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**Part 5  
Assessment  
Review of  
Environmental  
Factors –  
Guidelines and  
Worksheet for  
Larger Scale  
Council  
Projects**

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Avenel Park –  
Embellishment

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January 2024

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# Part 5 Assessment Guide for Project Managers

## 1. Introduction

Development without consent can apply to activities undertaken by Councils, government departments or agencies as part of their everyday responsibilities. This includes erecting amenity blocks, installing play equipment and constructing car parks.

Activities undertaken by Council on Council land may not need consent because the zoning permits that activity without consent or [State Environmental Planning Policy \(SEPP\) Transport and Infrastructure 2021](#) permits that development without consent being necessary.

In these cases, Council has a duty to consider the environmental impact of activities under [Part 5 of the Environmental Planning and Assessment Act 1979](#). Activities include use of land, the subdivision of land, the erection of a building, the carrying out of a work, and the demolition of a building or work.

A Review of Environmental Factors is required to ensure the protection and enhancement of the environment. The assessment must take into account to the fullest extent possible all matters affecting or likely to affect the local environment, community and economy because of the activity.

Project Managers are responsible for coordinating and completing the assessment, with the assistance of specialist/technical staff within the organisation. Smaller projects, such as the extension of amenity blocks, can use the Guidelines and Worksheet for Smaller Scale Projects.

## 2. How to Start the Process

The assessment process should begin early in the life of the project, well before the tender process and engaging contractors.

To commence the Part 5 assessment process:

1. **First: Confirm land ownership** – land must be owned by Fairfield City Council so that you have the authority to prepare the REF
2. **Second: Confirm land classification** - operational or community. If the land classification is “community”, an adopted Plan of Management must be in place.
3. **Third: Confirm that the proposal is an “activity”** for which development consent is not required.
4. **Fourth: Confirm whether the activity is a large scale or small-scale project.** Consult with the Strategic Land Use Planning Team.
5. **Fifth: Consult with internal and external stakeholders**, developing a strategy to gather professional and community advice and opinion on the activity and likely impacts.

The primary factors to check are that the proposal is:

- Not exempt development under T&ISEPP.
- Not a development for which consent is required under Fairfield LEP 2013.
- Not prohibited development under Fairfield LEP 2013.
- Not a major development #.

# For major developments (such as the construction of a new arterial road) it may be obvious that significant environmental impacts could potentially arise. In such cases, an Environmental Impact Statement would be required instead of an REF.

## **Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

Once it is concluded that the proposal is a Part 5 *activity* and an EIS is not required, the worksheet can be completed. The worksheet provides prompts to guide the Project Manager assessing officer in regard to the information required to undertake the assessment.

The following are basic procedures and research that can be pursued prior to commencing:

1. Confirm approval in principle to pursue the project – *eg, Council resolution, Delivery Plan, Operational Plan.*
2. Inspect the site and surrounds and document the context for the proposal with photographs and notes to contribute in preparing site and locality analyses.
3. Prepare plans and drawings, including locality plans showing distances to nearby residences and other sensitive uses.
4. Research existing information within Council regarding the site and surrounds, such as zoning, topography/slope, flooding, drainage, acid sulphate soils, salinity, heritage, bushfire, contamination, endangered species etc. *Note: Mapping layers within Council's Land Information System "Enlighten" will provide information to guide you.*

The worksheet provides a comprehensive list of considerations to be assessed and completed.

### **3. How to Complete the Part 5 Assessment**

The worksheet is self-explanatory and should be able to be completed by the relevant Council Project Manager in most circumstances. After the first draft is completed, set a meeting with internal stakeholders that includes the Strategic Land Use Planning Team. Issues for consideration and action can be identified at the beginning of the assessment process rather than at the end.

Dependent on the project, a number of differently qualified and experienced Council officers may be sometimes required to complete the worksheet.

You should consider and consult early with:

1. Environment and Health – *noise, vibration, air quality, soil contamination*
2. Traffic and Transport – *traffic, access and parking*
3. Catchment Planning – *mainstream and overland flooding*
4. Development Engineers – *stormwater management, on-site detention*
5. Senior Natural Resource Officer – *remnant and potentially ecologically significant vegetation.*

Prompts are provided for checks and authorisations by senior Council staff prior to completion of the worksheet and determination by Council or its delegate.

Attach all advice and reports to the REF document: refer to Section 8.

### **4. Other Approvals**

In addition to obtaining development consent or approval under the EPA Act, the undertaking of a development may also require approval under various other statutes. When applying for development consent under Part 4 of the Act the majority of these approvals can be secured through the *integrated development approval* process. Development authorised under Part 5 of the Act may also require such approvals.

Part 5 (s.5.5) of the Act specifies due consideration must be given relevant provisions of the [National Parks and Wildlife Act 1974](#), [Biodiversity Conservation Act 2016](#) and [Wilderness Act 1987](#).

#### **Biodiversity Conservation Act 2016**

## Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects

Under Part 5 of the Environmental Planning and Assessment Act 1979, council must apply the test of significance ([under s.7.3 of the BC Act](#)) to determine whether the proposed activity is likely to significantly affect threatened species or ecological communities, or their habitats.

If the activity is likely to have a significant impact, or will be carried out in a declared Area of Outstanding Biodiversity Value (AOBV), the proponent must either apply the Biodiversity Offsets Scheme or prepare a species impact statement (SIS).

The environmental impact of activities that will not have a significant impact on threatened species will continue to be assessed under [s5.5 Duty to consider environmental impact of the Environmental Planning and Assessment Act 1979](#).

If council does not opt-in to the Biodiversity Offsets Scheme and their proposed activity will have a significant impact or will be carried out in an AOBV, they must prepare a SIS and seek concurrence from the Environment Agency Head.

As a guide, approvals, licences or consent will be required in these cases:

1. **Services** - Check Dial Before You Dig - <http://1100.com.au/>
2. **Threatened Species/Populations and Ecological Communities** and possible damage to those threatened species – NSW National Parks and Wildlife Service - <http://www.nationalparks.nsw.gov.au/> and/or Commonwealth Department of the Environment <https://www.environment.gov.au>
3. **Working near or impacting upon waterways** - Department of Primary Industries: Water - <http://www.water.nsw.gov.au/>
4. **Working near known aboriginal relics or places**, or where an Aboriginal Relic s likely to be discovered –Office of Environment and Heritage <http://www.environment.nsw.gov.au/>
5. **Working on a Classified Road** – not under a current maintenance program – NSW Roads and Maritime Services - <http://www.rms.nsw.gov.au/>

### 5. What Additional Information May Be Required

Council or existing data sources may provide sufficient information to undertake a REF in accordance with Part 5 of the Act for the majority of the types of [activities](#) likely to be proposed. However in some circumstances further specialists studies and reports may need to be commissioned. Examples of when this may be necessary include:

1. **Remnant and potentially ecologically significant vegetation** - Site inspection or existing generalised mapping indicates that vegetation on the site may be remnant and potentially ecologically significant. In this case an investigation by a specialist ecologist may be warranted.
2. **Acoustic and air quality assessments** - Construction work will need to be undertaken immediately adjacent to exposed residential properties which could create substantial acoustic and air quality impacts. An acoustic assessment may be required to determine if the work would comply with relevant Protection of the Environment Operations Act 1997 and EPA standards or whether alternatives should be considered or a noise management plan employed particularly for extended construction periods. Similarly specialist air quality assessments and mitigation programs may need to be explored.
3. **Contaminated land** - The history of the use of the site indicates the potential for contaminants to be present. In such cases a preliminary hazard analysis may be warranted in accordance with State Environmental Planning Policy No. 55 – Remediation of Land.
4. **Flood study** - Observations and topographic information indicate that the land is affected by a major overland flow path and no flood information is available. Depending on the proposed works a site specific flood study may be required if the works would result in a structure or people being exposed to a flood risk.

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

- 5. **Aboriginal and Non-Aboriginal assessment** – If a site is situated located on or in the vicinity of an existing heritage item, archaeological site or within the Aboriginal Potential Investigation Area, an assessment of the heritage impacts of the proposal must be provided. Consideration of conservation and management methodology of the assessment will inform decisions on whether to allow the activity to proceed.
- 6. **Bushfire impact assessment** – Activities located within Bushfire Prone Areas are obliged to consider bush fire and meeting the requirements of Planning for Bush Fire Protection 2006 and As3959-2009.

It is emphasised that each situation will differ and there is a practical need to deal with every proposal on an individual basis to determine information and assessment requirements.

It is not necessary to automatically commission specialist studies for every proposal but there is an obligation to ensure that all reasonable efforts are made to source existing information and to assess the potential for environmental impact and obtain further studies where uncertainty regarding impacts and the consequences of potential impacts warrants. The environmental assessment worksheet is designed to assist the assessing officer in making these decisions.

**6. When the Part 5 Assessment May Not Be Sufficient**

A primary purpose of the environmental assessment worksheet is to provide a format for the undertaking of a REF as required by Part 5 of the Act. For the majority of Council projects involving relatively minor works or activity with clearly minimal potential to general environmental impacts (such as the construction of a bikeway in a built-up urban area, an amenities block in a playing field complex or minor road works) the worksheet would suffice.

However, in circumstances where a project is complex, substantial in size or with a potential for significant environmental impacts (for example due to the presence of extensive remnant vegetation on site that requires clearing or the proximity of existing residential properties to a proposed major road) a standalone REF report may be warranted.

Where it is considered beneficial to divert from the standardised format of the worksheet, it would nonetheless provide a relevant checklist of the issues and processes to be observed.

**7. Project Manager Acknowledgement**

The Project Manager responsible for REF to sign that the guidelines have been read, and requirements are understood, prior to commencing REF process.

Project Manager Title and name	Signature	Date
Kim Brown (Landscape Design Officer)		05/03/2023

**8. Preliminary Assessment of Planning Issues, Approvals, Consultation Requirements and Acknowledgement**

Council has a duty to consider the environmental impact of activities under Part 5 of the Environmental Planning and Assessment Act 1979.

A Review of Environmental Factors (REF) is required to ensure the protection and enhancement of the environment. The assessment must take into account to the fullest extent possible all matters affecting or likely to affect the local environment, community and economy because of the activity.

REF assessments are also undertaken for exempt development under the State Environmental Planning Policy (SEPP) Infrastructure 2007 as part of good practice rather than it being a requirement of the SEPP.

The Project Manager responsible for completing the REF is to sign that:

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

1. the 'Part 5 Assessment Guide for Project Managers' (Objective Reference A1668700) has been read, and requirements are understood, prior to commencing REF process.
2. Council's Development Engineer has reviewed the proposal and is satisfied it meets standards relating to drainage system performance, pavement design and construction, and any other relevant civil works associated with the project.
3. Strategic Land Use Planning team has been consulted and has reviewed the following preliminary assessment.

<b>Activity description and location</b>	
<b>Activity description</b>	<p>The proposed activity is for a new outdoor recreation facility, comprising the following:</p> <ul style="list-style-type: none"> <li>• skate park</li> <li>• multi-sports court</li> <li>• badminton court</li> <li>• outdoor table tennis</li> <li>• outdoor gym</li> <li>• ninja obstacle course</li> <li>• multi-sports wall</li> <li>• kickaround space (lawn area)</li> <li>• play space with play equipment</li> <li>• misting station</li> <li>• gathering space including shade structure</li> <li>• shade structures and feature element</li> <li>• custom signage</li> <li>• bike parking</li> <li>• amenities block</li> <li>• perimeter loop track;</li> <li>• fencing</li> <li>• lighting</li> <li>• tree planting and landscaping.</li> </ul> <p>A concept design report has been prepared by Group GSA and is provided in objective ref: A5876797. An excerpt of the concept design plan is provided in Figure 1.</p>
<b>Address</b>	1-27 Avenel Street Canley Vale (referred to as the site throughout this report).
<b>Lot/ Sec/DP</b>	<ul style="list-style-type: none"> <li>• Lot 1/-/DP221516</li> <li>• Lot 5/-/DP224183</li> <li>• Lot 1/-/DP982009</li> <li>• Lot 7/-/DP223496</li> <li>• Lot 11/-/DP221517</li> <li>• Lot 9/-/DP223404</li> </ul>
<b>Locational Map</b>	Refer Figure 2 and Figure 3.

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

<b>Activity permissibility and approvals</b>		
<b>Land use zoning under the <i>Fairfield Local Environmental Plan 2013 (FLEP 2013)</i></b>		
RE1 – Public Recreation and C2 Environmental Conservation.		
The proposed activity is located within the RE1 – Public Recreation zoned portion of the site.		
<b>Is the development permitted in the zone?</b>		
The proposed activity is defined as a recreation facility (outdoor) as follows: <b>recreation facility (outdoor)</b> means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).		
A recreation facility is permissible in the RE1 Zone with the consent of Council.		
<b>FLEP 2013 Clause 6.8 – Infrastructure Development – Council</b>	<b>Yes</b>	<b>No</b>
Does the scope of works have a value less than one million dollars Clause 6.8 infrastructure development –Council of Fairfield LEP 2013 allows certain development without consent to be carried out by or on behalf of Council.		<b>X</b>
<b>Development type under State Environmental Planning Policy (SEPP) Transport &amp; Infrastructure 2021*</b>		
Clause 2.73(3)(a)(ii) of the NSW <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> (Transport and Infrastructure SEPP) provides that a recreation facility (outdoor) can be carried out on land by or on behalf of a public authority without consent on land owned or controlled by a public authority.		
<b>Conditions for development</b>		
Refer to Attachment A1 of the REF document.		
<b>Classification of Council owned land (if relevant) – community or operational</b>		
Community Land		
<b>Plan of Management (POM)</b>		
Title	Community Land Generic Plan of Management	
Objective id reference	A532772	
Is activity authorised by the POM? (Include relevant reference/extract(s))	<p>The activity is authorised by the POM as noted in Page 9 – 3.1 ‘Community’s Vision’</p> <p><b><u>‘Theme 1: Community Wellbeing</u></b>  <i>We enjoy good health (physical, psychological, social and environmental), have access to high quality facilities and services and contribute to our own wellbeing through a healthy lifestyle in particular.</i></p> <ul style="list-style-type: none"> <li>- Goal 2: Being Healthy and Active</li> <li>- Strategy: Providing a range of open space, sporting fields and recreation facilities and programs.</li> <li>- Outcome: 2.2 Active and creative leisure and recreational opportunities’</li> </ul> <p>3.5 ‘Role of Community Land;  <i>‘The overall role of community land is to provide for a range of activities including recreation, exercise opportunities, the playing of casual sports</i></p>	

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

	<i>and games, physical, cultural, economic, educational, social and intellectual pursuits for the community. A wide range of facilities and infrastructure will be constructed upon community land to allow the activities to take place...'</i>		
<b>Licences/consultation</b> required with State Agencies (include copy of advice provided)			
Consultation is required to be undertaken with Sydney Water in association with major sewer line before commencement of construction.			
<b>Total Project Cost</b>			
Quantity Surveyors report has estimated the build cost at \$5,796,000.00			
<b>Is a Cost Report or Quantity Surveyors Report attached?</b>		<b>Yes</b>	<b>No</b>
QS Report prepared by Wilde & Woollard, project no. 23181 dated 29/01/2024 (A5892196)		<b>X</b>	
<b>Internal Council consultation required</b>		<b>Yes</b>	<b>No</b>
Traffic and Transport Branch	Advice was sought by the Traffic and Transport Branch regarding the potential impacts the Park may have upon operational phase. Given that the Park has not commenced operation, it is unclear of the potential generation the Park may have and in this regard an operational transport and pedestrian management plan shall be in place to monitor the generating impacts the activity may have upon the surrounding area.	<b>X</b>	
Catchment Planning Branch	Confirmation that construction is not likely to effect mainstream and overland flooding with close association with Orphan School Creek	<b>X</b>	
Natural Resources	A Flora and Fauna Assessment Report (A5929402) was prepared by Narla Consultants. The site contains both non-native and Cumberland Blue Box Riverflat Forest vegetation however does not seek to remove any native vegetation as part of the proposed activity. In this regard, no further assessment is required under the Biodiversity Conservation Act 2016.  Advice received by Natural Resources raised no issues subject to conditions imposed based on the recommendation outlined in section 6.1 of the report. Conditions in particular for tree protection zone be stated during construction and an assigned ecologist be commissioned to supervise of clearing works (A5864501).	<b>X</b>	

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Environmental Management	<p>A Preliminary Site Investigation (A5834724) and Detailed Site Investigation (A5834723) have been prepared as part of the REF documentation to identify the extent of contamination on the site and found that fragments of bonded Asbestos Contaminated Materials were found within Test Pit #22 and Test Pit #22a in the most eastern portion of the site.</p> <p>In this regard a Remedial Action Plan (A5898202) and Construction Environmental Management Plan (5898205) has been prepared to remediate the site to make suitable for the activity and shall be validated as per the RAP. A condition is imposed on the REF to remediate the site.</p>	X	
Development Engineer	Review of engineering documentation	X	
Building Control & Compliance			X
Other	Assets Management & Parks and Gardens provided comment in regard to the removal of 3x Ficus benjamina and the jubilee planting of Eucalyptus species can be pulled out and transplanted along the footpath closer towards the tennis courts. No issues were raised (A5873283).	X	
<b>Community consultation required</b>		<b>Yes</b>	<b>No</b>
Surveys completed as part of community consultations carried out by Assets Division from 19 May to 20 July 2023 through online, social media and mail out surveys. A total of 46 positive responses were received on the feedback from the community on what they would like for the site in which identified additional recreational facilities (A5920708).		X	

<b>Does the development required to be published onto Council's website or the NSW Planning Portal?</b>	<b>Yes</b>	<b>No</b>
<p>If:</p> <ol style="list-style-type: none"> <li>1. the activity has a capital investment value of more than \$5 million,</li> <li>2. The activity requires an approval or permit as referred to in any of the following provisions before it may be carried out— <ol style="list-style-type: none"> <li>1. <a href="#">Fisheries Management Act 1994</a>, sections 144, 201, 205 or 219</li> <li>2. <a href="#">Heritage Act 1977</a>, section 57</li> <li>3. <a href="#">National Parks and Wildlife Act 1974</a>, section 90</li> <li>4. <a href="#">Protection of the Environment Operations Act 1997</a>, sections 47–49 or 122, or</li> <li>5. the determining authority considers that it is in the public interest</li> </ol> </li> </ol>	The activity CIV is valued more than \$5mil.	

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

to publish the review		
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**Development Engineer Review**

<b>Reviewing Officer's Name</b>	Stephen Rajathurai		
<b>Position</b>	Senior Development Engineer		
<b>Signed</b>		Date	1/2/2024

**Project Manager Acknowledgement of REF Requirements**

I confirm that:

1. land where project is located is owned by Fairfield City Council
2. an adopted Plan of Management is in place for land classified as “community”
3. the proposal is an “*activity*” for which development consent is not required
4. the activity is a large scale project
5. external, internal and community consultation requirements have been determined
6. the Strategic Land Use Planning Team has been consulted in regard to the above.

<b>Project Manager's Name</b>	Kim Brown		
<b>Position</b>	Landscape Design Officer		
<b>Signed</b>		Date	05/03/2023

**Strategic Planning Approval to Proceed with REF Worksheet**

**Note delegations for approval**

1. Up to \$500,000 – Executive Strategic Planner/Coordinator Strategic Planning
2. Up to \$2,000,000 – Manager Strategic Land Use Planning
3. Over \$2,000,000 or where lesser value with probity/community conflict/political issues – Group Manager City Strategic Planning or Group Manager City Development

<b>Planning Officer's Name</b>	Kerren Ven		
<b>Position</b>	Senior Strategic Land Use Planner		
<b>Signed</b>		Date	06/03/2024

## Part 5 Environmental Assessment

### 1.0 Introduction

Project Name:	Avenel Park, Canley Vale
Council Department:	Open Space Asset
Project Management:	Major Projects
Council Objective File No:	fA670155
Document Objective Reference No.	A5892156
Owner of land	Fairfield City Council

### 1.1 Activity permissibility and approvals

<b>Definition</b> of intended development - copy of standard definition	<b>Recreation facility (outdoor)</b> means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).
<b>Zoning of land under the <i>Fairfield Local Environmental Plan 2013 (FLEP 2013)</i></b>	RE1 Public Recreation C2 Environmental Conservation
<b>Clauses under FLEP 2013</b> where relevant* (see Section 3.4 for more detail)	<ul style="list-style-type: none"> <li>• Clause 5.10 Heritage conservation</li> <li>• Clause 5.21 Flood Planning</li> <li>• Clause 6.2 Earthworks</li> <li>• Clause 6.4 Floodplain risk management</li> <li>• Clause 6.5 Terrestrial biodiversity</li> <li>• Clause 6.6 Riparian land and watercourses</li> <li>• Clause 6.8 Infrastructure development</li> <li>• Clause 6.9 Essential services</li> </ul>
<b>Classification(s) under the NSW <i>State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP)*</i></b>	Clause 2.73(3)(a)(ii) of the Transport and Infrastructure SEPP provides that a recreation facility (outdoor) can be carried out on land by or on behalf of a public authority without consent on land owned or controlled by a public authority.
<b>Classification of land</b> – community or operational	Community Land
<b>Plan of Management</b> – Title, date adopted by Council, Objective reference	Generic Plan of Management, October 2012, A532772
<b>Plan of Management</b> - Objective of activity	Increase Community Well Being

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<b>Licenses/consultation</b> required with State Agencies	Consultation with Sydney Water is required for an Out-of-Scope Application as there is a major sewer line running through the site.
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**\*Note:** The proposal **must** be permitted without development consent under one of these documents to qualify as an activity and thus only require preparation of a Review of Environmental Factors.

### 1.2 Authority to Undertake Activity

<b>Project reference within FCC Delivery Plan</b>	Page 63 of 2022/23 – 2025/26 Delivery Program  <i>'IN760 Park Embellishment Canley Vale Investigate and develop park embellishment opportunities in Canley Vale.'</i>
<b>Project reference within FCC Operational Plan</b>	Page 63 of 2023 / 2024 Operational Plan  <i>'SP24760 Avenel Park - Construction Construction of a sports/exercise playground at Avenel Park, which includes a pump track, ninja obstacle, walking and sprint tracks as well as exercise equipment. Manager Major Projects and Planning WestInvest Grant - \$4,211,420'</i>
<b>Project commencement authority – date of Council decision, item no.</b>	Services Committee – 9 <sup>th</sup> May 2023 – Item 68 Outcomes Committee – 12 <sup>th</sup> July 2023 – Items 62
<b>Previous reports to Council – list meeting dates and item no.:</b>	<ul style="list-style-type: none"> <li>• Services Committee – 14<sup>th</sup> February 2023 – Item 25</li> <li>• Services Committee – 5<sup>th</sup> December 2023 – Item 183</li> <li>• Services Committee – 14<sup>th</sup> November 2023 – Item 170</li> <li>• Services Committee – 8<sup>th</sup> August 2023 – Item 120</li> <li>• 2023 – 2024 Quarterly report - July to September 2023 <ul style="list-style-type: none"> <li>- ID No. MPVSG2353</li> <li>- ID No. IN24553</li> </ul> </li> <li>• 2023 – 2024 Quarterly report - April to June 2023 <ul style="list-style-type: none"> <li>- ID No. IN23760</li> </ul> </li> <li>• 2023 – 2024 Quarterly report - June to March 2023 <ul style="list-style-type: none"> <li>- ID No. SP23758</li> </ul> </li> <li>• 2023 – 2024 Operational Plan <ul style="list-style-type: none"> <li>- ID No. SP24760</li> <li>- ID No. MPVSG2353</li> <li>- ID No. SP760</li> </ul> </li> </ul>
<b>Requirement for activity</b> (eg. decision of Council or requisition by another government agency)	<p>As per the WestInvest Grant – Community Based Projects grant</p> <p><i>“Delivery of a sport and exercise orientated open space at Avenel Park, enabling a range of physical activities and inclusive play. The facility expands on the standard outdoor exercise stations provided, in conjunction with walking paths, and provides a range of multi-generational activities for local residents. It includes a pump track, ninja obstacle, walking tracks, a sprint track, inclusive exercise equipment and facilities. The expected outcome is to increase physical activity for local residents, particularly young people.”</i></p> <p><i>Elements to be included in Avenel Park are:</i></p> <ul style="list-style-type: none"> <li>• <i>Pump track</i></li> </ul>

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	<ul style="list-style-type: none"> <li>• Turf mound seating inside</li> <li>• Walking circuit path</li> <li>• Shade trees</li> <li>• Multi-sports court</li> <li>• 'Ninja' obstacle course</li> <li>• Inclusive fitness area with a 25m sprint track</li> <li>• Sheltered seating area</li> <li>• Cool station and bubblers</li> </ul>
<b>Final approval</b> required from (eg Council, Director etc)	Group Manager following sign off REF

### 1.3 Need for Review of Environmental Factors (REF)

Consideration	Yes	No
1. Project is an "Activity" as defined by the EPA Act under <a href="#">Part 5, Division 5.1, Section 5.1</a>	Yes	
2. The project is not "exempt development" under <a href="#">State Environmental Planning Policy (SEPP) Infrastructure 2007</a> or <a href="#">SEPP (Exempt and Complying Development Codes) 2008</a> or Fairfield LEP 2013 Clause 6.8 Infrastructure development – Council & Schedule 2		No
3. The project is not "complying development" under <a href="#">State Environmental Planning Policy (SEPP) Infrastructure 2007</a> or <a href="#">SEPP (Exempt and Complying Development Codes) 2008</a>		No
4. The project is not development that requires development consent under Part 4 of the EPA Act.		No
5. The project will obviously generate significant environmental impacts such that an REF would be superfluous and an EIS would be required.		No
If the answers to 2-5 are "yes" then re-assess the appropriate approval process. Where there is a degree of uncertainty, provide justification for your assessment.		

### 1.4 Agency Consultancy

Undertake consultation with any of the following agencies as considered appropriate.

	Consultation has occurred	Consultation will occur	Not Applicable	Outcome
1. NSW Dept of Planning, Industry & Environment			X	
2. NSW Roads & Maritime Services			X	
3. NSW Transport			X	
4. UrbanGrowth NSW Development Corporation			X	

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	Consultation has occurred	Consultation will occur	Not Applicable	Outcome
5. Sydney Water Corporation	X			<p>Sydney Water is currently upgrading a major sewer line within the site confines. The design has considered provisions to avoid crossing most of the sewer line and manhole and provided space for Sydney Water to continue their relining their pipe while Construction of Avenel Park is being undertaken.</p> <p>An Out-of-Scope Application will be required to be submitted to Sydney Water to ensure the activity will not impact on the sewer asset.</p>
6. Endeavour Energy			X	
7. Telstra/Optus and any other relevant telecommunications body			X	
8. Jemena Gas			X	
9. NSW National Parks & Wildlife Service			X	
10.NSW Rural Fire Service			X	
11.NSW Mine Subsidence Board			X	
12.NSW Office of Environment & Heritage			X	
13.Heritage Council of NSW			X	
14.State Emergency Services			X	
15.NSW Government – Family and Community Services (Housing)			X	
16.NSW Crown Lands - Chipping Norton Lakes Authority			X	
17.Local Traffic Committee			X	
18.NSW Police Force			X	
1. NSW RailCorp			X	
1. NSW Dept of Primary Industries (Fisheries)			X	
2. NSW WorkCover Authority			X	
3. NSW Office of Water			X	
4. NSW Emergency Services, Fires Services & Ambulance (regarding road closures)			X	
5. Other agency			X	

## 2.0 Activity location, description, construction phase.

### 2.1. Activity location

<b>Address</b>	1-27 Avenel Street Canley Vale
<b>Lot, Sec/DP</b>	<ul style="list-style-type: none"> <li>• Lot 1/-/DP221516</li> <li>• Lot 5/-/DP224183</li> <li>• Lot 1/-/DP982009</li> <li>• Lot 7/-/DP223496</li> <li>• Lot 11/-/DP221517</li> <li>• Lot 9/-/DP223404</li> </ul>

### 2.2 Activity description

<p><b>Activity description</b> - detailing all its parts – eg, <i>playing field with night time lighting, 45 space car park, 450 m walking track, play equipment.</i></p>	<p>The activity (the proposed activity) is for a new outdoor recreation facility, comprising the following:</p> <ul style="list-style-type: none"> <li>• skate park</li> <li>• multi-sports court</li> <li>• badminton court</li> <li>• outdoor table tennis</li> <li>• outdoor gym</li> <li>• ninja obstacle course</li> <li>• multi-sports wall</li> <li>• kickaround space (lawn area)</li> <li>• play space with play equipment</li> <li>• misting station</li> <li>• gathering space including shade structure</li> <li>• shade structures and feature element</li> <li>• custom signage</li> <li>• bike parking</li> <li>• amenities block</li> <li>• perimeter loop track;</li> <li>• fencing</li> <li>• lighting</li> <li>• tree planting and landscaping</li> </ul>
<p><b>Activity operating parameters</b> – eg, hours of operation, expected patron numbers</p>	<p>Monday to Friday – 7:00 am to 18:00pm in accordance with the Interim Construction Noise Guidelines.</p>
<p><b>Project alternatives</b> - What alternatives have been considered?</p>	<p>As shown in the Landscape Drawings concept design in Attachment A2 (A5876797), two other design options were considered, and the current design was selected.</p> <p>Design options were considered in consultation with Council. Council changed the brief – removing the pump track and introducing a multi-sports court and playground. Following this, two main spatial layouts were considered with the current design pursued. The alternate option had a more condensed layout, with active spaces close together. The preferred, and pursued, layout, utilises the broader park space with green lawn and treed spaced between the active zones. These spaces are linked and accessible by the 500m perimeter loop track.</p>

## 2.3 Plans and drawings



Figure 1 Developed Concept Design (Source: Group GSA)

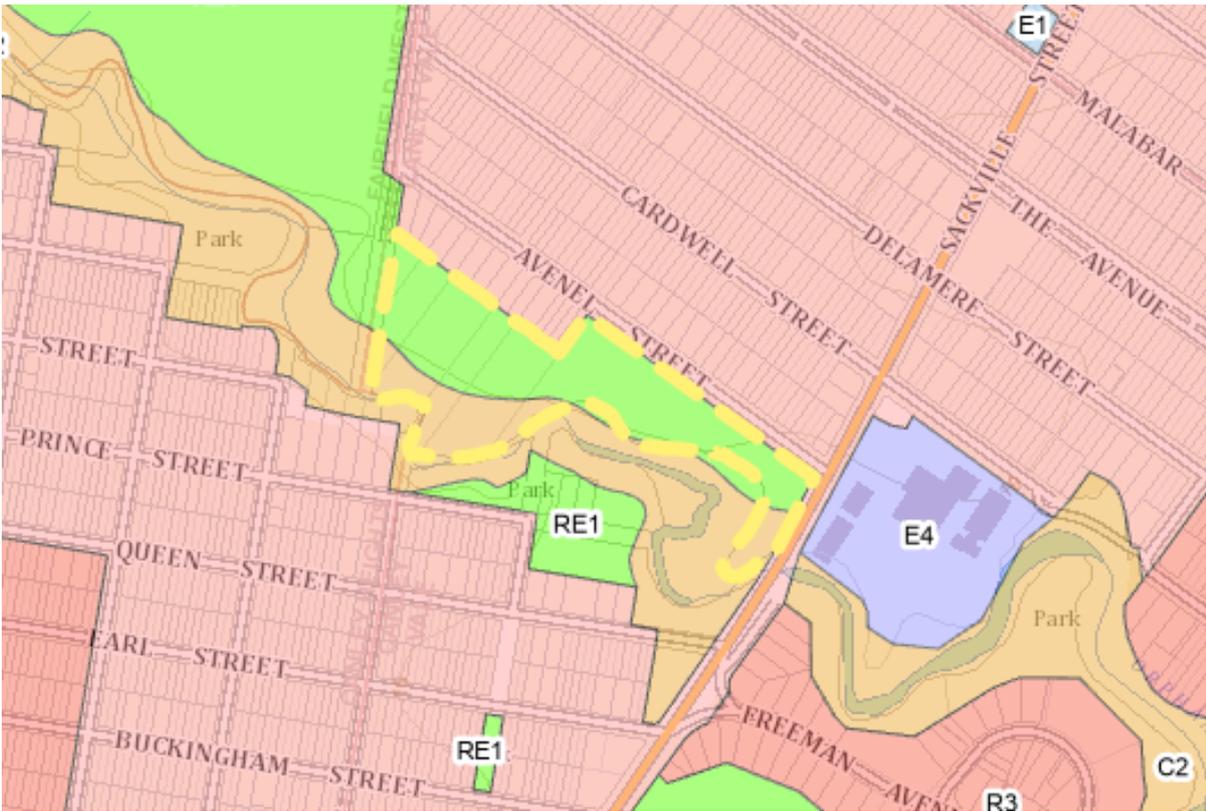


Figure 2 Site location and zoning (Source: NSW Planning Portal Maps)



Figure 3 Site location with aerial overlay (Source: NSW Planning Portal Maps)

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**Figure 4 Site location Avenel Park Approximate location to Endeavour Park Major Sports Park upgrade with aerial overlay (Source: Google Maps)**

## 2.4 Activity – Construction Phase

Has a draft Construction Management Plan been submitted?	Yes (obj ref#)	No
	Yes (A5898205)	
Factor	Comment	
Description of activity associated with project's construction/delivery:	<p>The construction methodology will be further developed by the nominated contractor in consultation with Council.</p> <p>A Construction Environmental Management Plan (CEMP) will be required to be prepared by the contractor and approved by Council ahead of works.</p> <p>A summary of the proposed construction activities and staging are provided below.</p> <p>The following staging is indicative and will be dependent on the contractor's preferred methodology, program, and sequencing of work.</p> <p><b>Stage 1 – Site establishment and environmental protection</b></p> <ul style="list-style-type: none"> <li>• Secure site perimeter boundary.</li> <li>• Establish site office, amenities, and plant/material storage areas.</li> <li>• Establish traffic and other environmental controls in accordance with the CEMP.</li> <li>• Install water and sediment management controls in accordance with an erosion and sediment control plan protect, secure, and relocate any affected services.</li> </ul> <p><b>Stage 2 – Earthworks, drainage, natural playground, and landscaping</b></p> <ul style="list-style-type: none"> <li>• Undertake minor earthworks to establish design levels.</li> <li>• Supply and install services, conduits and stormwater pipes and pits</li> <li>• Prepare footings and retaining walls (as required).</li> <li>• Undertake planting and tree planting throughout the site.</li> </ul> <p><b>Stage 3 – Construction of multi-sport court, skate park, play equipment, amenities, central plaza, outdoor fitness and kickabout lawns</b></p> <ul style="list-style-type: none"> <li>• Undertake traditional construction for all sports courts and site structures.</li> <li>• Undertake planting for kickabout lawn.</li> <li>• Construct playground in accordance with Australian Standard 4685:2021 (Playground equipment and surfacing general safety).</li> <li>• Undertake construction and landscaping works for central plaza.</li> <li>• Construct outdoor fitness and skate park.</li> </ul> <p><b>Stage 4 – Finishing work</b></p> <ul style="list-style-type: none"> <li>• Restore disturbed areas and engage in maintenance period.</li> </ul>	

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Proposed commencement and completion dates:	Subject to approval, construction is expected to take approximately 6 months, starting in February 2024, and finishing in August 2024
Proposed workdays and hours to undertake work:	Construction works will occur during the following standard working hours: <ul style="list-style-type: none"> <li>• Monday to Friday: 7:00 to 18:00.</li> <li>• no work on weekends or public holidays.</li> </ul>
Number of workers required on-site:	It is estimated that a construction workforce of approximately 20 personnel will be required. However, will be confirmed by the awarded contractor.
Work equipment and machinery required on-site:	The plant and equipment likely to be used during construction of the project includes: <ul style="list-style-type: none"> <li>• backhoes</li> <li>• cherry pickers</li> <li>• chainsaws</li> <li>• compressors</li> <li>• concrete pumps</li> <li>• concrete vibrators</li> <li>• concrete trucks</li> <li>• drilling rigs</li> <li>• dump trucks</li> <li>• excavators</li> <li>• front end loaders</li> <li>• generators</li> <li>• graders</li> <li>• light vehicles</li> <li>• mulchers</li> <li>• pavers</li> <li>• trucks</li> <li>• Rollers and</li> <li>• watercarts</li> </ul>
Requirement for temporary facilities (e.g. car parking, amenities etc)	It is expected that there will be the following temporary facilities provided by the principal contractors: <ul style="list-style-type: none"> <li>• site fencing</li> <li>• amenities</li> <li>• car parking</li> <li>• site office</li> <li>• plant/material storage areas</li> </ul>

### **3.0 Site analysis, locality analysis, and catchment analysis**

#### **3.1 Site analysis**

*See next page.*

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Feature	Description or Not Applicable	Enlighten Check
Aboriginal Significance	<p>The site is mapped as Potential Investigation Area under Council's Aboriginal Heritage Management Controls in the <i>Fairfield City-Wide Development Control Plan 2013</i> (DCP 2013).</p> <p>An Aboriginal Heritage Due Diligence Report (A5834726) has been prepared by Coast Heritage and found that the site is found there has previously been no recorded Aboriginal Sites and none were found during inspection. Based on the report it is recommended that disturbance of the ground is limited to the upper 0.5m soil profile and the report be updated at detailed design to be reviewed by the Gandagara Local Aboriginal Land Council. An unexpected finds protocol condition shall be imposed in order to adhere to if unforeseen aboriginal objects, relics or remains are identified on the site.</p>	See "Development Control" tab for Aboriginal PIA
Acid Sulphate Soils	The site is not mapped as being affected by Acid Sulphate Soils.	See "Development Control" tab for Acid Sulphate Soil classes
Bush Fire Prone Land	The site is not mapped as being Bushfire Prone Land.	See "Environment" tab for Bush Fire Prone class
Contamination	Site contamination issues identified in the Preliminary Site Investigation (PSI) and later the Detailed Site Investigation prepared by SMEC Australia Pty Ltd (SMEC, 2023) (refer Section 4 for further details).	See "Environment" tab for contaminated land
Drainage, flooding	The majority of the development site is within the 'medium to low risk' the area of mainstream flooding zone. The project site is also subject to the draft Central Overland Flood Study 2018 that is not yet adopted by Council. The Civil Designs have been prepared to factor in the precautions during construction and operation to not obstruct the flow at any time subject to the conditions imposed within the REF recommended by Council's Catchment Branch.	Mapped as Low, Medium and High risk precinct
Easements	No easements are identified on the site.	See "Property" tab for easement lines and easement areas
Heritage	The development site does not contain any heritage items.	See "Development Control" tab for heritage
Road Constraints:	No road constraints have been identified.	See "Development Control" for access denied, future roads, road widening, splay corners
Slope	The site topography is flat to gently sloping with from approximately 12 m Australian Height Datum (AHD) in the north to approximately 8 m AHD at the southern boundary of the site towards Orphan School Creek.	See "Contour" tab

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Vegetation	The site is covered by grass fields, with some trees along the southern portion of the site, along the creek line.	See “Environment” tab for vegetation type and threatened species
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### 3.2 Locality analysis

#### Land use in locality

North of site	Avenel Street, Low density residential development, open street parking, public bus stop
East of site	Sackville Street, Pedestrian underpass, followed by low residential type developments and Fairfield Council Depot
South of site	Medium density residential, shared paths, Orphan School Creek and public recreation land along the creek line
West of site	Low density residential development, tennis courts, shared path, small public car park & Endeavour Sports Courts (currently undergoing major upgrade works to facility various sporting activities)

#### Character of development

North of site	Established residential area and road
East of site	Established industrial use, with residential to the east, road and underpass
South of site	Established residential area
West of site	Established residential area with active open space to the west

### 3.3 Catchment analysis

The proposal will address the above matters as follows:	
Does the proposal impact on or reduce existing public access to a waterway or its tributary	The site is bound by Orphan School Creek to the south but there will no change or impact to existing public access to this waterway. Flooding over the site is discussed further in Section 4.
During construction phase, how will appropriate measures be included to mitigate the potential for erosion and sediment runoff from the site	As detailed further in Section 4, standard erosion, and sediment controls, including the requirement for a soil and erosion sediment control plan and ameliorative measures, will be incorporated in an erosion and sediment control plan (ESCP), which will form part of the site's CEMP.
Other impacts	Potential flooding impacts are considered further in Section 4.

### 3.4 Potential environmental, social, and economic impacts

<b>Key potential environmental impacts -</b> consider all parts of the project and the various potential impacts	As considered further in Section 4, key potential environmental impacts associated with the proposed activity, including: <ul style="list-style-type: none"> <li>• Construction air, noise, and traffic.</li> <li>• Biodiversity.</li> <li>• Aboriginal heritage.</li> <li>• Contamination.</li> <li>• Flooding.</li> <li>• Geotechnical.</li> </ul>
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<p><b>Key potential community impacts</b> – consider all parts of the project and the various potential impacts <i>i.e., internal departments, nearby residents, state agencies, community organisations etc.</i></p>	<p>Potential negative impacts include increase of usage will cause an increase of litter, noise to surrounding residents and increased demand for parking requirements. These impacts are assessed within Section 4 of the REF.</p> <p>Positive key community and social impacts, including:</p> <ul style="list-style-type: none"> <li>• Increases current use and amenity, removing a previously worn-out gym and exponentially expanding the activity of the space with a focus of exercise and health.</li> <li>• Encourage social cohesion with integrated activities across the space.</li> <li>• Providing a new space geared towards teenagers and older adults which is a significantly under looked age bracket in the community.</li> <li>• Considerations of all abilities by providing a facility that supports a range of physical activities, sports, and inclusive play.</li> <li>• The park’s closely associated sports park Endeavour Park provides a large sporting area with a variety of sports that can be formally booked by the community, clubs, and schools. By contrast, Avenel Park offers a casual space freely available to the public when required.</li> </ul>
<p><b>Key potential economic impacts</b> – consider all parts of the project and the various potential impacts <i>i.e., strategic plans and policies.</i></p>	<p>Positive key economic impacts, including:</p> <ul style="list-style-type: none"> <li>• The provision of additional visitors to the area which provides an opportunity for additional spending at local businesses.</li> <li>• The park upgrades will revitalise the open space and will represent the reinvestment of funds into the local community.</li> </ul>

#### **4. Environmental Impact Assessment & Ameliorative Measures**

This section includes an environmental impact assessment of the proposed activity, drawing on the findings of the technical assessments that have been prepared to accompany this REF

For the purposes of Part 5 of the Act, the factors to be taken into account when consideration is being given to the likely impact of an activity on the environment include those specified by Environmental Planning and Assessment Regulation 2021 (Clause 171)):

- (a) the environmental impact on the community,
- (b) the transformation of the locality,
- (c) the environmental impact on the ecosystems of the locality,
- (d) reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality,
- (e) the effects on any locality, place or building that has—
- (f) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or
- (g) other special value for present or future generations,
- (h) the impact on the habitat of protected animals, within the meaning of the [Biodiversity Conservation Act 2016](#),
- (i) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air,
- (j) long-term effects on the environment,
- (k) degradation of the quality of the environment,
- (l) risk to the safety of the environment,
- (m) reduction in the range of beneficial uses of the environment,
- (n) pollution of the environment,
- (o) environmental problems associated with the disposal of waste,
- (p) increased demands on natural or other resources that are, or are likely to become, in short supply,
- (q) the cumulative environmental effect with other existing or likely future activities,
- (r) the impact on coastal processes and coastal hazards, including those under projected climate change conditions,
- (s) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1,
- (t) other relevant environmental factors.

Tables 4.1-4.15 includes an assessment of the potential impacts of the proposed activity against the factors of Clause 171 of the EP&A Regulation, drawing on the outcomes of the technical assessments (refer below) prepared to accompany this REF, and having regard to the following criteria:

- potential impacts;
- size, scope and intensity of impacts;
- duration of impacts; and
- ameliorative measures.

After considering these criteria an assessment has been undertaken as to the severity of potential impacts, as follows:

- N/A – not applicable;
- P – positive impact;
- 1 – minor negative impact;

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- 2 – Potentially significant negative impact requiring further assessment; and
- 3 – Significant negative impact.

A summary of all ameliorative measures identified in this REF are provided in a table in Attachment A1.

## **Key Environmental Impacts**

The following technical assessment have been prepared to accompany this REF and are provided as attachments:

- a Due Diligence Aboriginal Heritage Assessment (Attachment A3);
- a Preliminary Site Investigation (Attachment A4);
- an engineering review of flooding (Attachment A5);
- a Geotechnical Assessment (Attachment A6); and
- a Flora and Fauna Assessment (Attachment A7).

The following sections include a summary of the technical assessments, including an overview of the assessment undertaken, the key findings, and identification of recommended ameliorative measures.

### **Aboriginal heritage**

The subject site is situated within the Aboriginal Potential Investigation Area. In this regard, a Due Diligence Aboriginal Heritage Assessment was prepared by Coast History and Heritage (CHH, 2023) to accompany this REF and is provided in Attachment A3. A summary of the assessment is provided as follows.

#### **i) Assessment**

The assessment was prepared to meet the reporting requirements of the *Fairfield City Council Aboriginal Heritage Study* and the Heritage NSW guidelines *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*.

The assessment considered the environmental setting and historical context of the site, what is currently known about past Aboriginal use of the surrounding area, and the results of a field inspection. It was then determined whether the current activities proposed within the site are likely to impact any items of Aboriginal heritage, and whether they may have other impacts to Aboriginal heritage values.

It was noted that at the time of assessment the proposed activity was in the concept design stage, and no details of the proposed ground disturbance have been developed, and therefore, an impact assessment could not be developed.

#### **ii) Results and conclusion**

The assessment identified that there are no previously recorded Aboriginal sites within the site, and none were found during the site inspection.

In relation to the potential for the presence of sites, it was identified that Aboriginal people would have likely camped along the elevated ground adjacent to the creek, but the survival of any associated archaeological material is likely to have been affected by historical disturbance.

The assessment identified that the trees within the site were planted in c.2005 and do not include culturally modified trees.

The assessment noted that the upper part of the soil profile within the site, to a depth of 0.4 m to 0.5 m below the current ground surface, appears to comprise fill, and is unlikely to contain in situ Aboriginal archaeological deposits. However, an alluvial unit was identified below the fill, where archaeological deposits may be present.

The assessment concluded that, if ground disturbance can be contained within the previously disturbed the upper 0.4 m to 0.5 m of the soil profile, the proposed activity would not have any impacts to Aboriginal heritage and there would be no requirements for further Aboriginal heritage investigations to be undertaken.

**iii) Recommendations**

The assessment included the following recommendations, which have been incorporated as ameliorative measures (refer Attachment A1 – Ameliorative measures table):

- If ground disturbance cannot be contained within the upper 0.4 m to 0.5 m of the soil profile or existing service trenches, then an Aboriginal heritage impact assessment will be required to be undertaken in accordance with relevant guidelines.
- The detailed design of the proposed activity shall ensure that all works requiring ground disturbance are contained within areas and depths known to be already disturbed.
- Once the detailed design of the proposed activity is available, the Aboriginal due diligence assessment (CHH, 2023) shall be updated, reviewed by the Gandangara Local Aboriginal Land Council (LALC) and provided to the Registrar of the Aboriginal Heritage information Management System. The findings of this updated study shall be adhered to.
- If the updated report confirms that the proposed activity is unlikely to result in harm, then:
  - a) no other Aboriginal heritage investigations are required in relation to the proposed activity within the site;
  - b) an Aboriginal heritage induction shall be provided to the works team by the Gandangara LALC, in order to outline the statutory protection provided by the NSW National Parks and Wildlife Act 1974, and to outline the procedure to be followed in the event of an unexpected find;
  - c) Gandangara LALC shall be provided with an opportunity to inspect or monitor any excavation required;
  - d) an unexpected finds protocol shall be implemented; and
  - e) if unforeseen Aboriginal objects or bones suspected of being human are identified during the works, site workers shall:
    - not further disturb or move the remain;
    - immediately cease all work at the location;
    - in the case of suspected human remains, notify NSW Police; and
    - in the case of Aboriginal objects, notify the Heritage NSW Environment Line on 131 555 as soon as practicable and provide available details of the objects or remains and their location.
  - f) the Gandangara LALC shall also be notified to assist in the determination of appropriate management for the objects or remains.

## **Contamination**

A Preliminary Site Investigation (PSI) and Detailed Site Investigation (DSI) report have been prepared by SMEC Australia Pty Ltd (SMEC, 2023) to accompany this REF and is provided in Attachment A4. The outcomes of the investigation are summarised below.

### **i) Assessment**

The aims of the PSI and DSI were to assess the potential for contamination to be present at the site from past or present activities and provide recommendations on the need for further investigations based on the findings.

To meet these aims, the following scope of works was carried out:

- A desktop-based search based on the historical geological, topographical, and/or land use for reason of previously identified contamination on the site followed by a site walkover to assess the conditions of the site and surrounds and assist with identification of potential contamination source/activities.
- Provide recommendations on the suitability of the Site for its intended future use as a publicly accessible open space; and
- Provide recommendations on the need for further investigations and/or management based on the findings.

### **ii) Results and conclusion**

Based on the data reviewed, within the PSI and DSI found that:

- Test pits generally comprised of Silty sandy clay topsoil underlain by a clayey silty sand alluvial layer.
- Fill was noted in selected test pits, generally towards the eastern side of the Site, and consisted of either a dark brown silty clay or a gravelly silty clay. Fill was shown to be present to a maximum depth of 0.5 m bgl.
- Trace of anthropogenic waste (glass, ceramic, terracotta and/ or concrete) were noted in fill layers down to 0.5m.
- Multiple fragments of Asbestos Containing Materials (ACM) debris were found within test pits TP22 between 0.1 and 0.5m bgl. Following observation of these fragments, additional 'step-out' test pits were excavated approximately 5m north and 5m south of TP22. A similar level of ACM was noted within TP22a to the north, with no ACM observed within TP22b to the south.
- No unusual odours or staining were observed within the test locations.

Multiple fragments of Asbestos Containing Material (ACM) debris were found within test pit TP22 between 0.1 and 0.5m bgl. Following observation of these fragments, additional 'step-out' test pits were excavated approximately 5m north and 5m south of TP22. A similar level of ACM was noted within TP22a to the north, with no ACM observed in TP22b to the south.

All fragments were located at depths ranging between 0.1 - 0.5 m bgl in TP22 and TP22a. Representative fragments were collected and submitted to the laboratory for analysis of asbestos, with all four reported as containing asbestos. In addition to these bonded fragments, asbestos 'fines' (1x single fragment less than 7mmx7mm in size) was identified in soil sample TP22/0.3. As quantification of the concentration of asbestos has not been undertaken, the concentration of asbestos relative to quantitative assessment criteria is not known.

With consideration to the bonded asbestos and asbestos fines, a potential risk to human health exists. As such, a Remedial Action Plan has been prepared to make the Sites suitable for the proposed activity does not present an unacceptable risk to health or the environment.



**Figure 4 Areas of Interest identified in PSI sampling locations (Source: SMEC)**

**iii) Recommendations**

Based on the recommendations outlined within the DSI located within Attachment A4 of the REF, it is considered that the Site can be made suitable for the proposed recreational development subject to the following recommendations:

- As an interim safety measure, temporary fencing is recommended to be erected around investigation locations TP22 and TP22a.
- A Remedial Action Plan (RAP) should be developed to document the steps required to remediate the identified asbestos contamination around the investigation locations of TP22 and TP22a to make the Sites suitable for the proposed developments so that contamination does not present an unacceptable risk to health or the environment.
- Remediation and validation of the Site as per the RAP.
- Preparation of an unexpected finds protocol as part of a Construction Environmental Management Plan (CEMP) to outline measures to be adopted during the civil earthworks stage of construction to manage potential unexpected asbestos finds in areas of outside of those covered by the RAP.
- An investigation of soils within AEC 4 (Sydney Water works compound) should be undertaken by a suitably qualified consultant to characterise this part of the Site, following decommissioning of the compound

A RAP has been prepared outlining the remediation options analysis identified that delineation and off-site disposal to an appropriately licensed facility is a practical and cost-effective remedial option to address Site asbestos soil contamination previously identified during the DSI (SMEC, 2023a).

It is considered that the Site can be made suitable for the proposed development subject to the condition that the RAP within Attachment A4 is implemented including validation post remediation.

## **Flooding**

A review of the proposed activity was undertaken by Fairfield City Council's Catchment Team and determined a Flood Risk Report is not required. A structural engineering review was prepared by C & M Consulting Engineers (C&MCE, 2023) to accompany this REF and is provided in Attachment A5. The outcomes of the report are summarised below.

### **i) Assessment**

The site is within the area covered by the Flood Study for Orphan School Creek, Clear Paddock Creek and Green Valley Creek.

The referral to Fairfield City Council's Catchment Team included a desktop review of the site and relevant flooding policies and determined that a Flood Risk Impact Assessment is not required for the proposed activity. The site is mapped as medium to low-risk floodway as detailed in Figure 5.

The proposed activity will contain some filling to flush and match into existing levels of the site for retained existing footpaths, vegetation, and flood paths. In this regard, the western and eastern portions of the site will result in no significant changes and will remain outside the zone of influence to not obstruct any overland flow within the catchment area.

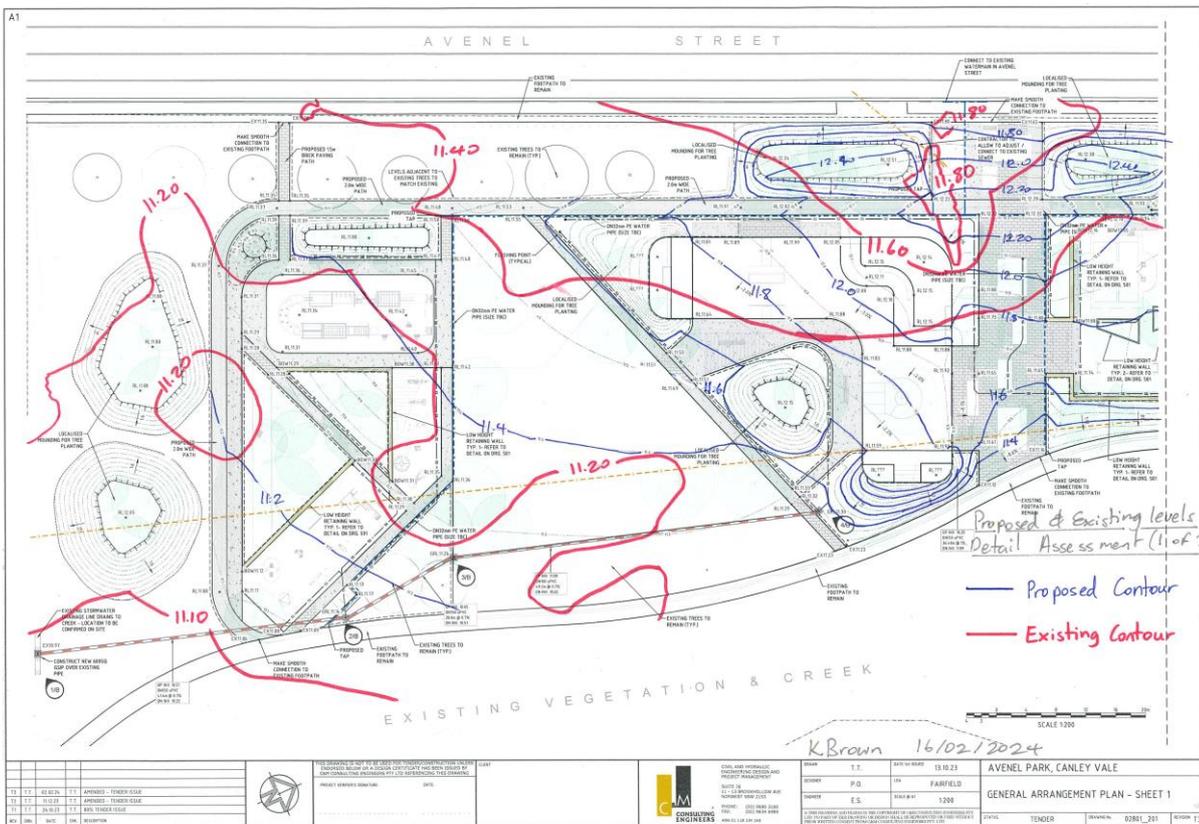
The Catchment Team assessment raised no issues in relation to the proposed activity, subject to meeting the following conditions:

- The existing flow path should not be obstructed at any time. It seems that the proposed work is within the medium flood risk area as such the consultant needs to demonstrate that the proposed work does not obstruct the flow and make flooding worse to adjacent properties.
- Submit an engineer's report to certify any structure within the medium risk zone can withstand the forces of floodwater, debris, and buoyancy up to and including the 100yr ARI flood event plus 0.5m freeboard.
- Any structure will have flood compatible building components up to and including the 100yr ARI flood event plus 0.5m freeboard.
- Footpaths along the eastern boundaries must be flush with existing levels. All other footpaths must meet with existing footpaths as well.
- Where no works are to be carried out, existing levels are to be maintained
- Direction of flow must be maintained as existing

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**Figure 5** Flooding Map (Source: Fairfield City Council Enlighten Maps)



**Figure 6** Proposed Contour Analysis vs Existing Contour Analysis to establish a flow (Source: Engineering plans)

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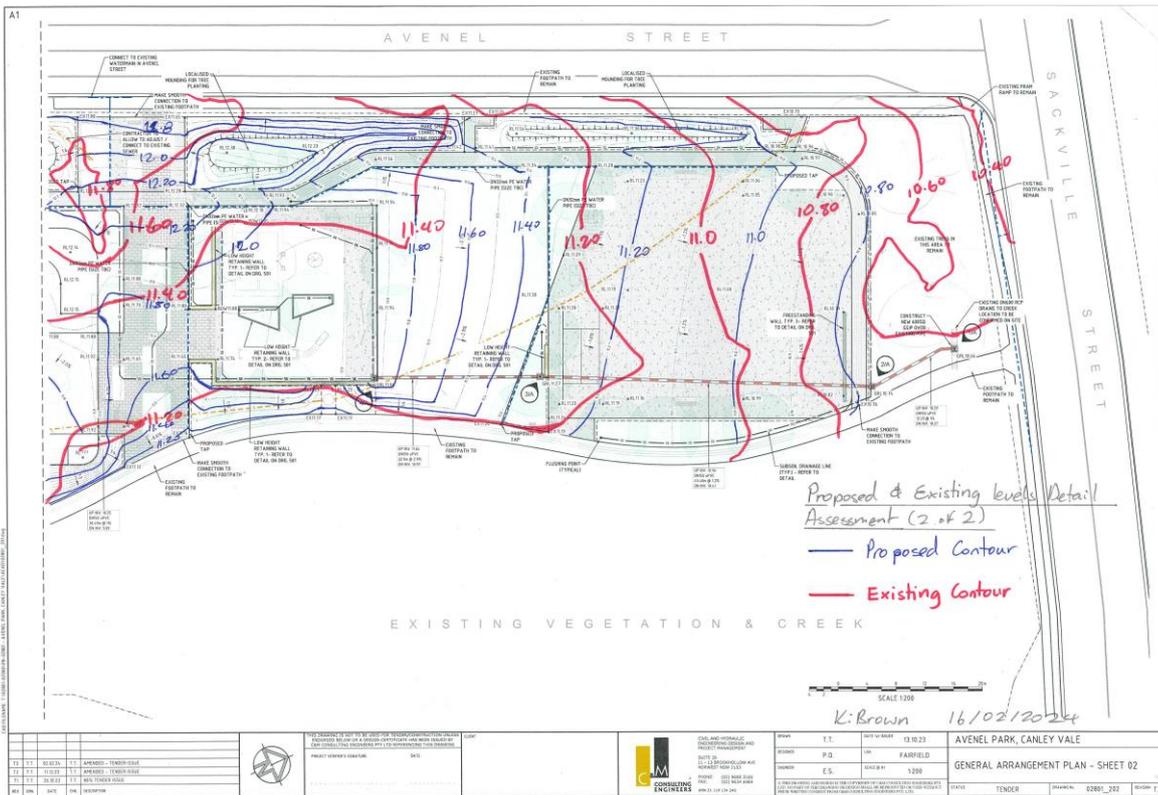


Figure 7 Proposed Contour Analysis vs Existing Contour Analysis to establish a flow (Source: Engineering plans)

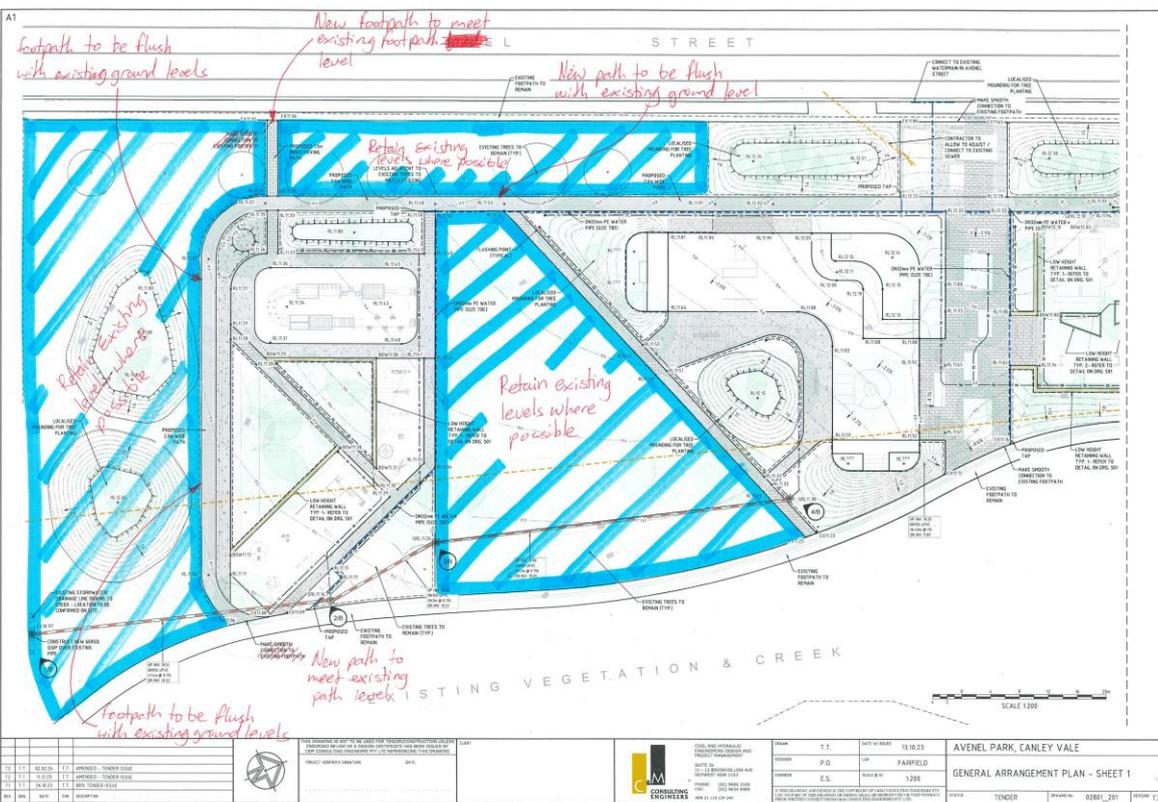
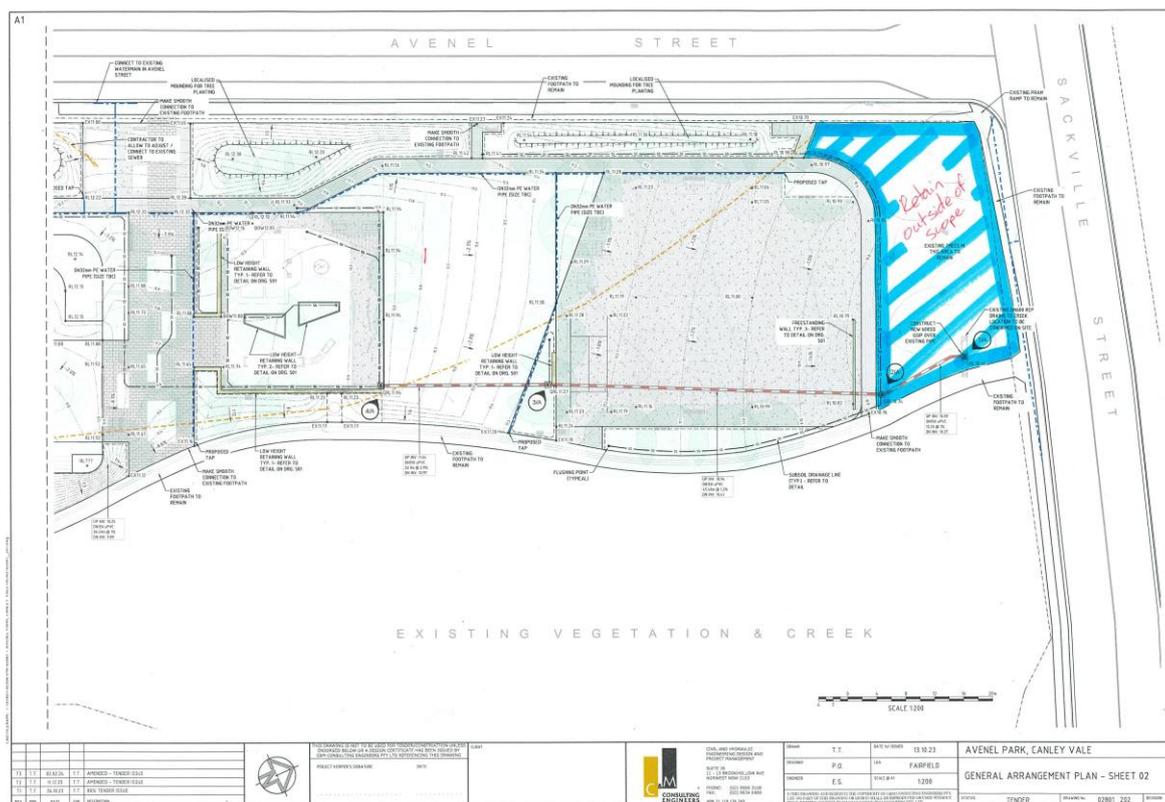


Figure 8 Demonstrations of areas meeting original levels to maintain flow paths across site

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**Figure 9** Demonstrations of areas meeting original levels to maintain flow paths across site

**ii) Results and recommendation**

A Hydraulic Engineer was engaged to peer review the Civil Design to ensure the activity meets the conditions specified by Council’s Catchment Branch. The engineering review (A5834725) confirmed that the proposed activity will satisfy the following:

- The proposed civil engineering works will not significantly obstruct the existing overland flow path, and the effects of the proposed works are likely to be negligible.
- The proposed structures are generally limited to low height walls, playground equipment and skate park features.

The following shall be undertaken as part of the detailed design to ensure that the proposed activity will meet the relevant flood related development controls:

- All structure shall be designed to:
  - a) withstand the forces of floodwater, debris, and buoyancy up to and including the 100-year average recurrence interval (ARI) flood event; and
  - b) use flood compatible building materials up to and including the 100yr ARI flood level.
- An appropriately qualified engineer shall provide certification of compliance with items a) and b) as part of the final design package.
- Where possible, existing contours will be maintained
- Direction of flow to be maintained

- Overflow to be maintained and unobstructed

### **Geotechnical**

A Geotechnical Investigation was prepared by Green Geotechnics Pty Ltd (GG, 2023) for the proposed activity and is provided in Attachment A6. The outcomes of the report are summarised below.

#### **i) Assessment**

The aim of the investigation was to assess the subsurface soil and groundwater conditions across the project site and provide comments on the relevant issues, including:

- outline the site conditions and regional geology;
- provide a Site Classification to AS2870;
- assess the subsurface conditions over the site including groundwater levels;
- provide recommendations regarding the appropriate foundation system for the site including design parameters;
- provide recommendations for site preparation and re-grading; and
- provide an exposure classification in accordance with AS2159 and AS2870.

#### **Geotechnical investigations**

Field work was undertaken by a GG senior field geologist on 29 June 2023. The fieldwork included the drilling of nine cored boreholes numbered BH1 to BH9. The boreholes, drilled using rotary solid flight augers attached to a utility mounted Christie Engineering drilling rig, were located within the site at the locations shown in Figure 6.

The strength of the soils encountered in the boreholes was assessed by undertaking dynamic cone penetrometer (DCP) tests adjacent to each borehole.

Groundwater observations were made in all boreholes during drilling, on completion of drilling and a short time after completion of drilling. No longer term groundwater monitoring was carried out.



**Figure 9 Test location plan (Source: Green Geotechnics Geotechnical Assessment)**

Laboratory testing

To assist with determining the site classification in accordance with AS2870-2011, two undisturbed soil samples were collected for shrink swell testing. The soils were tested to assess their aggressiveness and levels of salinity. The representative soil samples were tested to determine the following:

- pH;
- Sulphate Content (SO4);
- Chloride Content (CL); and
- Electrical Conductivity (EC).

The details and results of the laboratory testing are provided on the test reports in Appendix B of the Geotechnical Investigation (Attachment A6 of this REF).

Geotechnical model

The general ground profile interpreted from the borehole testing undertaken within the site has been grouped into three geotechnical units which are summarised as follows:

*Unit 1 – Topsoil / Fill:*

Topsoil and fill materials were encountered across the site to depths of 0.2 m to 0.8 m. The topsoil comprises a low plasticity dark brown silty clay with organics and traces of sand. The fill materials were primarily encountered over the eastern half of the site and comprised low and medium plasticity silty clays with traces of sand, gravel and organics. The fill appears uncontrolled.

*Unit 2 – Alluvial Sandy Soils:*

Natural loose to medium dense becoming medium dense clayey silty sands were encountered below the topsoil and fill to depths of 0.8 m to 4.5 m; however, typically extend to depths of around 1.5 m to 2 m. The sands were assessed to be fine to medium grained and contain low plasticity fines with some gravel. The sands were assessed to be moist becoming moist to wet with depth.

*Unit 3 – Alluvial Clayey Soils:*

Natural medium to high plasticity firm to stiff becoming stiff and very stiff alluvial clays were encountered below the sandy alluvial soils to the depth of drilling, 6 m. The clayey soils were assessed to be moist becoming moist to wet with depth. The clays include some gravelly lenses which could not be penetrated in BH6 and BH8.

Groundwater seepage was observed at depths of 2.5 m to 4.5 m over the western portion of the site, with water levels in BH2, BH3 and BH5 rising to around 2.5 m to 3.5 m depth shortly after drilling. Moist to wet conditions were noted in boreholes drilled over the eastern portion of the site, however groundwater seepage was not noted.

## **Results and conclusion**

### Site classification

The assessment found that due to the trees present on the site, abnormal moisture conditions (AMC) prevail at the site.

Because of the AMC and fill present, the site is classified a 'Problem Site (P)' as defined in *AS2870-2-11 Residential Slab and Footings Classification*.

However, provided the recommendations provided below are adopted and footings are founded in at least firm to stiff clays or loose to medium dense sands, the site may be re-classified as 'Moderately Reactive (M)' foundation design and construction consistent with this classification shall be adopted as specified in the above referenced standard and in accordance with the design details in Section 4.2 of the Geotechnical Investigation (Attachment A6 of this REF).

### Site preparation for building slabs and heavily trafficked pavements

The performance of building structures including slabs and heavily trafficked pavements cannot be guaranteed unless the following procedures are adopted during the site earthworks:

- Remove any vegetation, topsoil and uncontrolled fill present. The exposed subgrade should be inspected by a geotechnical engineer who may wish to proof roll the exposed subgrade with a heavy, non-vibrating roller to detect soft or wet areas. These areas should be excavated to competent material and then filled as detailed below.
- Fill the site to the underside of slab or pavement level, in layers not exceeding 200 mm loose thickness, compacted to achieve a density ratio in the range of 98% to 102% of the Standard maximum dry density, at a moisture content within the range of -2% to +2% of the optimum for the material adopted.

### Site preparation for landscaped areas, softfall and footpaths

For areas of landscaping and rubber softfall any topsoil materials should be removed prior to the placement of the softfall. The stripping of fill is not considered necessary in softfall areas, subject to a site inspection by a geotechnical engineer following stripping of the overlying topsoil layer.

For areas of pedestrian concrete pavement, the subgrade below the pavement should be excavated to a depth of 150mm and replaced with compacted road base (DGB). Subgrade replacement may not be required in areas where natural stiff clays form the pavement subgrade. Any vehicular crossings of the pedestrian concrete pavement should be subject to an inspection by a geotechnical engineer as they may require additional thickness of road base or the incorporation of reinforcing layers.

#### Soil aggressivity

Results of chemical laboratory testing indicate that the soil present at the site is generally 'non-aggressive' to buried steel and 'mild' to buried concrete.

Appropriate allowances for concrete cover, concrete strength, steel-section loss and steel protection requirements should be made in the design of buried structural elements, such as piles.

#### Footings and foundations

In general, footings for any structure should be found on a bearing stratum with uniform engineering properties to reduce the risk of excessive differential settlements. For this reason, it is considered that the existing uncontrolled fill is generally not suitable for the (foundation) support of permanent structures.

Structural loads are to be founded within the upper loose to medium dense sands or firm to stiff alluvial clays or the underlying deeper stiff to very stiff clays, below the existing fill.

Due to the presence of sandy soils and groundwater, the site is not considered suitable for the use of conventional open hole bored cast in-situ piles. In this regard the site would be better suited to the use of either steel screw piles or continuous flight auger (CFA) injected piles.

Bored piles may also be considered for the site where the piles terminate above the groundwater table. Some allowance would also need to be made for the use of temporary light weight liners to support the pile sidewalls when drilling in loose sandy soils or poorly compacted fill.

Bored pile footings should be drilled, cleaned, inspected and poured with minimal delay, on the same day. Water should be prevented from ponding in the base of footings as this will tend to soften the foundation material, resulting in further excavation and cleaning being required.

The initial stages of footing excavation/drilling, particularly if bored piles are adopted, should be inspected by a geotechnical engineer/engineering geologist to ascertain that the recommended foundation material has been reached and to check initial assumptions about foundation conditions and possible variations that may occur between borehole locations.

#### **Recommendations**

The assessment included the following recommendations which have been incorporated as ameliorate measures (refer Attachment A1 – Ameliorative measures of this REF):

- Geotechnical review of the proposed earthworks and structural drawings shall be undertaken.
- Slabs and footings shall be designed in accordance with engineering principles as recommended in AS 2870 – 2011.
- Geotechnical supervision and testing is provided during bulk earthworks.
- Footing excavation/drilling, particularly if bored piles are adopted, shall be inspected by a geotechnical engineer/engineering geologist to ascertain that the recommended foundation material has been reached.

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- Site preparation and earthworks shall be undertaken in accordance with the methodology outlined in Sections 4.3 and 4.4 of the Report on Geotechnical Investigation prepared by Green Geotechnical, dated 13 July 2023.
- Any off-site disposal of spoil shall generally require assessment for re-use or classification in accordance with the NSW EPA's *Waste Classification Guidelines*.
- Footings and foundations shall be designed and constructed in accordance with the methodology and design parameters provided in Section 4.2 (and Table 4.2) of the Report on Geotechnical Investigation prepared by Green Geotechnical, dated 13 July 2023.
- Structural design shall accord with Australian Standard AS 1170.4 – 2007 *Structural design actions – Part 4: Earthquake actions in Australia*.
- Appropriate allowances for concrete cover, concrete strength, steel-section loss and steel protection requirements shall be made in the design of buried structural elements, such as piles.
- The uncontrolled fill on the site shall include site preparation to be made suitable for supporting pavements, as detailed in Sections 4.3 and 4.4 of the Geotechnical Investigation (GG, 2023).

### Flora and Fauna

A Flora and Fauna Assessment (FFA) was prepared by Narla Environmental (NE, 2023) to accompany this REF and is provided in Attachment A7. The outcomes of the report are summarised below.

#### **i) Assessment**

The aims of the FFA assessment were to:

- Establish the likelihood of occurrence of migratory species, threatened species, endangered populations and threatened ecological communities as listed under the Biodiversity Conservation Act 2016 and/or the Environmental Protection and Biodiversity Conservation Act 1999;
- Assess any potential impacts to species and/or communities listed under the BC Act and EPBC Act;
- Identify and map the distribution of vegetation communities within the site;
- Record presence and the extent of any known or potential fauna habitat features such as nests, dreys, caves, crevices, culverts, pools, soaks, flowering trees, fruiting trees or hollow-bearing trees and provide recommendations for on-going management of these habitat features and any fauna present;
- Record presence and the extent of any priority weeds or weed infestations and provide recommendations for on-going management; and
- Recommend any controls or additional actions to be taken to protect or improve environmental outcomes of the proposed activity.

#### Desktop assessment and literature review

A thorough literature review of local information relevant to the Fairfield local government area (LGA) was undertaken including searches using NSW Wildlife Atlas (BioNet; DPE 2023a) and the Commonwealth Protected Matters Search Tool (DCCEEW 2023) to identify all current threatened flora and fauna, as well as migratory fauna records within a 10 km by 10 km cell search area centred on the site.

The data collected in this search was used to assist in establishing the presence or likelihood of any ecological values as occurring on or adjacent the site to help inform the ecologist on what to look for during the site assessment.

#### Ecological site assessment

A site assessment was undertaken by experienced an ecologist, on Tuesday the 9 of May 2023. During the site assessment, the following activities were undertaken:

- identifying and recording the vegetation communities present within the site, with focus on identifying any threatened ecological communities;
- recording a detailed list of flora species encountered within the site, with a focus on threatened species, species diagnostic of threatened ecological communities and priority weeds;
- recording opportunistic sightings of any fauna species seen or heard on or within the immediate surrounds of the site;
- targeted surveys for threatened flora;
- identifying and recording the locations of notable fauna habitat such as important nesting, roosting or foraging microhabitats;
- assessing the connectivity and quality of the vegetation within the site and surrounding area; and
- targeting the habitat of any threatened and regionally significant fauna.

Weather conditions were recorded prior to and during the site assessments and are provided in Table 2 of the FFA (refer Attachment A7 of this REF).

#### **ii) Results and conclusion**

##### Native vegetation

Two vegetation communities have been historically mapped within the site, comprising:

- non-native vegetation; and
- Cumberland Blue Box Riverflat Forest.

The field survey identified the vegetation within the site and broader area best conforms to the following vegetation communities:

- Cumberland Blue Box Riverflat Forest;
- urban exotic/native vegetation; and
- manicured Lawn.

The Cumberland Blue Box Riverflat Forest was identified along the Orphan School Creek frontage of the site. The proposed activity has been located away from this area to ensure there will be no impact on this environment.



**Field-validated Vegetation Mapping of the Project Area**

- Subject Site
- Project Area

**Field-validated Vegetation Type**

- Exotic Manicured Lawn
- Urban Exotic/Native Vegetation
- Existing Hardstand
- Cumberland Blue Box Riverflat Forest

**Habitat Features**

- Hollow-bearing Tree
- Hollow-bearing Stag

0 50 100 m



**NARLA**  
 environmental



Date: 22/05/2023  
 Coordinate System: GDA94 MGA Zone 56  
 Image Source: Nearmap Australia Pty Ltd (March 2023)

**Figure 10 Field validated vegetation plan (Source: Narla Environmental Flora & Fauna Assessment)**

Threatened ecological Communities

The assessment concluded that the Cumberland Blue Box Riverflat Forest may be present on the site. The Cumberland Blue Box Riverflat Forest is a BC Act listed, Endangered Ecological Community (EEC), River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions, and the EPBC Act listed, Critically Endangered Ecological Community (CEEC), River-flat eucalypt forest on coastal floodplains of southern NSW and eastern Victoria.

During the site assessment, vegetation conforming to Cumberland Blue Box Riverflat was found to occur within the site along the Orphan School Creek frontage. The proposed activity does not include any works within this area, and therefore, no vegetation of this type will be directly impacted by the proposed activity.

Threatened flora

During the desktop analysis it was revealed a range of threatened flora as occurring or having the potential to occur on or within a 10 km by 10 km cell centred on the site. Thorough targeted surveys were undertaken throughout the site for potentially occurring threatened flora.

No threatened flora was identified at the time of the site assessment.

A comprehensive list of flora species identified within the site during the site assessment is presented in Appendix B of the FFA (refer Attachment A7 of this REF).

Threatened fauna

A small suite of avian native fauna species were identified within and surrounding the site during the site assessment. All native fauna species encountered are listed as 'protected' under the BC Act.

The list of fauna recorded during the site visit is provided in Appendix C of the FFA (refer Attachment A7 of this REF).

Migratory fauna species

Several EPBC Act listed migratory fauna species were considered to occasionally use habitat within or around the site for foraging or passage.

The proposed activity will have low impacts to potential foraging habitat and negligible impacts to potential breeding habitat for these species given their migratory nature. In the unlikely event that these species forage within the site, the proposed removal of vegetation will have low impacts to foraging habitat given the large areas of suitable foraging habitat in the surrounding area and in their migratory range. No anticipated net loss of breeding habitat is expected as these species do not breed within or in close proximity of the site.

The proposed activity is unlikely to a significant impact on these species; therefore, a referral to Commonwealth pursuant to the EPBC Act is not required.

Table 8 of the FFA provides a detailed assessment of the likely occurrence of threatened fauna species within the site (refer Attachment A7 of this REF).

Vegetation loss

Approximately 0.12 ha of Urban Exotic/Native Vegetation and 0.38ha of Manicured Lawn will be impacted to accommodate the proposed activity within the site.

All vegetation conforming to the locally occurring TEC, located outside of the site will not be impacted by the proposed activity.

#### Threatened species and fauna habitat

The proposed activity has been strategically located to avoid the need to remove the majority of habitat features located within the site.

Hollow-bearing trees are present along the Orphan School Creek frontage of the site however, all will be unimpacted by the proposed activity.

It is therefore considered that the proposed activity is unlikely to result in a significant impact on any BC Act or EPBC Act listed species. No further assessment of impacts pursuant to the BC Act (e.g. Biodiversity Development Assessment Report (BDAR)) and/or EPBC Act Referral to Commonwealth will be required.

#### Project location, design and planning

The proposed activity has been strategically placed to have as little impact on native vegetation as possible by largely located in an area of historically cleared vegetation. The TEC to the south of the Subject Site will be unimpacted by the proposed activity. In addition, the numerous hollow-bearing trees will also be unimpacted and retained.

### **iii) Recommendations**

The assessment included the following recommendations which have been incorporated as ameliorate measures (refer Attachment A1 – Ameliorative measures table):

The following measures shall be implemented during construction and incorporated in the relevant environmental management plans as required:

- undertake an extensive pre-clearing survey which includes targeted searches for threatened fauna threatened flora and Priority Weeds, and delineating habitat-bearing trees and shrubs; and
- supervise the clearance of any habitat trees or shrubs identified during the pre-clearing survey (native and exotic) to capture, treat and/or relocate any displaced fauna.

#### Landscaping/revegetation

- The proposed landscaping/revegetation of the site shall involve the planting of species associated with the adjacent naturally occurring TEC vegetation type, Cumberland Blue Box Riverflat Forest.

#### Erosion and sedimentation

- Appropriate erosion and sediment control shall be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. As a minimum, such measures shall comply with the relevant industry guidelines such as 'the Blue Book' (Landcom 2004).

#### Storage and stockpiling (soil and materials)

- All storage, stockpile, and laydown sites shall be located away from any vegetation that is planned to be retained.
- Importing any soil from outside the site in order to avoid the potential of incurring indirect impacts on biodiversity values shall be avoided as this can introduce weeds and pathogens to the site.
- If materials are required to be imported for landscaping works, they shall be sterilised according to industry standards prior to importation to site.

### Traffic & Parking

The embellishment of the Park will likely increase the amount of patrons on site to what is currently existing. Based on this, an internal review of the traffic generation was undertaken to understand the potential impacts for the safety of pedestrians along the existing shared path.

It was determined for the safety of the public using the path be maintained and utilised by the upgrade and that the railing and bollard hoops to be retained to ensure the safety of pedestrians accessing the site.

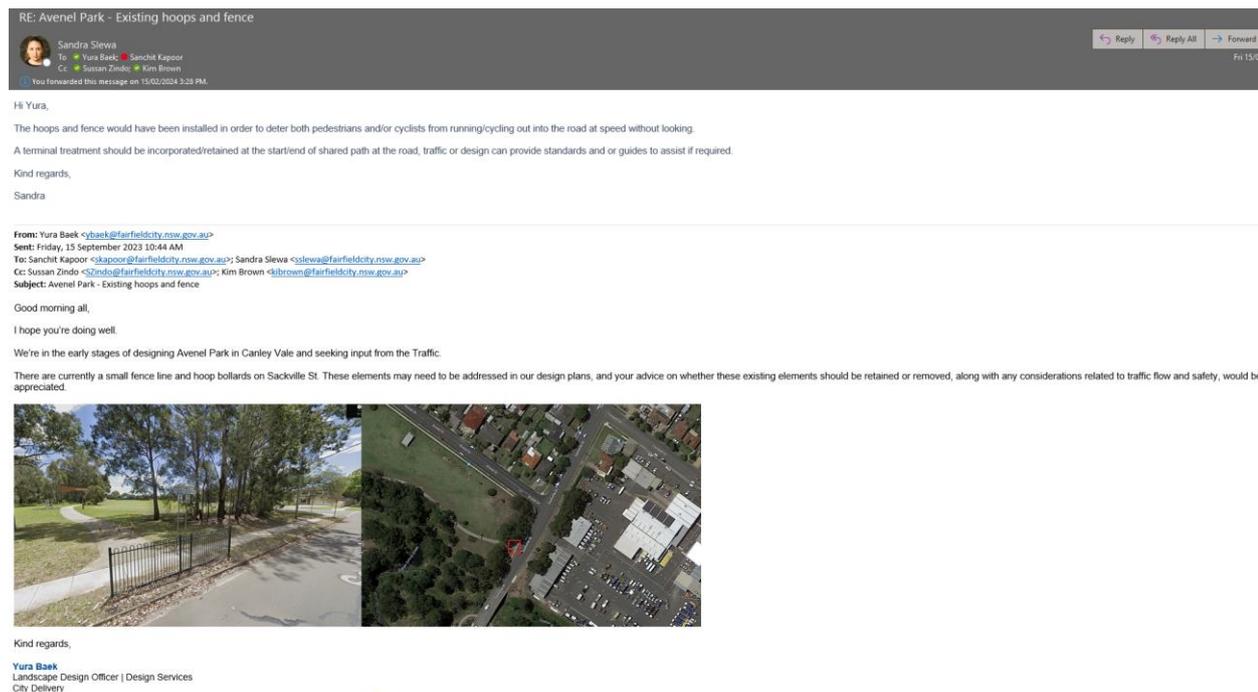


Figure 10 Email to Traffic Engineers

With regards to parking rate generated for the park, it is considered that the site is located near a variety of amenities to facilitate public movement to and from the site encouraged through a mixture of active transport services, including the following as illustrated in Figure 11;

- Bus stops
- On-Street Parking
- Existing nearby carparks used for recreational activities
- Major footpath networks inclusive of shared paths and pedestrian underpasses below Sackville Road

It is currently assumed that the existing infrastructure to be sufficient, however, the following will be implemented as precautionary measures as part of the REF:

- Encourage the use of the existing infrastructure with additional wayfinding signage where necessary. This will be determined and installed during the construction period.
- Post construction ongoing monitoring of the operation of the site to determine if additional measures will be required to manage any increased requirements in the location. A condition shall be imposed for ongoing monitoring of the traffic and parking management of the site to not impact nearby residents and the surrounding road network. The Operational Pedestrian and Transport Management Plan (OTPM) will determine additional mitigation measures required during operation of the Park i.e signage for pedestrian movement and/ or traffic signs for access routes

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- If required additional on-site parking, monitoring of impacts on surrounding work network and mitigation measures to avoid delay and traffic queuing, an ongoing monitoring and review program etc. The OPTMP will be prepared in consultation with Council's Traffic Branch.



**Figure 11 Pedestrian and traffic movement analysis**

**Table 4.1 Any environmental impact on a community**

<b>Assessment Consideration</b>	<b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	<b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)	<b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)	<b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	<b>Impact Assessment</b> NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
<b>(a) Social factors</b>					
4.1.(a) 1. Any environmental effect that may cause substantial change or disruption to the community or improvement to social linkages(loss) of neighbour cohesion, access to facility, links to other communities, community identity or cultural character)	<p>The new recreation area will provide benefits to the local community through improved access to outdoor recreation facilities and links to the existing outdoor recreation facility to the west of the site.</p> <p>As considered further in Assessment Considerations 4.2.(b).2, 4.4.7, 4.12.(a).1, 4.12.(a).2, 4.12.(d).1, 4.13.2, 4.14.3, 4.15.1, 4.15.2 the proposed activity will result in temporary construction impacts, including in relation to air quality, noise and traffic.</p>	Local residents - Temporary impact on users of the existing recreational area (walking along the creeklines).	During construction phase.	<p>Preparation of a Construction Environmental Management Plan will be prepared to minimise the occurrence for disruption to the community during construction.</p> <p>Works will be undertaken during approved hours of the NSW Interim Construction Noise Guideline.</p>	P – Positive impact

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Assessment Consideration	Potential Impacts (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	Size, scope & intensity of impacts (e.g. area or number of people affected etc)	Duration of Impacts (e.g. construction period of 3 months or on-going post construction)	Ameliorative Measures Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	Impact Assessment <b>NA</b> – Not applicable <b>P</b> – Positive impact <b>1</b> – Minor negative impact <b>2</b> – Potentially significant negative impact requiring further assessment <b>3</b> – Significant negative impact
4.1. (a) 2. Any impacts which result in some individuals or communities being significantly disadvantaged.	<p>The proposed activity will not result in individuals or communities being significantly disadvantaged.</p> <p>The park will provide a multi-generational facility that will be a destination for the local and wider Fairfield community to engage in a range of outdoor recreational activities.</p> <p>Additionally, considerations for accessible equipment have been provided in the design to enable a range of capabilities to utilise their space within their own comfort zones.</p>	Not applicable.	Not applicable.	Nil	P – Positive impact
4.1.(a).3. Any impacts on the health, safety, security, privacy or welfare of individuals or communities because of factors such as – a. air pollution or odour; b. noise, vibration, blasting, electromagnetic fields or radiation;	As considered further in Assessment Considerations 4.2.(b).2, 4.4.7, 4.12.(a).1, 4.12.(a).2, 4.12.(d).1, 4.13.2, 4.14.3, 4.15.1, 4.15.2. The proposed activity will result in temporary construction impacts, including in relation to air quality, noise and traffic.	Local residents	During Construction only	Construction will be limited between the hours of 7:00am until 6:00pm, Monday to Friday to minimise the	1 – Minor negative impact

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<p><b>Assessment Consideration</b></p>	<p><b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)</p>	<p><b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)</p>	<p><b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)</p>	<p><b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.</p>	<p><b>Impact Assessment</b> <b>NA</b> – Not applicable <b>P</b> – Positive impact <b>1</b> – Minor negative impact <b>2</b> – Potentially significant negative impact requiring further assessment <b>3</b> – Significant negative impact</p>
<p>c. release of disease or genetically modified organisms; d. lighting, overshadowing or visual impacts.</p>				<p>disruption of noise, odour, or visual impacts during construction.</p>	
<p>4.1.(a).4. Any impacts that result in a change in the level of demand for community resources (e.g. facilities, services and labour force).</p>	<p>The park upgrades will create a destination park with a variety of facilities that are suited to a wide range of the community.</p> <p>Minor increases of demand include cleaning of the site, waste disposal, monitoring for behaviour trends and electrical and water services to support new Exeloo, water misting stations and CCTV cameras.</p>	<p>Council staff</p>	<p>On going</p>	<p>Internal stakeholders responsible for the ongoing requirements of the park have been consulted and included in as per the attachments to this REF. Consultations directly affected the location of these amenities to encourage ease. This includes:</p>	<p>1 – minor negative impact</p>

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<b>Assessment Consideration</b>	<b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	<b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)	<b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)	<b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	<b>Impact Assessment</b> NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
				<ul style="list-style-type: none"> <li>- CCTV camera locations and specifications</li> <li>- Taps for watering and cleaning throughout the park</li> <li>- Location of the Exeloo</li> <li>- Maintenance access</li> <li>- Location and sizes of bins</li> <li>- Types of planting for robustness</li> </ul>	
4.1.(a) 5. Any other social impacts	Concerns for security with increased delinquency with the new amenities.	Residents	On going	CCTV cameras have been included in the construction provisions for the park. This	1 – Minor Negative

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<b>Assessment Consideration</b>	<b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	<b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)	<b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)	<b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	<b>Impact Assessment</b> NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
				includes on going monitoring inclusive of night monitoring.  CCTV monitoring camera signage will also be provided in the park to discourage unwanted behaviour.	
<b>(b) Economic factors</b>					
4.1.(b).1. Any impacts which affect the economic viability of existing businesses	The park is designed to provide the Fairfield LGA with a new and improved facility, but it will also attract visitors from outside the local community and LGA who will bring in additional economic growth and spending for the local community.	Not applicable.	Not applicable.	Nil	P – Positive impact

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<b>Assessment Consideration</b>	<b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	<b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)	<b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)	<b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	<b>Impact Assessment</b> NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
	This will not impact the viability of existing businesses. During construction, local services and suppliers may benefit from the development to support the construction processes.				
4.1.(b).2. Any impacts that affect the viability of public services or infrastructure	Some users of the park will likely travel via public transport. However, given the scale of the development, it is unlikely that the proposed activity will adversely affect the viability of any public transport services.	Locals and park users that will use public transportation to access the site and/or the surrounds	Post construction, ongoing.	Provide supportive infrastructure for the existing public transport route (bus) to support the comfort of use. This includes providing a solid landing pad for those alighting and provide seating for waiting customers.	1 – Minor negative impact

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Assessment Consideration	Potential Impacts (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	Size, scope & intensity of impacts (e.g. area or number of people affected etc)	Duration of Impacts (e.g. construction period of 3 months or on-going post construction)	Ameliorative Measures Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	Impact Assessment NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
				Continuous access to share paths will be maintained during construction.	
4.1.(b).3. Will additional employment opportunities be created or lost?	Additional employment opportunities will be created during the construction period.  The ongoing maintenance of the park will provide ongoing employment to existing Council staff.	Not applicable.	On going	Nil	P – Positive impact
4.1.(b).4. Any other economic impacts?	No other potential economic impacts identified. The embellishment of Avenel Park will benefit the community of Fairfield LGA by providing additional facilities for local residents and the wider community to enjoy.	Not applicable.	Not applicable.	Nil	N/A – Not applicable

## Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects

Assessment Consideration	Potential Impacts (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	Size, scope & intensity of impacts (e.g. area or number of people affected etc)	Duration of Impacts (e.g. construction period of 3 months or on-going post construction)	Ameliorative Measures Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	Impact Assessment NA – Not applicable P – Positive impact 1 – Minor negative impact 2 – Potentially significant negative impact requiring further assessment 3 – Significant negative impact
<b>(c) Property factors</b>					
4.1.(c).1. If any land acquisition is required, have arrangements been settled or likely to be settled with affected landowners?	No land acquisition required.	Not applicable.	Not applicable.	Nil	N/A – Not applicable
4.1.(c).2. If Council land and categorised as Community land under the Local Government Act, is there a plan of management and is the proposal consistent with this plan? Note Council land (excluding public roads) requires to be classified as Operational or conform with an approved Plan of Management before approval for the activity may be granted).	The subject site exists under a Generic Plan of Management adopted in 2012 and is consistent with the objectives and intended outcomes for Avenel Park.	Not applicable.	Not applicable.	Nil	N/A
4.1.(c).3. If the land is owned by another government agency, has their consent been obtained and the proposal consistent with any of their requirements	The land is owned by Council.	Not applicable.	Not applicable.	Nil	N/A – Not applicable
4.1.(c).4. Are easements required from another landowner, and have	There are no easements over the site.	Not applicable.	Not applicable.	Nil	N/A – Not applicable

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<b>Assessment Consideration</b>	<b>Potential Impacts</b> (e.g. loss of access, improved access, loss of trade during construction, creation of a barrier to pedestrians etc)	<b>Size, scope &amp; intensity of impacts</b> (e.g. area or number of people affected etc)	<b>Duration of Impacts</b> (e.g. construction period of 3 months or on-going post construction)	<b>Ameliorative Measures</b> Outline any ameliorative measure proposed to address potential impacts. Note these measures will be considered to form part of the proposed activity and must be undertaken.	<b>Impact Assessment</b> <b>NA</b> – Not applicable <b>P</b> – Positive impact <b>1</b> – Minor negative impact <b>2</b> – Potentially significant negative impact requiring further assessment <b>3</b> – Significant negative impact
arrangements been adequately settled or likely to be settled?					

**Table 4.2 Any transformation of the locality**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<b>(a) Land use impacts (during construction and operation)</b>					
<p>4.2.(a).1. Compatibility with existing or planned land use in proximity</p>	<p>During construction, there will temporarily restricted access to the site that prevents the use as a community outdoor space.</p> <p>However, post construction the recreational area is compatible with existing uses of the space previously featuring gym equipment and open green recreational space. The new development will enhance existing character and replace an end-of-life gym node. This will also be complimentary to the existing tennis courts and greater expansion of the Endeavour Park sports fields nearby.</p> <p>The development is compatible with the residential locality and preferences of use. This was identified in a survey conducted by Assets to gage what the local community will want from the space. This survey was conducted online, letter drop and via QR portal present on site and in nearby localities with similar uses as the proposed development (See attached results from Consultations 1 through to 4).</p> <p>Avenel Park is suited for informal recreation and sporting to provide additional free user-friendly space for the community while</p>	<p>Total expanse of the site</p>	<p>Ongoing</p>	<p>Nil</p>	<p>P- Positive impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	Endeavour Sports Park manages formal sporting events and booked spaces.				
4.2.(a).2. Consistency with existing or planned character of locality	The proposed activity is consistent with the character of the surrounding locality. The outdoor recreational facilities will enable local residents and users access to public open space for recreational purposes and activities compatible with surrounding land uses.	Total expanse of the site	Ongoing	Not applicable.	P – Positive impact
4.2.(a).3. Consistency with existing or planned streetscape	<p>The proposed activity is consistent with the existing and planned streetscape. And does not interfere significantly with the existing pedestrian path.</p> <p>The proposed activity will increase the amenity of the locality by providing an active open space area that is suitable for a range of inclusive physical activities.</p> <p>The proposed activity will enhance usability of the space in hot conditions by increasing shade availability on the streetscape by increasing planting (trees), additional seating options, toilets and water fountains for respite and providing misting stations to act as a local cooling mechanism.</p>	Total expanse of the site	Ongoing	<p>Some positive impacts for the streetscape include...</p> <ul style="list-style-type: none"> <li>- Provisions of additional trees for shaded streets</li> <li>- Expansion and formalisation of adjacent bus stop</li> <li>- Provision of an accessible toilet on the street frontage</li> <li>- Provision of water and misting for cooling streets</li> </ul>	P – Positive impact

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<ul style="list-style-type: none"> <li>- Provision of bins</li> <li>- Provision of bike parking</li> </ul>	
4.2.(a).4. Any other land use impacts?	No other potential land use impacts identified.	Nil	Not applicable	Nil	N/A - Not applicable
<b>(b) Transportation impacts (during construction and operation)</b>					
4.2.(b).1. Effect on existing transportation systems (rail, water, road, air, or pedestrian, both public and private), altering present patterns of circulation, modal split or movement of people and/or goods.	Minor inconvenience will be present during the construction of the park, including access to a bus stop shortly during the upgrade of this amenity.	Bus stop expense and formalisation	During construction, short period (estimated 2 weeks)	<p>Reduce the expected time frame that the bus stop is to be modified by removing back and for the site fence when required. Allow public access to the new concrete platform for the bus stop while the remainder of the site is being constructed.</p> <p>Connect new formalised bus stop pad to the existing footpath</p>	1 – Minor negative impact

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				for accessible access.	
<p>4.2.(b).2. Encourages directly or indirectly additional traffic:                      a. during construction                      b. during operation.</p>	<p><u>Construction traffic</u>                      Construction traffic associated with the proposed activity will occur during the construction phase, with the delivery of materials and the daily workforce. Peak hour construction traffic has been calculated with a predicted peak of up to 13 vehicle trips per day consisting of eight light vehicles and five heavy vehicles.</p> <p>The site is well serviced by road infrastructure with direct links to local, state, and regional roads. Overall, given the relatively short duration of construction works and the relatively low level of construction traffic generated by proposed activity, it is considered that there will be a negligible impact to the surrounding road network and there is adequate space on site to temporarily accommodate a construction compound with an associated parking area for the workforce.</p> <p><u>Operational traffic</u>                      Parking is not proposed as part of the proposed activity and therefore it is expected that visitors to the park will utilise existing parking (i.e., on street or at the nearby exiting car parks at The Boulevard to the north-west and at the Prince Street Park to the south). The site is also well serviced by</p>	<p>Eight light vehicles and five heavy vehicles per day (average expectations during the peak of construction)</p>	<p>During the construction period.</p>	<p>Construction traffic ameliorative measures will be incorporated in the CEMP, including site access and parking arrangements, detailed scheduling and staging of the construction activities.</p> <p>Contractors will provide Pedestrian and Traffic Management Plans prior to construction to mitigate potential risks.</p> <p>Ongoing monitoring of the space will be engaged post construction to identify if</p>	<p>1 – Minor negative impact</p>

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
	<p>public transport with the bus stop immediately adjacent to the north on the south side of Avenel Street.</p> <p>Overall, given that the site is well serviced by existing road infrastructure and will good access to public transport, it is considered that any traffic impacts associated with the ongoing use of the park will be negligible.</p>			additional resourcing for parking is required or other mitigation measures such as line marking or timed parking spaces.	
4.2.(b). Any other impacts on transport or traffic	No other potential impacts of traffic or transport have been identified.	Nil	Nil	Nil	N/A - Not applicable

**Table 4.3 Any environmental impact on the ecosystems of the locality**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.3.1. Potential direct impacts (e.g., removal of vegetation, disturbance of existing watercourses or water bodies etc)</p>	<p>The proposed activity is located adjacent to the creek line (Orphan School Creek) however no works are involved along the creek line.</p> <p>The proposed vegetation removal will be approximately 0.12ha of urban exotic vegetation and 0.38ha of manicured lawn. A Flora and Fauna Assessment has been prepared to identify the potential impacts the activity may have upon the biodiversity values of the area.</p> <p>The Flora and Fauna Assessment concludes that the activity is unlikely to result in any significant impact under the Biodiversity and Conservation Act 2016 or the Environmental Protection and Biodiversity Conservation Act 1999.</p>	<p>The proposed activity will result in the removal of 0.12ha of urban exotic/native vegetation and 0.38ha of manicured lawns within the scope of works.</p>	<p>During construction period.</p>	<p>Most of the vegetation removed as part of the construction have been noted as exotic or lawns. This reduces the presence of exotic species as a result. As part of the Flora and Fauna report, all planting restored into the project will be required to be native to encourage ecology and native diversity.</p> <p>In total three fig trees classified as 'Urban Exotic' will be removed as part of the works. Additionally, a cluster of juvenile Eucalyptus trees planted as part of the Queens Jubilee will be relocated closer towards the</p>	<p>Positive Impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<p>Tennis Courts or as determined by Assets during construction.</p> <p>The conditions set out in section 6.1 of the Flora and Fauna Assessment Report will be imposed during the construction period to ensure that the existing native vegetation on site are protected.</p>	
<p>4.3.2. Potential indirect impacts (e.g., overshadowing vegetation, discharge of stormwater etc)</p>	<p>Increased overland stormwater discharged from impermeable surfaces.</p>	<p>Discharge to stormwater during rain events.</p>	<p>During construction and for the ongoing use of the recreation area.</p>	<p>The ameliorative measures for sediment and erosion control are considered further in the Flora and Fauna Assessment and in ameliorate measures summary table in Attachment A1.</p> <p>Control measures include, encourage natural direction of stormwater</p>	<p>1 – Minor negative Impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				discharge and increased planting nearest the creek to encourage macrophage filtration.	

**Table 4.4 Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.4.1. Effect on the scenic quality of the landscape when viewed from a public place	<p>No effect on the scenic quality when viewed from a public place.</p> <p>Additional landscaping is proposed adjacent to Avenel Street, whilst advanced trees along Sackville Street will be retained.</p> <p>The embellishment of the Park will uplift the site that is majorly a relative flat site with minimal landscaping that will enhance the streetscape.</p>	Not applicable.	Not applicable.	Nil.	P – Positive impact
4.4.2. Effect on the scenic quality of the landscape when viewed from private property	<p>No negative impact. There will be a change in the landscape when viewed from the adjoining residential properties and the streetscape however this will be a positive impact with the uplift of the Park. Additional landscaping is proposed throughout the site and along the Avenel Street frontage of the site.</p>	Not applicable.	Not applicable.	Nil.	P – Positive impact
4.4.3. Effect on views obtainable from a public place	<p>There will be no effect on views obtained from a public place. The landscaping and hardstand treatment of the park will enable a viewer of the space to readily identify the purpose and intended use of the site as a park and will demonstrate an improved connection to surrounding public open space/ recreational areas</p>	Not applicable.	Not applicable.	Nil.	P – Positive impact

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
	creating a distinction of the appropriate land uses.				
4.4.4. Effect on views obtainable from private property	Minor impact may occur from the proposed lighting within the Park however is required to improve the safety and amenity for the Park. The lighting will be constructed in accordance with the Australian Lighting Standards to ensure impact is minimal upon the surrounding area.	Within the scope of works area.	Operational.	Lighting to be constructed in accordance with the Australian Lighting Standards.	1 – Minor negative impact.
4.4.5. Will the proposal affect access to or the use of existing public open space or recreational facilities?	The proposed activity will provide opportunities for additional physical activities to be undertaken on the site. The variety of activities that can be undertaken will ensure there is a wide range of the community that can be engaged in using the park.	Not applicable.	Not applicable.	Nil.	P – Positive impact
4.4.6. Will the activity affect access to or the use of an area or facility of scientific value, for educational or other purposes?	Not applicable.	Not applicable.	Not applicable.	Nil.	N/A - Not applicable
4.4.7. Will the activity affect the environmental quality of the locality during construction and operation phase?	The proposed activity will have a minor impact on the environmental quality of the locality with regards to noise, air and traffic during construction phase only. The embellishment of the Park will improve the environmental quality by upgrading the existing services and infrastructure such as landscaping and drainage on the site to ensure the	Within the scoping area and surrounding residential properties during construction phase only.	During construction phase.	A Construction Environmental Management Plan will be prepared prior to the commencement of works to ensure environmental	1 – Minor negative impact

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	<p>activity will not impact upon the environment and surrounding area.</p> <p>Potential construction noise impacts are considered further in Assessment Consideration 4.12.(d).1 (below).</p> <p>Potential construction air quality impacts are considered further in Assessment Consideration 4.12.(a).1-2 (below).</p>			<p>impacts regarding noise, traffic, dust, erosion etc are mitigated. Contractors will be required to ensure they comply with the provisions set out within the CEMP.</p> <p>Noise impact ameliorative measures: Include restricting working hours between 7:00am and 6:00pm on weekdays to prevent likely hours that will cause a disturbance</p> <p>Air quality ameliorative measures: Air suppression tactics including watering soil to prevent blow</p>	

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				away material, reduce the amount of material being moved around and potential	
4.4.7. Any other impacts on the environmental quality or value of the locality?	No other impacts on the environmental quality or value of the locality have been identified.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.5 Any effect on a locality, place or building having aesthetic, anthropological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.5.1. Effect on a local heritage item or conservation area	<p>There are no Heritage Items listed under FLEP 2013 on the site.</p> <p>The site is not listed in FLEP 2013 as being within a Heritage Conservation Area however is in the vicinity of two local heritage items (LHI#30 &amp; LHI#27). The REF was referred to Council's Heritage Advisor and raised no concerns regarding the impact of the activity on the heritage items.</p>	Not applicable.	Not applicable.	Nil.	N/A – Not applicable
4.5.2. Effect on any other item on the State Heritage register *note. Further consent may be required under the Heritage Act 1977 if any activities directly impact SHI	There are no items listed on the State Heritage Inventory on the site.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.5.3. Effect on the archaeological or cultural heritage value of any aboriginal object or place (note if this is likely to occur, approval under the National Parks & Wildlife Services Act may be required).	<p>The subject site is located within the Aboriginal Potential Investigation Area.</p> <p>The Due Diligence Aboriginal Heritage Assessment (provided in Attachment A3 and summarised in Section 4 of this REF) identified that the upper part of the soil profile within the site, to a depth of 0.4 m to 0.5 m below the current ground surface, appears to comprise fill,</p>	Potential for Aboriginal Heritage to be uncovered during construction within the scope of work area.	During construction period.	<p>It is recommended that the following protocols be implemented as part of the REF:</p> <p>An Aboriginal heritage induction should be provided to the works team by Gandagara LALC in order to outline the statutory protection provided by the National</p>	2 – Potentially significant negative impact requiring further assessment

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	<p>and is unlikely to contain in situ Aboriginal archaeological deposits. However, an alluvial unit was identified below the fill, where archaeological deposits may be present.</p> <p>The assessment concluded that, if ground disturbance can be contained within the previously disturbed the upper 0.4 m to 0.5 m of the soil profile, the proposed activity would not have any impacts to Aboriginal heritage and there would be no requirements for further Aboriginal heritage investigations to be undertaken.</p> <p>It should be noted that the concept design was reviewed during the preparation of the Aboriginal Due Diligence Assessment Report and in this regard, the report recommends that once the detailed design of the proposed activity is available, the report shall be updated and reviewed by the Gandagara Local Aboriginal Land Council.</p>			<p>Parks and Wildlife Act 1974 and outline the procedure to be followed in the event of an unexpected find.</p> <p>Gandangara LALC should be provided with the opportunity to attend the initial site works, to inspect the sub-surface conditions.</p> <p>If any Aboriginal objects or bones suspected of being human are identified during excavation and/or construction, site workers must:</p> <ul style="list-style-type: none"> <li>• Not further disturb or move these remains.</li> <li>• Immediately cease all work at the location.</li> <li>• Immediately cease all work at the location.</li> <li>• A copy of the final version of the report should be forwarded</li> </ul>	
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				<p>to the Gandangara LALC and to:</p> <ul style="list-style-type: none"> <li>- The Registrar</li> <li>- Aboriginal Heritage Information Management System</li> <li>- Heritage NSW, Locked Bag 5020 Parramatta NSW 2220</li> </ul> <p>All works are to remain in the above 500mm to 400mm fill soil profile.</p> <p>If ground disturbance cannot be contained within the upper 0.4 m to 0.5 m of the soil profile or existing service trenches, then an Aboriginal heritage impact assessment will be required to be undertaken in accordance with relevant guidelines.</p>	
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4.5.4. Any other impact	No other heritage impacts have been identified.	Nil.	Nil.	Nil.	N/A – Not applicable
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**Table 4.6 Any impact on the habitat of Protected Fauna (within the meaning of the Biodiversity Conservation Act 2016)**

**Note:** Liaise with Natural Resources Team Leader to determine whether a 5 Part Test in accordance with the Environmental Planning Assessment Act 1979. Part 1, CI 1.7 is required.

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.6.1. Is the proposal likely to have any direct impact on the habitat (by removal of vegetation etc) of protected fauna as defined by the Biodiversity Conservation Act 2016 which includes all species of fauna except as outlined at Schedule 1, 2, 4, 5 and 6 of that Act?</p>	<p>Potential to impact habitat during construction</p>	<p>The FFA (provided in Attachment A7 and summarised in Section 4 of this REF) identifies six hollow bearing trees along the along the creek frontage.</p>	<p>During construction period.</p>	<p>The ameliorative measures for vegetation removal are considered further in the FFA and in ameliorate measures summary table in Attachment A1.</p> <p>This includes completing a site survey to check for animals roosting of presence prior to construction and removing them. Additionally, provisions of native</p>	<p>1 – Minor negative impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<p>vegetation to facilitate increased native habitat for fauna.</p> <p>No hollow trees will be removed as part of this project.</p>	
4.6.2. Are there any potential indirect impacts to the habitat of the same protected fauna? (e.g. overshadowing, water run-off, removal of vegetation for habitat, lighting, noise)	The Flora and Fauna Assessment concludes that there is a low likelihood of threatened fauna species, potential foraging and breeding habitat for species in their migratory nature within the site. In this regard it is unlikely to significantly impact on those species.	Not applicable.	Not applicable.	Nil.	N/A - Not applicable
4.6.3. Any other impacts	No other impacts have been identified.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.7 Any endangering of any species or animal, plant or other form of life whether living on land, in water or in the air**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.7.1. Any direct or indirect effect on National Parks & Wildlife Service Register of critical habitat	There is no critical habitat identified on the site.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.7.2. Any direct or indirect effect on land subject to a conservation agreement or plan of management under the National Parks & Wildlife Act 1974	There is no conservation agreement or plan on the site.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.7.3. Any direct or indirect effect on land subject to a joint management agreement under the Biodiversity Conservation Act 2016.	There is no management agreement on the site.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.7.4. Any direct or indirect effect on land subject to any Stewardship agreement under the Biodiversity Conservation Act 2016.	There is no stewardship agreement on the site.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.7.5. Any direct or indirect effect on land identified as a wilderness area or in the locality of a wilderness area under the Wilderness Act 1987. <b>Note:</b> If so, approval under that Act would be required.	There is no wilderness area identified on the site.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.7.6. Any direct or indirect effect on critical habitat, threatened species, population or ecological communities and their habitats, or any other protected fauna as defined by the National Parks &amp; Wildlife Act 1974. <b>Note:</b> if any significant impacts are likely, a Species Impact Statement (SIS) would be required (Section 112(1B) of EPA Act) and there would be a requirement to consider any applicable recovery plan or threat abatement plan (Section 112(1A) of EPA Act) and obtain concurrence of the Director General of the National Parks &amp; Wildlife Service (Section 112C of EPA Act).</p>	<p>There is no critical habitat, threatened species, population, or ecological communities on the site.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>	<p>N/A - Not applicable</p>
<p>4.7.7. Any direct or indirect potential impact upon other important flora or fauna habitat. Refer to any existing studies undertaken by Council.</p>	<p>There is potential for flora and fauna habitat to be disturbed during construction. The matters have been addressed throughout Table 4.7 of the REF.</p>	<p>There are hollow bearing trees within the native vegetation along the Orphan Creek frontage.</p>	<p>During construction period</p>	<p>The ameliorative measures for vegetation removal are considered further in the FFA and in ameliorate measures summary table in Attachment A1.</p> <p>Site sweeps prior to construction will be conducted to ascertain the presence of fauna species, if</p>	<p>1 – Minor negative Impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				any, to be relocated.  All fauna addressed for demolition are either Urban Exotic or Exotic in nature. The removal of these weed species is beneficial to the local ecology. All planting thereafter will be native species only to encourage native biodiversity.	
4.7.8 Will there be any adverse impact on the condition, ecological value and significant of the fauna and flora on the land	There will be no adverse impact on the ecological value of the site or surrounding area.	Not applicable.	Not applicable.	The conditions and Summary of Safeguards of the REF shall ensure the ecological value of the surrounding area is protected from any potential impact of the proposed activity.	N/A - Not applicable
4.7.9. Any other impacts	No other impacts identified.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.8 Any long-term effects on the environment**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.8.1. Any potential irreversible impacts upon the landscape (e.g., loss of natural rock feature, removal of watercourse etc)</p>	<p>The proposed activity will be contained within the previously disturbed portion of the site and be located outside of the immediate proximity of the Orphan School Creek. Minor impact will occur within the area disturbed that contains no existing native vegetation and hollow bearing trees.</p> <p>Some vegetation removal is to occur to urban exotic and exotic species, inclusive of turf, and additional landscaping is provided throughout the proposed activity to re-introduce native planting back into the area to improve the natural landscape of the environment.</p>	<p>Within the scope of works area will be replanted with landscape with a mix of non-native and native species to improve the existing landscape.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>	<p>P – Positive impact</p>
<p>4.8.2. Any residual chemicals to be used that may influence humans, pets or native flora and fauna</p>	<p>There will be no residual chemicals used on the site however may occur during ongoing maintenance of landscaping and pest control for the activity however this will be maintained by Council's Assets Division and ensure any potential chemicals used on site will be in accordance with the manufacturers specification and safety data sheets.</p>	<p>Within the scope of works area.</p>	<p>Maintenance of the Park.</p>	<p>Not applicable.</p>	<p>N/A - Not applicable</p>

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4.8.3. Long term impacts associated with other factors such as noise, traffic etc (as assessed elsewhere)	Potential long-term impacts associated with the ongoing use of the park as a recreation area, such as noise and traffic, will be minimal in the context of the surrounding environment, limited to the daytime use of the park, and unlikely to cause significant adverse long-term impacts.	Within the scope area of the Park.	During operation of the Park.	Ongoing monitor of Council's recreational facilities will be reviewed post operation of the activity to ensure any potential impacts are monitored and minimised to reduce the impacts to surrounding sensitive land uses and surrounding catchment area.	1 – Minor negative Impact
4.8.4. Any other impact	No other impacts on the long-term effects on the environment identified.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.9 Any degradation of the quality of the environment**

<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
4.9.1. Other potential impacts not discussed elsewhere	All potential impacts have been considered.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.10 Any risk to the safety of the environment**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.10.1. Will the activity result in an asset being subject to risk from flooding?</p>	<p>The development site is bound by Orphan School Creek to the south. The flood study for Orphan School Creek, Green Valley Creek and Clear Paddock Creek 2008 identifies the site as being subject to a medium flood risk.</p> <p>As considered further in Section 4, Council’s Flood Catchment Team and raised no issues, subject to the following conditions:</p> <ul style="list-style-type: none"> <li>• The existing flow path should not be obstructed at any time. It seems that the proposed work is within the medium flood risk area as such the Hydraulic Engineering consultant confirm that the proposed work does not obstruct the flow and make flooding worse to adjacent properties.</li> <li>• Submit an engineer’s report to certify any structure within the medium risk zone can withstand the forces of floodwater, debris, and</li> </ul>	<p>Up to up to and including the 100-year ARI.</p>	<p>For the operational life of the park.</p>	<p>The engineering review undertaken (refer Section 4) confirmed that the proposed activity will likely satisfy the following flood related development controls:</p> <ul style="list-style-type: none"> <li>• The proposed civil engineering works will not significantly obstruct the existing overland flow path, and the effects of the proposed works are likely to be negligible.</li> <li>• The proposed structures are generally limited to low height walls, playground equipment and skate park features.</li> </ul>	<p>1 – Minor negative impact</p>

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	<p>buoyancy up to and including the 100yr ARI flood event plus 0.5m freeboard.</p> <ul style="list-style-type: none"> <li>• Any structure will have flood compatible building components up to and including the 100 yr ARI flood event plus 0.5m freeboard.</li> </ul>			<p>The following shall be undertaken as part of the detailed design to ensure that the proposed activity will meet the relevant flood related development controls:</p> <ul style="list-style-type: none"> <li>• All structure shall be designed to:                             <ul style="list-style-type: none"> <li>a) withstand the forces of floodwater, debris, and buoyancy up to and including the 100-year average recurrence interval (ARI) flood event; and</li> <li>b) use flood compatible building materials up to and including the</li> </ul> </li> </ul>	

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<p>100yr ARI flood level.</p> <ul style="list-style-type: none"> <li>• An appropriately qualified engineer shall provide certification of compliance with items a) and b) as part of the final design package.</li> <li>• Design changes were made to prevent creating charged overland flow adjacent to neighbouring properties. This included the removal of proposed trees and mounting on the western fringe of the design.</li> <li>• Additional design measures to remove</li> </ul>	

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
				additional overland drainage pressures included ensuring marrying down new levels to existing levels nearest the existing shared path nearest the creek.	
4.10.2. Will the activity result in an increase flood impact on other properties, infrastructure, or services?	As above.	As above.	As above.	As above.	As above.
4.10.3. Will the activity result in an increase flood impact on other properties, infrastructure, or services?	As above.	As above.	As above.	As above.	As above.
4.10.4. Will the activity result in an increase in the bush fire risk to other properties, services, or infrastructure?	The site is not mapped as bushfire prone land.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.10.5. Will the activity result in any asset that would be subject to potential acid sulphate soils?	The site is not mapped as containing acid sulphate soils.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.10.6. Will the asset be subject to any potential risks associated with land instability?	The Geotechnical Assessment (provided in Attachment A6 and summarised in Section 4 of this REF) identified that the site was generally suitable for the proposed activity and recommended several measures to be implemented in relation to structural earthworks and footings.	Within the scope of works area.	Ongoing operation of the Park.	Ameliorative measures are provided in the Geotechnical Assessment (summarised in Section 4 of this REF) and in the ameliorative measure's summary table to ensure all works involving earthworks and footings to be in accordance with the relevant Australian Standards (Refer to the Summary of Safeguards in Attachment A1)	1 – Minor negative Impact
4.10.7. Is the activity to be undertaken on slopes of greater than 18° with potential erosion problems?	The site has slopes of generally <5% however sediment and erosion control measures will be in place during construction to avoid any impacts.	Within the scope of works area.	During construction phase.	Sediment and Erosion Control measures to be implemented during construction phase. Refer to Summary of Safeguards in Attachment A1 in the REF.	N/A – Not applicable
4.10.8. Is the area within a known subsidence or slip area?	The site is not within a known subsidence or slip area. The Park incorporates pervious areas such as footpaths that will be designed	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	to avoid potential of risks such as slips.				
4.10.9. Is the area subject to sodic or highly permeable soils?	The site is not subject to sodic or highly permeable soils.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.10.10. Is the area subject to salinity or potential salinity problems?	<p>The PSI (provided in Attachment A4) identified that the site is located within an area of high salinity potential. However, as this is not a building the issues that affect the park include:</p> <ul style="list-style-type: none"> <li>• Shortening of the useful life on infrastructure e.g., degradation of bitumen and concrete including deterioration of concrete slabs and corrosion of underground services, and corrosion of metal elements e.g., power poles.</li> <li>• Possibly poor plant growth (you may have to select plant species which could tolerate the potential salt levels in the soils)</li> </ul>	Site wide	During Construction	<p>Several ameliorative measures are applicable where required and may include...</p> <ul style="list-style-type: none"> <li>- A high impact damp proof membrane was laid under the slab (as per Clause 3.2.2.6 of the BCA), provided a Class 32 MPa(N32) concrete was used</li> <li>- Application of a concrete sealer/protective coating</li> <li>- Ensure effective underdrainage of all municipal infrastructure assets (pipes, facilities, buildings etc)</li> <li>- Use of corrosion-resistant materials</li> </ul>	1 – Minor negative impact

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<ul style="list-style-type: none"> <li>- Drain water away from infrastructure to avoid ponding</li> <li>- Maintain drainage systems (e.g., ensuring they are working effectively – including free of debris and blockages etc)</li> <li>- Avoid overwatering</li> <li>- Apply mulch (as opposed to large, grassed areas) where possible</li> <li>- Plant low water demanding plants</li> <li>- Plant large native trees and shrubs in open spaces where possible</li> </ul>	
4.10.11. Is the site subject to any potential land contamination? If there is uncertainty, there may be a need to undertake preliminary site investigation, including review of the history of the site use, reference to aerial photography and Council records.	<p>The PSI (provided in Attachment A4 and summarised in Section 4) identified that there is potential for site contamination during construction.</p> <p>A Detailed Site Investigation (DSI) was carried out to determine the extent of the works. The report concluded that among the 34 pits, one pit (No. TP22) uncovered</p>	Five potential areas of environmental interest and potential contamination source.	During construction	<p>Temporary fencing to be erected around investigation locations TP22 and TP22a.</p> <p>Remediation and validation of the Site as per the Remediation Action Plan (RAP) including:</p>	2 – Potentially significant negative impact requiring further assessment

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	<p>bonded asbestos. Additional step out test pits were carried out 5m from TP22, one indication asbestos as well (No. TP22a) at 0.3m depth. This indicated a potential complete Source-Pathway-Receptor (S-P-R) linkage exists between asbestos within shallow soils at the site, and current and future site users if necessary, steps are not undertaken, despite potential for contamination from this source was considered to be low in the PSI</p> <p>Refer to Part 4 Summary of Key environmental issues of the REF for the detailed assessment regarding contamination of the site.</p>			<ul style="list-style-type: none"> <li>- Delineation of the contamination area of influence</li> <li>- Off-site disposal to a appropriately licensed facility.</li> </ul> <p>Post remediation, Contractor to adhere to the unexpected finds protocol as part of a Construction Environmental Management Plan (CEMP) to outline measures to be adopted during the civil earthworks stage of construction to manage potential unexpected asbestos finds in areas of outside of those covered by the RAP.</p> <p>An investigation of soils within AEC 4 (Sydney Water works compound) should be</p>	

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				undertaken by a suitably qualified consultant to characterise this part of the Site, following decommissioning of the compound.  Validation testing post remediation to confirm.	
4.10.12. Any other potential risks to be considered?	No other potential risks identified.	Nil.	Nil.	Nil.	N/A - Not applicable

**Table 4.11 Any reduction in the range of beneficial uses of the environment**

<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
4.11.1. Will the activity affect the use of land with a high agriculture capability and suitability?	The proposed activity will not affect the use of any agricultural land.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.11.2. Will any significant extractive resources be sterilised?	The proposed activity will not impact any significant extractive resources.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.11.3. Any potential impact upon ground water?	The proposed activity will not impact groundwater.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
4.11.4. Any affect on access to public open space (existing or potential) where desirable?	The proposed activity will increase access and usability of the existing open space. The range of facilities that will be offered within the park upgrade provide an opportunity for inclusive physical movement and play. Additional use of the site is expected by local residential and visitors from outside of the local area.	Not applicable.	Not applicable.	Not applicable.	P – Positive impact

**Table 4.12 Any pollution of the environment**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<b>(a) Air impacts</b>					
4.12.(a) 1. Air quality impacts with economic, health, ecosystem, or amenity considerations.	Potential air quality impacts will comprise dust generation and vehicle/machinery emissions during construction.	Minor and temporary for the duration of construction.	During construction period.	Construction shall be limited to the following hours: <ul style="list-style-type: none"> <li>Monday to Friday: 07:00 to 18:00</li> <li>Saturday, Sundays and public holidays: Nil</li> </ul> Specific air quality ameliorative measures (e.g., progressive excavation of topsoils, dust suppression with water during construction etc) will be incorporated in the CEMP.	1 – Minor negative impact
4.12.(a) 2. Air impacts with greenhouse or ozone damage consideration.	There will be very minor quantities of greenhouse gas emissions generated during construction from the operation of machinery and from traffic generation.	Minor and temporary for the duration of construction.	During construction period.	The construction period shall be managed efficiently to minimise the use of machinery and vehicles	1 – Minor negative impact
4.12.(a) 3. Any other impacts	No other impacts identified.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
<b>(b) Water impacts</b>					

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.12.(b) 1. Impacts from change in water quality with economic, health, ecosystem or amenity considerations	There will be no change to the existing environment in relation to water quality. Stormwater Design will be designed in accordance with Council's Stormwater Management Policy 2017. The REF was referred to Council's Development Engineers and raised no issues.	Not applicable.	Not impact.	Not applicable.	N/A - Not applicable
4.12.(b) 2. Any other impacts on water or from the use of storage of water	No other impacts on water or from the use of storage of water identified.	Not applicable.	Not applicable.	Not applicable.	N/A - Not applicable
<b>(c) soil and stability impacts</b>					
4.12.(c).1. Potential for soil contamination (intentional or unintentional), salination, acidification?	Asbestos contamination is located on site as per the attached Detailed Site Investigation. The Bonded contamination is isolated to the North-eastern corner of the site. Council intends to remove the contaminated fill off site and completely decontaminate site. The removal process could potentially spread the contaminated fill.	The contaminated zone as noted in the Detailed Site Investigation is isolated to the North-eastern corner of the site.	During remediation works	Remediation is to be carried out by qualified remediation specialists and to be carried out in accordance with the Remediation Action Plan and Asbestos Management Plans.  Validation testing to be completed post-remediation to confirm the contamination has been entirely removed.	2 – Potentially significant negative impact requiring further assessment

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	Refer to Part 4 Key summary of environmental issues of the REF for further details.				
4.12.(c).2. Any other impacts on soils?	No other impacts on soils have been identified except that has been already addressed within Part 4 of this REF.	Nil.	Nil.	Nil.	N/A – Not applicable
<b>(d) noise and vibration impacts</b>					
4.12.(d).1. Results in increased noise or vibrations to unacceptable levels for the surrounding communities	The proposed construction activity will generate noise and have the potential to impact the amenity of the occupiers of nearby residential properties, the closest of which are located adjacent to the north of the site on the opposite (northern) side of Avenel Street.	Minor and temporary for the duration of construction	During construction period	The CEMP will describe in detail the construction phases, programme, processes, and equipment used, noise impact assessment and proposed ameliorative measures, including that: <ul style="list-style-type: none"> <li>• plant shall be operated in a conservative manner (no over-revving) and shutdown when not in use.</li> <li>• the quietest suitable machinery shall be available for each activity.</li> <li>• noisy plant/machinery shall not be operated simultaneously, and noise impacts will be minimised where practicable.</li> </ul>	1 – Minor negative impact

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Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
				<ul style="list-style-type: none"> <li>• broadband reverse alarms shall be utilised in lieu of the traditional high frequency type reverse alarm.</li> <li>• toolbox meetings, training and education shall be provided to drivers and contractors visiting the site during construction, so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities.</li> <li>• signage shall be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and</li> <li>• project related community consultation forums shall be utilised where necessary to notify residences within proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.</li> </ul>	
4.12.(d).2. Affects sensitive properties (educational, hospitals, residential, heritage)	There are no sensitive facilities near site, however, there are residential properties near the site on the eastern boundary and	Minor and temporary for the duration of construction	During Construction	As per the above. A notification letter will be sent to nearby residents prior to the commencement of works. The assigned project manager will be available for contact regarding any	1 – Minor negative impact

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
	across Avenel Road north of the site.			potential concerns raised to mitigate any environmental impacts.	
4.12.(d).3. Any other impacts from noise, blasting or vibration	Potential noise generated from the operation of the Park however is likely to be minimal to the existing noise levels for sensitive land uses given the site is located adjacent to Sackville Street that is an busy road that generates noise throughout the day.	Within the scope area.	Operational phase.	Nil.	N/A – Not applicable
<b>(e) any other physical or pollution impacts</b>					
4.12.(e).1. Any other physical or pollution impacts.	No other physical or pollution impacts have been identified.	Nil.	Nil.	Nil.	N/A – Not applicable

**Table 4.13 Any environmental problems associated with the disposal of waste.**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
4.13.1. Will any demolition work be undertaken in accordance with Australian Standard AS2601-1991 The Demolition of Structures?	No demolition works of building structures are proposed.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.13.2. Are materials associated with the project to be recycled, if possible?	Most of the waste generated by the proposed activity will either be recycled or disposed off-site as general solid waste, depending on its type. The exception is the disposal of contamination wastage which will be disposed of at an appropriate facility.	Construction wastes will include concrete paving, redundant play structures, building materials, scrap metal and cabling material, trees, shrubs and topsoils.  Limited amounts of waste generated by users of the park.	During construction period and ongoing for the life of the park.	Construction waste ameliorative measures will be incorporated in the CEMP to incorporate a waste management plan to address all waste materials likely to result from the proposed activity with details of the estimated waste volumes, onsite storage, and management, proposed re-use of materials, designated waste contractors, and identification of landfill sites and suitably licenced waste facilities.  A series of bins will be located throughout the site for both general waste and recycling.  Waste collection will be undertaken by Council as part of their ongoing maintenance of the park.	1 – Minor negative impact
4.13.3. Will there be likely any contaminated material required to be removed and disposed?	Contaminated material, referred to in the above, will be removed and disposed of as per the	Extent of contaminated soil – a section of the	During construction period	All contaminated materials to be disposed of at a suitably qualified tipping facility. All documentation pertaining to the tipping to be collected	1 – Minor Negative Impact

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
	Remediation Action Plan and Asbestos Management Plan.	Northern quadrant of the site.		by contractor and provided to Council as proof.	
4.13.4. Is there adequate area available on the site for the management of waste during the undertaking of the activity?	A series of bins will be located throughout the site for both general waste and recycling.	General waste generated throughout construction	During Construction	Contractors will need to submit a Site Management Plan to delineate and nominate stockpile and storage areas and must be approved by Council prior to commencement.	1 – Minor negative impact
4.13.5. Will all waste be appropriately removed and disposed of at the completion of the project?	As above in response to Assessment Consideration 4.13.2.	As above.	During Construction	As per the above relevant to table 4.13 of the REF.	1 – Minor negative impact
4.13.6. Is there any need for on-going waste management measures?	There will be ongoing operational waste from the users of the park upgrades.	Limited amounts of waste generated by users of the park.	Operational	<p>A series of bins will be located throughout the site for general waste only. Waste collection will be undertaken by Council as part of their ongoing maintenance of the park.</p> <p>Council has confirmed internal approvals from waste management for the number and location of new waste bins to manage to increase in general user wastage.</p>	1 – Minor negative impact

**Table 4.14 Any increased demands on resources (natural or otherwise) that are likely to become in short supply**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<b>(a) Resource use impacts (during operation and construction) – community resources</b>					
4.14.1. Any significant increase in the demand for services and infrastructure resources including roads, power, water supply and drainage, waste (including sewage) management, education, medical and social services?	<p>The future recreation area will be connected to existing services (i.e., power, water, and stormwater). There will be no significant increase in demand for these services and infrastructure.</p> <p>Exeloo will be replacing an existing toilet block and will not be taking on extra demand.</p> <p>Minor increased demands will come from the inclusion of CCTV cameras, water taps (for maintenance), drinking fountains and misting stations.</p>	Minor site wide implements	Operational	<p>Select equipment according to their appropriateness in reducing overall impact on Council's operation including:</p> <ul style="list-style-type: none"> <li>- Anti-vandal maintenance taps</li> <li>- Timed equipment to reduce water expectation inclusive of drinking fountain and misting stations</li> <li>- Water safe equipment</li> <li>- Power sensitive surveillance equipment</li> </ul>	1 – Minor negative impact
4.14.2. Any significant resource recycling or reuse schemes to reduce resource usage?	Refer Assessment Consideration 4.13.2 regarding recycling of materials.	-	-	-	N/A – Not applicable
4.14.3. Any diversion of resources to the detriment of other communities or natural systems?	While the proposed activity will result in some increased demand on local and regional	Minor and temporary for	During construction period.	Resource requirements, particularly for water and general construction	N/A – Not applicable

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
	resources during construction, the development alone will not result in any resource becoming scarce or in short supply within the local or greater regional area.	the duration of construction.		materials, will be determined by the contractor as detailed design progresses.	
4.14.4. Any degradation of infrastructure such as roads, bridges?	There will be no degradation of infrastructure all works will be contained within the site.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.14.5. Any other impacts?	No other impacts identified.	Nil.	Nil.	Nil.	N/A – Not applicable
<b>(b) Resource use impacts (during operation and construction) – natural resources</b>					
4.14.1. Any disruption or destruction of natural resource (e.g., fish habitat or fish species) with impacts on industries based on these resources?	Potential for sediment to enter the creek from run-off during construction.	Minor and temporary for the duration of construction.	During construction period.	Water and sediment management controls will be implemented in accordance with an approved erosion and sediment control plan.  Sediment control plan to be provided to Council by Contractor prior to commencement of construction.	1 – Minor negative impact
4.14.2. Any disruption of existing activities (or reduction of options for future options) because of the natural resource demands of the proposal?	The natural resource demands will be limited to those required during the construction phase	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable

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<b>Assessment Consideration</b>	<b>Potential Impacts</b>	<b>Size, scope &amp; intensity of impacts</b>	<b>Duration of Impacts</b>	<b>Ameliorative Measures</b>	<b>Impact Assessment</b>
	and will not result in a disruption of existing activities.				
4.14.3. Any use which results in the wasteful use of large amounts of natural resources.	The natural resource demands will be limited to those required during the construction phase, which will not be in large quantities or wasted.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.14.4. Any use which results in the substantial depletion of natural resources.	The natural resource demands will be limited to those required during the construction phase and will not result in a disruption of existing activities.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.14.5. Any use which results in the degradation of any area reserved for conservation purposes.	The proposed activity will not result in the degradation of any area reserved for conservation purposes.	Not applicable.	Not applicable.	Not applicable.	N/A – Not applicable
4.14.6. Any other impacts?	No other impacts have been identified.	Nil.	Nil.	Nil.	N/A – Not applicable

**Table 4.15 Any cumulative environmental effect with other existing or likely future activities**

Assessment Consideration	Potential Impacts	Size, scope & intensity of impacts	Duration of Impacts	Ameliorative Measures	Impact Assessment
<p>4.15.1. Will the cumulative effects of the activity as determined above, be significant?</p>	<p>The proposed activity is for a new recreation area which is compatible with the surrounding open space and residential land uses.</p> <p>Potential cumulative impacts during construction (i.e., noise, traffic, and dust) will be limited to the construction period, and with the implementation of the ameliorative measures identified in this REF, and given the separation to other surrounding land uses, there are not expected to be significant adverse cumulative impacts.</p> <p>Potential cumulative impacts during operation in relation to noise and traffic are expected to be very minor given the scale of the proposed activity and the separation to other surrounding land use. Significant adverse cumulative impacts are not anticipated.</p>	<p>Minor and temporary for the duration of construction and ongoing for the life of the park.</p>	<p>During construction period.</p>	<p>Construction traffic, noise and air quality ameliorative measures as outlined in this REF.</p>	<p>1 – Minor negative impact</p>
<p>4.15.2. Is there likely to be any other development or activity in the area that is likely to generate impacts that compound with the proposed activity? If so, will the cumulative impacts be manageable and acceptable?</p>	<p>The proposed activity is located within an existing open space area, with the Endeavour Sports Park located west of the site and residential areas to the north and east. Potential cumulative impacts are likely to be manageable and acceptable given the type and scale of the proposed activity and the multiple access roads. Particularly as Endeavour Park's</p>	<p>Minor and temporary for the duration of construction and ongoing for the life of the park.</p>	<p>During construction period and ongoing for the life of the park.</p>	<p>Co-ordination between project managers during construction to mitigate traffic and resources issues.</p>	<p>1 – Minor negative impact</p>

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	primary access will be off Maud Street which does not link closely with the primary access to Avenel Park on Avenel Street, reducing the likelihood of traffic concerns.				
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## 5 Community Consultation

### 5.1 Notification policy

Undertake consultation with the community or user groups affected by the activity as considered appropriate. Fairfield Community Engagement Strategy provides guidance on notification protocols with the community. An example of consultation expectation appears below:

Development	Extent	Duration
Recreation facilities including amenity facilities	30 metres from all property boundaries	14 days
Recreation facilities (indoor)	30 metres from all property boundaries	14 days
Recreation facilities (outdoor) including playing fields, but not including grandstands, proposals with lighting, if light spill and artificial sky glow is minimised in accordance with AS/NZS 1158: 2007, Lighting for Roads and Public Spaces	30 metres from all property boundaries	14 days
Prior to construction – advisory only	20 metres from all property boundaries	2 days before commencement of works

Failure to adequately consult with the community or user groups will result in a delay of the final approval of the REF.

### 5.2 Consultation strategy

	Yes / No or explain answer
<b>Consultation is required</b>	Yes
<b>Consultation has occurred</b>	Consultation occurred between May to July 2023, this included letters to residents, signage for online surveys in nearby skate parks, online survey, and social media call outs.
<b>Consultation is proposed</b>	Completed

**Note:** A letter template to:

6. seek feedback on a project can be found through Objective reference A1619611.
7. advise construction about to begin can be found through Objective reference A1619613.

### 5.3 Consultation outcome

A total of 46 positive responses were received on the feedback from the community on what they would like for the site in which identified additional recreational facilities (A5920708).

Detail the outcome of community or user group consultations

Refer to attachments below:
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CONSULTATION 1_2023-05-31 interim 19-31 May 2023 - Avenel Park (incl Emerson & Bonnyrigg Town Centre Park)
CONSULTATION 2_2023-07-19 Avenel Park - Community consultation 20 May-30 June 2023 - Summary open-ended questions
CONSULTATION 3_Avenel Park - social media - consultation
CONSULTATION 4_2023-07-20 Skate parks Emerson Park & Bonnyrigg Town Centre Park 20 May-30 June 2023

## 6. Outcomes Assessment

Having regard to the foregoing information and the potential impacts of the activity, there will be:

Potential Impacts	Yes	No
a. No significant impact on the environment	Yes	
b. Possible impacts on the environment that require further investigation	Yes	
c. Minor impacts because of the activity which can be minimised by appropriate measures so that the activity would not result in any significant impacts (attach proposed mitigation measures to the assessment)	Yes	
d. Substantial impacts on the environment that will require further detailed consideration or modification of the activity. This will necessitate the preparation of an Environmental Impact Statement (EIS) and/or Species Impact Statement (SIS) prior to approval.		No
e. Significant impacts on the environment such that the activity should not proceed in its present form		No
f. Community consultation has occurred appropriate for the type of activity and potential impact	Yes	
g. Other comments		No

If concluded that the activity can proceed without any further assessment, review and determine whether any further approvals are nonetheless required and will be obtained.

N/A	Roads Act 1993 (RMS)	N/A	Protection of the Environmental Operations Act 1997
N/A	Forestry Act 1916	N/A	Mine Subsidence Compensation Act 1961
N/A	Heritage Act 1977	N/A	National Parks & Wildfire Act 1974
N/A	Rural Fires Act 1997	N/A	Water Management Act 2000
N/A	Mining Act 1991	N/A	Tree Preservation Order Authority to Remove any Trees (from Council)
N/A	Fisheries Management Act 1994	N/A	Notify Emergency Services, Fire Services & Ambulances (regarding road closures)

## 7. Authorisation of REF

### Project Manager REF Assessment Complete For Approval

I confirm that:

8. external, internal and community consultation requirements have been undertaken and issues raised considered and addressed;
9. key impacts have been assessed and where necessary ameliorative measures identified;
10. the worksheet is complete and all necessary attachments included; and
11. the Strategic Land Use Planning Team has been consulted where necessary to ensure compliance with the above.

### Project Manager

Project Manager's Name	Kim Brown		
Position	Landscape Design Officer		
Signed		Date	05/03/2023

### Division Manager Review and Approval

I confirm that I have reviewed and discussed this Part 5 Assessment Review of Environmental Factors – Worksheet and am satisfied that the project concept and current information is complete.

Division Manager's Name	Burak Turgutoglu		
Position	Acting Director City Delivery - Manager Design Services		
Signed		Date	06/03/2024

### Strategic Land Use Planning Review and Approval

I confirm that the environmental impact of the proposed activity is not considered to be significant and may proceed in its present form noting any ameliorative measures identified.

Planning Officer's Name	Kerren Ven		
Position	Senior Strategic Land Use Planner		
Signed		Date	06/03/2024

**Group Manager or delegate approval**

*Refer to Decision Statement (A5931057)*

**8. Attachments**

	Yes	No	Objective reference
A1 Conditions of the REF and Ameliorative measures table	X		See pg. 110-114.
A2 Concept design:	X		Figure 1 of REF
A2.1 Avenel Park - Tender Landscape Drawings	X		A5876797
A2.2 Avenel Park - Tender Civil Engineering Drawings - 80% Tender Issue	X		A5892175
A2.3 Avenel Park - Tender Skatepark Drawings	X		A5876795
A2.4 Avenel Park - Tender Landscape Specifications	X		A5876799
A3 Aboriginal Heritage Assessment	X		A5834726
A4 Preliminary Site Investigation	X		A5834724
A5 Detailed Site Investigation	X		A5834723
A6 Remediation Action Plan	X		A5898202
A7 Construction Environmental Management Plan	X		A5898205
A8 Engineering review of flooding	X		A5834725
A9 Geotechnical Investigation	X		A5834720
A10 Flora and Fauna Assessment	X		A5834722
A11 REF Layers – Avenel – Stormwater	X		A5512152
A12 REF Layers – Avenel – LEP 2013 Layers	X		A5512154
A13 REF Layers – Avenel – Heritage Layers	X		A5512155
A14 REF Layers – Avenel – Flooding Layers	X		A5512156
A15 REF Layers – Avenel – CSA Values Layers	X		A5512153
A16 Consultation 1	X		A5920710
A17 Consultation 2	X		A5920708
A18 Consultation 3	X		A5920709
A19 Consultation 4	X		A5920711
A20 Quantity Surveyor Report	X		A2592196
A21 Email – Salinity Advice – SMEC	X		A5861253
A22 Email – Natural resources acceptance	X		A5864501
A23 Email – Maintenance acceptance	X		A5864493
A24 Email - Heritage acceptance	X		A5892146
A25 Email – Environment acceptance	X		A5885717
A26 Email - Assets Acceptance	X		A5873283
A27 Email – Catchment Acceptance pt. 1	X		A5873281
A28 Email – Catchment Acceptance pt. 2	X		A5921398
A29 Email – Traffic Comments	X		A5932261

## **Attachment A1 – Ameliorate measures**

### **Conditions of REF:**

#### **PART A – ADMINISTRATIVE CONDITIONS**

##### **A1. OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this REF.

##### **A2. TERMS OF REVIEW OF ENVIRONMENTAL FACTORS**

The activity may only be carried out:

- (a) in compliance with the conditions of this REF.
- (b) in accordance with the REF document,
- (c) in accordance with the Civil Drawings specified in Attachment A2; and
- (d) in accordance with the Summary of Safeguards in Attachment A1 below.
- (e) In accordance with recommendations outlined in the following technical reports:
  - (i) *Aboriginal Due Diligence Assessment Report prepared by Coast History and Heritage dated 15 August 2023 (obj ref: A5834726)*
  - (ii) *Remedial Action Plan prepared by SMEC, reference. '30018088.V03', dated 20 October 2023 (obj ref: A5898202)*
  - (iii) *Geotechnical Investigations prepared by Green Geotechnics, reference 'GG11095.001'. dated 13 July 2023.*
  - (iv) *Flora and Fauna Assessment Report prepared by Narla Environmental, reference. 'FFCC25', dated March 2024.*

##### **A3. NOTIFICATION TO LANDOWNERS**

The Project Manager must notify adjoining landowners in writing within 20 metres of the site at least two (2) days prior to the commencement of any construction works on site in accordance with Council's Community Engagement Strategy.

##### **A4. UTILITIES AND SERVICES**

Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.

##### **A5. EVIDENCE OF CONSULTATION**

Where conditions of this REF requires consultation with **Sydney Water**, the Project Manager must:

- (a) consult with the relevant party and record keep correspondence, licensing, permits etc; and
- (b) record keep details of the consultation undertaken including:
  - (i) the outcome of that consultation, matters resolved and unresolved; and

- (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

**A6. STRUCTURAL ADEQUACY**

All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the Building Code of Australia (BCA).

**A7. COMPLIANCE**

The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

**A8. ADVISORY NOTES**

All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this REF removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

**PART B – SPECIFIC ENVIRONMENTAL CONDITIONS**

**B1. FLORA AND FAUNA**

1. Tree Protections

Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970) outlines that a Tree Protection Zone (TPZ) is the principal means of protecting trees on construction sites. It is an area isolated from construction disturbance so that the tree remains viable. Ideally, works should be avoided within the TPZ.

A Minor Encroachment is less than 10% of the TPZ and is outside the structural root zone (SRZ). A Minor Encroachment is considered acceptable by AS-4970 when it is compensated for elsewhere and contiguous within the TPZ.

A Major Encroachment is greater than 10% of the TPZ or inside the SRZ. Major Encroachments generally require root investigations undertaken by non-destructive methods or the use of tree sensitive construction methods.

2. Assign a Project Ecologist

Prior to commencing any clearing or construction activities that may impact new habitat features, fauna, or threatened species, the proponent shall commission the services of a qualified and experienced Ecologist. The Ecologist must hold a minimum tertiary degree in Science, Conservation, Biology, Ecology, Natural Resource Management, Environmental Science, or Environmental Management. Additionally, the Ecologist must be licensed with a current Department of Primary

Industries Animal Research Authority permit and New South Wales Scientific License issued under the BC Act.

No habitat features (e.g. nests or hollow-bearing trees) have been identified within the Subject Site. The Ecologist will provide advice and guidance on the management of habitat features, fauna, and threatened species throughout the project duration.

### 3. Unexpected Finds Procedure

In the event that any fauna, habitat features (e.g. nests) or threatened flora species are unexpectedly discovered during any clearing or construction works, the following steps shall be taken:

- (a) Cease work in the vicinity of the find immediately and notify the Environmental Site Representative.
- (b) Any new habitat that will be impacted (e.g. nests) must be removed with the Ecologist present.
- (c) Fauna species shall be managed in accordance with the Ecologist's recommendations, which may include self-relocation. If a fauna species is injured or suspected to be injured, a licensed fauna handler or rescuer (e.g., WIRES) shall be contacted for further assistance.
- (d) Threatened flora species shall be managed in accordance with the Ecologist's recommendations, which may include reassessment of works to avoid impacts to the species. If avoidance is not feasible, a translocation plan shall be implemented.
- (e) Work shall only resume when deemed safe to do so by the Ecologist.

### 4. Landscaping/ Revegetation

The proposed landscaping/revegetation of the Subject Site should involve the planting of species associated with the adjacent naturally occurring TEC vegetation type, Cumberland Blue Box Riverflat Forest. Hybrids and invasive species should be avoided as per Fairfield Biodiversity Strategy 2022: Principles for Selecting Flora Species: Landscape Planting.

Trees to be removed from the Queens Jubilee project are to be replaced with 45L stock.

### 5. Erosion and Sedimentation

Appropriate erosion and sediment control should be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. As a minimum, such measures should comply with the relevant industry guidelines such as 'the Blue Book' (Landcom 2004).

### 6. Storage and Stockpiling of Soil and Materials

Allocate all storage, stockpile, and laydown sites away from any vegetation that is planned to be retained. Avoid importing any soil from outside the site in order to avoid the potential of incurring indirect impacts on biodiversity values as this can introduce weeds and pathogens to the site. If materials are required to be imported for landscaping works, they are to be sterilised according to industry standards prior to importation to site.

### 7. Weed Eradication and Suppression

Weed removal is proposed as part of the proposal to improve the condition of the locally occurring native community that is present within the entire Project Area. Two (2) Priority Weed identified during the site assessment are to be completely removed from the Subject Site:

- *Olea europaea subsp. cuspidata* (African Olive); and
- *Anredera cordifolia* (Madeira Vine).

## **B2. ABORIGINAL HERITAGE**

### **1. Changes to ground disturbance**

Ground disturbance for the proposed activity shall be contained within areas that have previously been disturbed, that is, the upper 0.4-0.5m of the soil profile, and existing service trenches. The detailed design of the activity must ensure that all works requiring ground disturbance are contained within areas and depths known to be already disturbed.

Upon detailed design stage, the present *Aboriginal Heritage Due Diligence report by Coast History and Heritages dated 15 August 2023 (obj ref: A5834726)* should be updated, and reviewed by Gandangara LALC.

### **2. Unexpected finds protocol**

- (a) An Aboriginal heritage induction should be provided to the works team by the Gandangara LALC, in order to outline the statutory protection provided by the *National Parks and Wildlife Act 1974* and outline the procedure to be followed in the event of an unexpected find.
- (b) Gandangara LALC are to be provided with an opportunity to inspect or monitor excavation.
- (c) An unexpected finds protocol should be implemented for the life of the project. The unexpected finds protocol should be adhered to if unforeseen Aboriginal objects or bones suspected of being human are identified during the works, site workers must:
  - i. Not further disturb or move these remains.
  - ii. Immediately cease all work at the location.
  - iii. In the case of suspected human remains only, notify NSW Police. In the case of Aboriginal objects, notify the Heritage NSW Environment Line on 131 555 as soon as practicable and provide available details of the objects or remains and their location. The Gandangara LALC should also be notified to assist in the determination of appropriate management for the objects or remains.
- (d) Once finalised, copies of this report should be forwarded to the Gandangara LALC, and to the Registrar of the Aboriginal Heritage Information Management System.

## **B3. FLOOD MANAGEMENT**

### **1. Structures**

All structure shall be designed to withstand the forces of floodwater, debris, and buoyancy up to and including the 100-year average recurrence interval (ARI) flood event and use flood compatible building materials up to and including the 100yr ARI flood level.

An appropriately qualified engineer shall provide certification of compliance this condition as part of the final design package.

2. Flooding – General

- (a) Where possible, existing contours of the site are to be maintained.
- (b) Direction of flow shall be maintained.
- (c) Overflow to be maintained and unobstructed.

**B4. LIGHTING**

All outdoor lighting shall comply with, where relevant , AS1158.3.1-2005 Pedestrian Area Lighting and AS 4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.

**B5. CONTAMINATION**

1. Remediation Action Plan and Site Validation

All remediation works are to be undertaken in accordance with the Remediation Action Plan prepared by SMEC, reference no. '30018088.V03' dated 20 October 2023.

Removal of asbestos must be undertaken by a suitably licensed contractor and an asbestos clearance certificate must be provided before waste classification, disposal and site validation is undertaken.

2. Further Investigations

Prior to the commencement of works, the relevant recommendations detailed in the Detailed Site Investigation (Contamination), prepared by SMEC, reference no. '30018088.300' dated 22 September 2023 must be implemented.

The applicant must undertake additional sampling and analysis of potentially contaminated soils within AEC 4 (Sydney Water compound) following decommissioning of the site.

3. Unexpected Finds Protocol for Contaminated land and Asbestos

An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared as part of the CEMP before the commencement of any works and must be followed should unexpected, contaminated land or asbestos be excavated or otherwise discovered during construction. The Unexpected Contaminated Land and Asbestos Finds Procedure must outline the steps to be undertaken to identify, report and manage any signs of potential environmental concern encountered during earthworks/redevelopment works. The Unexpected Finds Protocol must be endorsed by an EPA-accredited site auditor.

**B6. FILLING WITHIN A SITE**

Any excess fill and or fill imported into the site to fill within the proposed works site must meet the criteria of “Virgin Excavated Material” or “Excavated Natural Material” as defined in NSW EPA Environmental guidelines – and written verification provided to Council.

### **PART C – ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING**

#### **C1. ENVIRONMENTAL MANAGEMENT PLAN REQUIREMENTS**

Management plans required under this REF must be prepared in accordance with relevant guidelines, and include:

- (a) details of:
  - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
  - (ii) any relevant limits or performance measures and criteria; and
  - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
- (b) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
- (c) a program to monitor and report on the:
  - (i) impacts and environmental performance of the development; and
  - (ii) effectiveness of the management measures set out pursuant to paragraph (b) above;
- (d) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
- (e) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (f) a protocol for managing and reporting any:
  - (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);
  - (ii) complaint;
  - (iii) failure to comply with statutory requirements
- (g) a protocol for periodic review of the plan.

#### **C2. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN**

The Project Manager must prepare a Construction Environmental Management Plan (CEMP) in accordance with condition C1. As part of the CEMP required under this REF, the Project Manager must include the following, but not limited to environmental management factors:

- (a) *Air Quality*
- (b) *Dust Minimisation*
- (c) *Noise and Vibration*
- (d) *Erosion and Sedimentation Controls*
- (e) *Imported Soils*
- (f) *Contaminated land*
- (g) *Flora and Fauna*
- (h) *Waste management*
- (i) Traffic management and control
- (j) Unexpected finds Contamination

- (k) Unexpected finds protocol for Aboriginal Heritage

### **C3. OPERATIONAL TRANSPORT AND PEDESTRIAN MANAGEMENT PLAN (OTPMP)**

Within 6 months of the operation of the activity, an OTPMP must be prepared addressing the following:

- (a) Be prepared in consultation with Council’s Traffic and Transport Branch;
- (b) pedestrian analysis including the identification of safe route options – to identify the need for management measures patrons are able to access and leave the site in a safe and efficient manner;
- (c) the location of all car parking spaces used by the site facilitation.
- (d) The need for location and operational management procedures located within the project site during activities in operation including traffic control arrangements; to avoid potential staggard queuing;
- (e) the need for provision of services to compensate for any lack of public transport services in the locality;
- (f) delivery and services vehicle access and management arrangements;
- (g) potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts while accessing on-street parking; and
- (h) a monitoring and review program.

The Project Manager must prepare the OTPMP in accordance with the requirements of condition and must include the following:

- (a) Describe the role, responsibility, authority and accountability of all key personnel involved in the management of the activity.
- (b) describe the procedures that would be implemented to:
  - (i) receive, handle, respond to, and record complaints;
  - (ii) resolve any disputes that may arise;
  - (iii) respond to any non-compliance
  - (iv) respond to emergencies; and

### **C4. REPORTING AND AUDITING**

Any condition of this REF that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing.

Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the activity to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.

**Attachment A1 – Ameliorative measures cont.**

**Summary of Safeguards:**

Aspect	Measure
Further investigation/certification	<p>The following further investigation/certification shall be undertaken and where relevant the outcomes/recommendations shall be incorporated in the final detailed design:</p> <p><u>Contamination:</u></p> <ul style="list-style-type: none"> <li>• Further investigation shall be undertaken which includes intrusive investigations to assess and characterise the site with respect to potential contamination, fill data gaps, develop a site conceptual model (CSM) and assess the need for remediation/management with respect to the proposed use of the site during construction.</li> <li>• Further investigations shall be carried out by developing a Sampling, Analysis and Quality Plan and then implementing this plan through a Detailed Site Investigation (DSI).</li> </ul> <p><u>Flooding:</u></p> <p>The following shall be undertaken as part of the detailed design to ensure that the proposed activity will meet the relevant flood related development controls:</p> <ul style="list-style-type: none"> <li>• All structure shall be designed to:               <ul style="list-style-type: none"> <li>a) withstand the forces of floodwater, debris, and buoyancy up to and including the 100 year Annual Recurrence Incident (ARI) flood event; and</li> <li>b) use flood compatible building materials up to and including the 100yr ARI flood level.</li> </ul> </li> <li>• An appropriately qualified engineer shall provide certification of compliance with items a) and b) as part of the final design package.</li> </ul> <p><u>Aboriginal heritage:</u></p> <ul style="list-style-type: none"> <li>• The detailed design of the proposed activity shall ensure that all works requiring ground disturbance are contained within areas and depths known to be already disturbed.</li> </ul>

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	<ul style="list-style-type: none"> <li>• If ground disturbance cannot be contained within the upper 0.4 m to 0.5 m of the soil profile or existing service trenches then an Aboriginal heritage impact assessment shall be undertaken in accordance with relevant guidelines.</li> <li>• Once the detailed design of the proposed activity is available, the Aboriginal due diligence assessment (CHH, 2023) shall be updated, reviewed by the Gandangara Local Aboriginal Land Council (LALC) and provided to the Registrar of the Aboriginal Heritage information Management System. The findings of this updated study shall be adhered to.</li> <li>• If the updated report confirms that the proposed activity is unlikely to result in harm, then the following measures shall be implemented into the CEMP:             <ul style="list-style-type: none"> <li>- no other Aboriginal heritage investigations are required in relation to the proposed activity within the site.</li> <li>- an Aboriginal heritage induction shall be provided to the works team by the Gandangara LALC, in order to outline the statutory protection provided by the NSW National Parks and Wildlife Act 1974, and to outline the procedure to be followed in the event of an unexpected find.</li> <li>- Gandangara LALC shall be provided with an opportunity to inspect or monitor any excavation required.</li> <li>- an unexpected finds protocol shall be implemented for the life of the project.</li> <li>- if unforeseen Aboriginal objects or bones suspected of being human are identified during the works, site workers shall:                 <ul style="list-style-type: none"> <li>a) not further disturb or move the remain;</li> <li>b) immediately cease all work at the location;</li> <li>c) in the case of suspected human remains, notify NSW Police;</li> <li>d) in the case of Aboriginal objects, notify the Heritage NSW Environment Line on 131 555 as soon as practicable and provide available details of the objects or remains and their location; and</li> <li>e) the Gandangara LALC shall also be notified to assist in the determination of appropriate management for the objects or remains.</li> </ul> </li> </ul> </li> </ul>
<p>General</p>	<p>Provided there are no further issues arising from the investigations listed above, the proposed activity shall be carried out generally in accordance with this REF and the detailed design drawings.</p>

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<p>Construction management</p>	<p>A CEMP shall be prepared by the contractor to describe ameliorative measures identified in this REF during construction of the project, which will incorporate ameliorative measures in relation to the following:</p> <ul style="list-style-type: none"> <li>• construction traffic management;</li> <li>• road safety;</li> <li>• erosion and sediment control;</li> <li>• an unexpected finds protocol;</li> <li>• construction noise management;</li> <li>• construction air quality management; and</li> <li>• construction waste management.</li> </ul>
<p>Work health and safety</p>	<ul style="list-style-type: none"> <li>• Work Health and Safety (WHS) signage shall be installed at the project site entrance detailing the location of the site offices, construction/excavation works, first aid facilities and parking. Traffic restrictions shall be installed to limit access further into the project site and ensure the safety of visitors.</li> <li>• Signage at the main gate will include after-hours contact details. Additional signage will be erected along exclusion zone boundaries to restrict access to these areas to authorised personnel only.</li> </ul>
<p>Construction traffic</p>	<p>Construction traffic ameliorative measures shall be incorporated in the CEMP, which will contain details of site access and parking arrangement, detailed scheduling and staging of the construction activities.</p>
<p>Noise</p>	<p>The CEMP shall describe in detail the construction phases, programme, processes and equipment used, noise impact assessment and proposed ameliorative measures, including that:</p> <ul style="list-style-type: none"> <li>• plant shall be operated in a conservative manner (no over-revving) and shutdown when not in use;</li> <li>• the quietest suitable machinery shall be available for each activity;</li> <li>• noisy plant/machinery shall not be operated simultaneously, and noise impacts will be minimised where practicable;</li> <li>• broadband reverse alarms shall be utilised in lieu of the traditional high frequency type reverse alarm;</li> </ul>

**Part 5 Assessment Review of Environmental Factors – Guidelines and Worksheet for Larger Scale Council Projects**

	<ul style="list-style-type: none"> <li>• toolbox meetings, training and education shall be provided to drivers and contractors visiting the site during construction, so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities;</li> <li>• signage shall be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and</li> <li>• project related community consultation forums shall be utilised where necessary to notify residences within proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.</li> </ul>
Stormwater, soil and erosion control	Standard erosion and sediment controls, including the requirement for a Soil and Erosion Sediment Control Plan shall be incorporated in the CEMP.
Geotechnical	<ul style="list-style-type: none"> <li>• Geotechnical review of the proposed earthworks and structural drawings shall be undertaken.</li> <li>• Slabs and footings shall be designed in accordance with engineering principles as recommended in AS 2870 – 2011.</li> <li>• Geotechnical supervision and testing is provided during bulk earthworks.</li> <li>• Footing excavation/drilling, particularly if bored piles are adopted, shall be inspected by a geotechnical engineer/engineering geologist to ascertain that the recommended foundation material has been reached.</li> <li>• Site preparation and earthworks shall be undertaken in accordance with the methodology outlined in Sections 4.3 and 4.4 of the Report on Geotechnical Investigation (GG, 2023).</li> <li>• Any off-site disposal of spoil shall generally require assessment for re-use or classification in accordance with the NSW EPA's <i>Waste Classification Guidelines</i>.</li> <li>• Footings and foundations shall be designed and constructed in accordance with the methodology and design parameters provided in Section 4.2 (and Table 4.2) of the Report on Geotechnical Investigation (GG, 2023).</li> <li>• Structural design shall accord with Australian Standard AS 1170.4 – 2007 <i>Structural design actions – Part 4: Earthquake actions in Australia</i>.</li> <li>• Appropriate allowances for concrete cover, concrete strength, steel-section loss and steel protection requirements shall be made in the design of buried structural elements, such as piles.</li> <li>• The uncontrolled fill on the site shall include site preparation to be made suitable for supporting pavements, as detailed in Sections 4.3 and 4.4 of the Geotechnical Investigation (GG, 2023).</li> </ul>

<p>Flora and Fauna Assessment</p>	<ul style="list-style-type: none"><li>• A Tree Protection Zone in accordance with Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970) shall be implemented to protect any retained trees within the construction zone.</li><li>• Prior to the commencement of works:<ul style="list-style-type: none"><li>- Undertake any required targeted searches for threatened flora prior to vegetation clearing;</li><li>- Undertake an extensive pre-clearing survey which includes targeted searches for threatened fauna threatened flora and Priority Weeds, and delineating habitat-bearing trees and shrubs; and</li><li>- Supervise the clearance of any habitat trees or shrubs identified during the pre-clearing survey (native and exotic) to capture, treat and/or relocate any displaced fauna.</li></ul></li><li>• The proposed landscaping/revegetation shall involve the planting of species associated with the adjacent naturally occurring TEC vegetation type, Cumberland Blue Box Riverflat Forest.</li><li>• Appropriate erosion and sediment control shall be erected and always maintained during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. As a minimum, such measures should comply with the relevant industry guidelines such as ‘the Blue Book’ (Landcom 2004).</li><li>• All storage, stockpile, and laydown sites shall be located away from any vegetation that is planned to be retained.</li><li>• Importing soil from outside the site shall not occur to avoid the potential of incurring indirect impacts on biodiversity values. If materials are required to be imported for landscaping works, they shall be sterilised according to industry standards prior to importation to site.</li></ul>
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