritage Consultant – Ian Travers, Extent Heritage Consultants

Senior Heritage Advisor – Richa Swarup, City of Yarra

Senior Advisor Community Engagement - Natalie Thomas, City of Yarra.

The following notes are direct transcriptions (*shown in italics*) of handwritten comments supplied on a feedback form completed at the event. To the best of our ability, they have been transcribed faithfully, however errors may naturally occur through this process.

Key messages

Proposed Priority Area 1 – “Improved statements of significance and precinct citations”

- i. Improve communication and awareness of all statements and citations
- ii. Update and refresh all citations
- iii. Invest resources and budget to improve the citation and statement quality
- iv. Diversify the content and scope of heritage citations.
- v. Make statements of significance available to decision makers as that may influence decision making

Proposed Priority Area 2 – “Natural heritage”

- i. Natural heritage is important and needs more than just protection
- ii. Clarify the scope and definition of natural heritage
- iii. Interdepartmental collaboration within the council and engagement with external agencies and partners will be essential
- iv. Use community experts to assist in local natural heritage research
- v. *Provide protection to trees of heritage significance*

Proposed Priority Area 3 – “Strengthening existing provisions”

- i. Invest in heritage training and education programs for Council staff
- ii. Consider developing a new Heritage department at Council
- iii. Encourage positioning ‘heritage’ as a cross department responsibility across council
- iv. Develop more rigor in setting a clear heritage policy for the municipality and clear heritage controls

Proposed Priority Area 4 – “Managing council’s own heritage assets”

- i. Council needs to develop a framework for managing its own assets
- ii. Council needs to consider ESD within heritage.
- iii. Council needs to promote building industry skills and education

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Attachment 3 - Summary of CoY Heritage Stakeholder Forum October- November 2018

2019 Yarra Heritage Strategy – Stakeholder / Industry Forum

Proposed Priority Area 5 – “Heritage advice”

- i. Council to deliver a high-quality heritage advice service
- ii. Council to consider how to pay or charge for heritage advice
- iii. Council to have a heritage department (a dedicated heritage unit)

Proposed Priority Area 6 – “World Heritage”

- i. Council to protect World Heritage from adjacent development
- ii. Council should do more to promote and celebrate World Heritage values

Proposed Priority Area 7 – “Indigenous heritage”

- i. Council should invest in-house indigenous heritage skills and engagement resources
- ii. Council should increase protection and recognition of indigenous heritage
- iii. Council should increase promotion and awareness of indigenous heritage

Proposed Priority Area 8 – “Community access to information”

- i. Council should increase the availability of useful heritage online information Council should do more to generally promote heritage across the city
- ii. Council should consider more ways to celebrate heritage

