

Cook Park

Review of Environmental Factors

June 2026

PENRITH CITY COUNCIL

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Appendices

- Appendix A - Draft Review of Environmental Factors, Cook Park Upgrade, Wilson Street St Marys prepared by Helen Mulcahy Urban Planning dated September 2023
- Appendix B - An Ecological Assessment was completed by Ecological Australia dated 26 June 2025
- Appendix C - flood modelling report was prepared by Cumulus Engineering dated 3 July 2025
- Appendix D - A Bushfire Protection Assessment was prepared by EcoLogical Australia dated 14 May 2025
- Appendix E - Arboricultural Development Assessment Report was prepared by Moore Trees Arboricultural Services dated 28 November 2024
- Appendix F - Cook Park Synthetic Surfaces Specification's
- Appendix G - AHMIS Search
- Appendix H - Legal Advice was received from Council's Legal Team
- Appendix I – Remedial Action Plan prepared by Trinitas Group dated July 2024

Declaration

This Review of Environmental Factors (REF) has been prepared internally by Council's Divisional Assurance and Security Operations Coordinator for Penrith City Council stakeholders. The REF provides an assessment of the potential environmental impacts associated with the proposed recreational development at Cook Park.

The proposal satisfies the definition of an activity under Part 5.1(1)(d) of the *Environmental Planning and Assessment Act 1979* and as such, Council must assess and consider the environmental impacts before determining whether to proceed with the activity.

This REF has been prepared in accordance with the guideline and legislation outlined below and provides a true and fair assessment of the likely impact on the environment and addresses, to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the activity.

- The Department of Planning and Environment's (DPE) *Guidelines for Division 5.1 Assessments* as required under Clause 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation 2021).
- Section 5.5 of the EP&A Act and Clause 171 of the EP&A Regulation 2021 which relate to consideration of environmental impacts.

The findings of this REF conclude that:

1. The activity is not likely to have a significant impact on the environment and therefore, an Environmental Impact Statement (EIS) is not required.
2. The activity is not likely to significantly affect any threatened flora and fauna species, populations or ecological communities or their habitats as defined under the *Biodiversity Conservation Act 2016* and therefore a Species Impact Statement (SIS) or Biodiversity Development Assessment Report (BDAR) is not required.
3. The activity will not affect Commonwealth land as it is not being carried out on Commonwealth land and is not likely to significantly impact on any Matters of National Environmental Significance listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The proposed activity is therefore recommended for approval, subject to implementation of the measures to avoid, minimise or manage the environmental impacts identified in this REF.

REF author name and qualifications	Adrian Estreich Bach. of Applied Science (Environmental Health)
Title	Divisional Assurance and Security Operations Coordinator
Organisation	Penrith City Council
Signature	
Date	22 June 2026

Determining authorities verification and determination

I certify that I have reviewed and endorsed the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under clause 170 of the EP&A Regulation, and the information it contains is neither false nor misleading

Name	Anne Sacco
Title	Head of Design
Organisation	Penrith City Council
Signature	
Date	22 June 2026

Section One: Site and Project Details

1.1 Introduction

Council is proposing a development at Cook Park to upgrade the existing recreational facilities on that site. The development includes:

- Construction of a new amenities building
- Upgrade work to existing recreational facilities, including the installation of synthetic turf field
- Alterations and additions to the existing grandstand building
- New Entry Gate Structure
- New two storey amenities building
- Maintenance work to Grandstand
- Ancillary Works
- Upgrade to existing sporting lighting

The purpose of this Review of Environmental Factors is to address the requirements of Part 5, Division 5.1 of the Environmental Planning and Assessment Act 1979.

Section 5.5 of the Environmental Planning and Assessment Act 1979 outlines a determining authority in its consideration of an activity shall, notwithstanding any other provisions of this Act or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

This Review of Environmental Factors (REF's) builds on previous REF's developed for the site, which are listed in Section 1.2.

1.2 Supporting Information

The information within the REF has been prepared with consideration of the following documents:

- DRAFT Review of Environmental Factors, Cook Park Precinct, St Marys prepared by The Planning Hub dated 29 July 2025
- Draft Review of Environmental Factors, Cook Park Amenities Upgrade, Wilson Street St Marys prepared by Helen Mulcahy Urban Planning dated September 2023
- Flooding Modelling prepared by Cumulus Engineering dated November 2024
- Bushfire Protection Assessment prepared by Ecological Australia Pty Ltd dated May 2025
- Ecological Assessment Report prepared by Ecological Australia Pty Ltd dated 26 June 2025
- Ecological Assessment Report Update Letter prepared by Ecological Australia Pty Ltd dated 26 June 2025

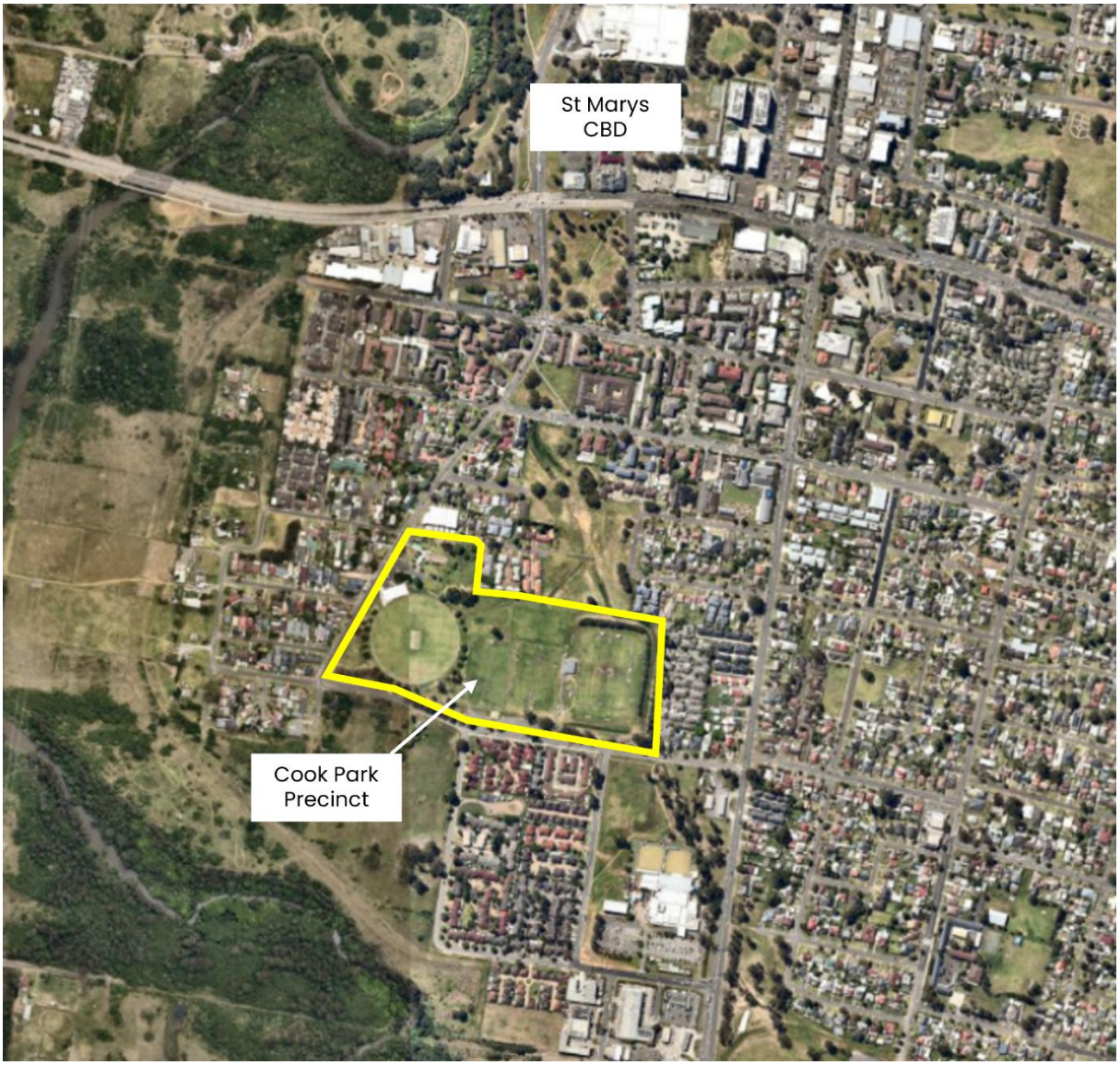
- Architectural Diagrams (for Amenities) prepared by Melocco and Moore dated February 2022.
- Civil Engineering Plans (for Amenities) prepared by Stantec dated June 2023
- Landscaping Plan (for Amenities) prepared by Stantec dated June 2023
- Stormwater Services Plans (for Amenities), prepared by Erbas dated November 2022
- Civil Engineering Plans (for Precinct) prepared by SportEng dated October 2024
- Architectural Plans (for Precinct) prepared by SportEng dated July 2025
- Hydraulic Services (for Precinct) prepared by iingen dated October 2024
- Flora and Fauna Assessment Report prepared by Stantec dated 29 November 2022
- Flood Impact Assessment, Cook Park Precinct Upgrade prepared by Stantec dated 20 March 2023
- Preliminary (Stage 1) Site Investigation prepared by JK Environmental dated 15 June 2022
- Geotechnical Investigation prepared by JK Environmental dated 15 June 2022
- Arboricultural Development Assessment Report prepared by Moore Trees Arboricultural Services dated November 2024
- Remedial Action Plan prepared by Trinitas Group dated 18 July 2024
- Cook Park Synthetic Surfaces Specifications developed by Smart Connection Consultancy dated October 2025.
- Cook Park Precinct Landscape Documentation, prepared by Mode dated 14 July 2025

1.3 Site Details and Description

Site Name

The site is commonly known as Cook Park Precinct and is located within St Marys NSW (Penrith Local Government Area).

Picture One: Location Aerial Photograph



Address

Wilson Street and Pages Road, St Marys

Legal Description

The site consists of size different lots, these are:

- Lot 101 DP 618270
- Lot 102 DP 618270
- Lot 9 DP 1432
- Lot 10 DP 1432
- Lot A DP 342440
- Lot 1 E DP 1895

Picture Two: Project Site Boundaries



Site Size

The site has an approximate area of 10.5 hectares.

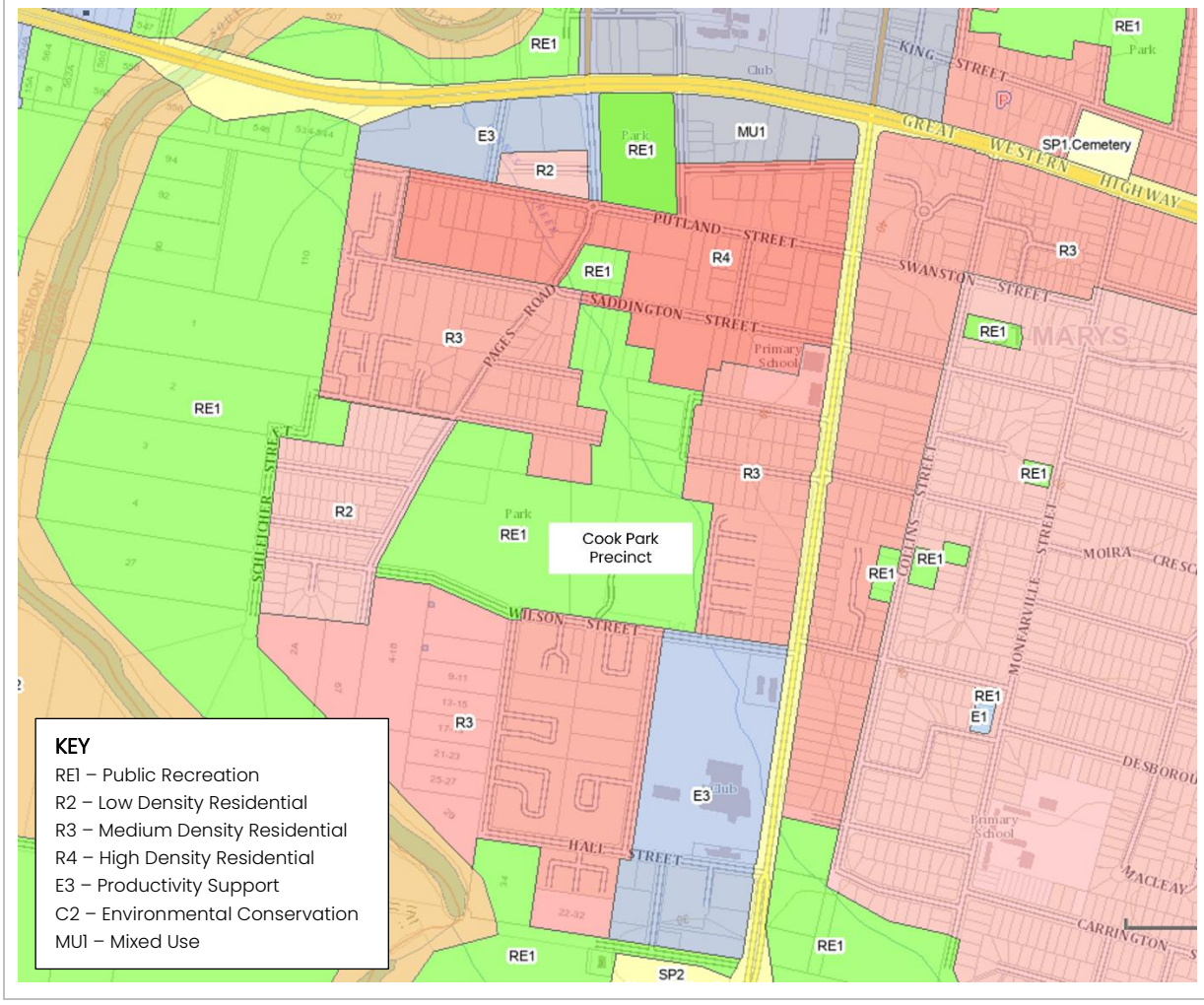
Current Site Use

The site is used for a range of passive and active recreational purposes. It currently comprises of an existing amenity building, playground, grandstand, playing fields, car parking and turf cricket pitch.

Zoning

RE1 Public Recreation

Picture Three: Land Zoning Map



1.4 Detailed description of the proposal

The development proposes upgrading Cook Park by undertaking the following works:

- Construction of a new amenities building
- Upgrade work to existing recreational facilities, including the installation of synthetic turf field
- Alterations and additions to the existing grandstand building

- New Entry Gate Structure
- New two storey amenities building
- Maintenance work to Grandstand
- Ancillary Works

Construction of a new amenities building

The proposed new amenities building will consist of:

- 2 unisex toilets
- 2 ambulant toilets
- 1 unisex toilet with baby change facilities
- 1 accessible toilet
- Storage room
- Cleaner room
- Services room

Upgrade work to existing recreational facilities

The proposed upgrade to existing recreational facilities will consist of:

- Field 1 - New Synthetic turf
- Field 2 – Resurfacing of turf pitch
- Field 3 – Resurfacing of turf training area
- Bill Ball Oval – Resurfacing of material turf cricket pitch

Alterations and additions to the existing grandstand building

The proposed alterations and additions to the existing grandstand will include:

Ground floor:

- demolition of existing storeroom (separate structure) at northern end of the building. Upgrade / make good existing hardstand area.
- addition to northern end of existing building to include new storeroom at ground level.
- convert existing kiosk/canteen at southwestern corner of the ground floor to an accessible adult change room.
- install passenger lift at the southern end of the building.
- block off existing external breeze block openings to change rooms and toilet facilities (western elevation) and install mechanical ventilation; and
- creation of a new opening in the western elevation of the existing building to extend the players race to facilitate access to Field 1 and Fields 2 & 3.

First Floor:

- demolish existing media room on upper concourse, north of the entry doors; and

- first floor addition to the northern end of the building incorporating new media room, accessible toilet, male and female amenities and a new kitchenette.

New Entry Gate Structure

The proposed construction of a new entry gate structure will incorporate pedestrian and vehicle entry gates.

New two storey amenities building

The proposal includes the construction of a new two storey amenities building immediately to the south of the existing grandstand, connected at first floor via a pedestrian bridge and incorporating the following facilities:

The ground floor will include:

- change rooms (x 2); umpire change facilities (x 2); coaches room; medical / first aid room; and office / administration
- players race providing access to Field 1 (east) and Fields 2 & 3 (to the west)
- new canteen located at the northern end of the building

The first floor will include:

- viewing deck
- stair to ground level at southern end of the building providing access
- pedestrian bridge between existing grandstand and new amenities building
- new activities room (approx. 130m2) incorporating additional male and female amenities, kitchenette and storage

Ancillary works

Ancillary works will include:

- relocation / reconfiguration of existing metal bench seating on the eastern side of the site of the new amenities building
- Earthworks to adjust existing earth bund to the south of the new amenities building to allow access from the first floor to the top of the bund. The western side of the bund will be supported by two low retaining walls which will be landscaped
- Minor remediation works for asbestos contaminated areas
- construction of pedestrian pathways as required
- installation of building and wayfinding signage
- Bicycle racks, terraced and bench seating, drinking fountain and fencing
- Shae sail structures
- Overland flow grassed swale
- WSUD Drainage Basin
- Walking Circuit and pedestrian lighting

- Landscaping and tree planting
- Two car parking areas and car park extension

1.5 Need for Proposal

The need for the proposed Cook Park improvements align with the following:

NSW Government's Public Open Space Strategy for NSW

The State Government's Public Open Space Strategy for NSW (DPE, 2022) emphasizes that public open space is fundamental to creating liveable communities. It is considered essential infrastructure that supports active, healthy lifestyles and enhances community wellbeing.

The Strategy outlines a series of directions and actions, with several being particularly relevant to the Cook Park project:

- Recognize public open space as essential infrastructure for creating vibrant communities and promoting healthy, active lifestyles.
- Plan, design, and manage public open spaces sustainably, ensuring resilience to future challenges.
- Deliver high-quality, well-maintained public open spaces that meet community needs.
- Provide guidance and support to local governments in the planning, design, and management of public open space

Office of Sport's Strategic Plan 2018-2022

The project is consistent with the Office of Sport's Strategic Plan 2018–2022, which emphasizes the delivery of high-quality, environmentally sustainable facilities that remove barriers to participation and encourage involvement in sport and active recreation.

Additionally, the project aligns with the NSW Government's 'Her Sport Her Way' strategy, which seeks to shape the future of women's sport in NSW by providing new multi-sport playing fields and infrastructure to support the growth of grassroots programs for women and girls.

Penrith Sport and Recreation Strategy

The Penrith Sport and Recreation Strategy, finalised in 2020, identified a significant undersupply of sports grounds and adequate facilities across the Local Government Area (LGA).

Community feedback highlighted a strong demand for improved access to high-quality sports facilities and increased opportunities for participation in sport and recreation activities.

The Strategy outlines a staged delivery plan, categorized into short-term (1–5 years), medium-term (6–10 years), and long-term (10–15 years) timeframes. Within the first five years, the program includes 82 projects valued at $125 million.

The upgrade works proposed at Cook Park have been identified as a priority project.

Section Two: Planning Pathway

The Environmental Planning and Assessment Act 1979 (The Act) provides the approval pathways available for development and activities undertaken by Council. The pathway required will depend on the nature of development or activity being undertaken.

The Act outlines the planning pathways available to Council are:

- Exempt development
- Complying development
- Part 4 Development Consent (D/As)
- Part 5 (Division 5.1) Development
- State Significant Development.

Development consent is generally required to carry out development or associated works unless they fall within Section 4.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

As outlined in the Helen Mulcahy Urban Planning document (appendix A), Section 4.1 provides that, where an environmental planning instrument specifies that certain development may be carried out without the need for development consent, that development may proceed in accordance with the instrument on land to which the provision applies. However, an environmental assessment of the development may still be required under Division 5.1 of the Act.

Furthermore, the proposed works are considered to be an "activity" within the meaning of Section 5.1 of the EP&A Act which defines the *carrying out of a work* as an "activity".

Section 5.1(1) of the EP&A Act defines an "activity" as being:

(a) the use of land, and

(b) the subdivision of land, and

(c) the erection of a building, and

(d) the carrying out of a work, and

(e) the demolition of a building or work, and

(f) any other act, matter or thing referred to in Section 26 that is prescribed by the regulations for the purposes of this definition,

but does not include:

(g) any act, matter or thing for which development consent under Part 4 is required or has been obtained, or

(h) any act matter or thing that is prohibited under an environmental planning instrument, or

(i) exempt development, or

(j) development carried out in compliance with a development control order, or

(k) any development of a class or description that is prescribed by the regulations for the purposes of this definition.

The proposal involves the use of land, the demolition of a work, the erection of a building and the carrying out of works and is therefore an "activity" for the purposes of Part 5.

Penrith City Council has a decision-making flowchart to assist with determining the appropriate pathway. This is shown on Page 20 of this REF.

The proposed activity is a combination of exempt development and permitted without consent development under the State Environmental Planning Policy (Transport and Infrastructure) 2021 and the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The relevant clauses are outlined below.

State Environmental Planning Policy (Transport and Infrastructure) 2021

Clause 2.20 and Schedule 1

Fences

Must be constructed so as not to prevent natural flow of stormwater drainage or run-off.

Height of boundary fence must not exceed 1.8m above ground level (existing) if behind front building line, or 1.2m if forward of that line, in any of the following land use zones or a land use zone that is equivalent to any of those zones—

(i) Zone R1 General Residential,

(ii) Zone R2 Low Density Residential,

(iii) Zone R3 Medium Density Residential,

(iv) Zone R4 High Density Residential,

(v) Zone R5 Large Lot Residential,

(vi) Zone RU5 Village.

Must not include masonry construction to a height of more than 90 mmm above ground level (existing).

Clause 2.73

1) Development for any purpose may be carried out without consent—

(a) on land reserved under the *National Parks and Wildlife Act 1974*, or acquired under Part 11 of that Act, if the development is for a use authorised under that Act, or

(b) on land declared under the *Marine Estate Management Act 2014* to be a marine park or an aquatic reserve if the development is for a use authorised under that Act, or

(2) Development for any purpose may be carried out without consent—

(a) on Trust lands within the meaning of the *Centennial Park and Moore Park Trust Act*

1983, by or on behalf of the Centennial Park and Moore Park Trust, or

(b) on trust lands within the meaning of the *Parramatta Park Trust Act 2001*, by or on behalf of the Parramatta Park Trust, or

(c) on Crown managed land, by or on behalf of—

(i) the Secretary, or

(ii) a Crown land manager of the land (or an administrator of the manager), or

(iii) the Ministerial Corporation, or

(iv) the Minister administering the *Crown Land Management Act 2016*,

if the development is for the purposes of implementing a plan of management adopted for the land under the Act referred to above in relation to the land or in accordance with the *Local Government Act 1993* in relation to Crown managed land managed by a council.

(3) Any of the following development may be carried out by or on behalf of a public authority without consent on land owned or controlled by the public authority—

(a) development for any of the following purposes—

(i) roads, pedestrian pathways, cycleways, single storey car parks, ticketing facilities, viewing platforms and pedestrian bridges,

(ii) recreation areas and recreation facilities (outdoor), but not including grandstands,

(iii) visitor information centres, information boards and other information facilities,

(iv) lighting, if light spill and artificial sky glow is minimised in accordance with the Lighting for Roads and Public Spaces Standard,

(v) landscaping, including landscape structures or features (such as art work) and irrigation systems,

(vi) amenities for people using the reserve, including toilets and change rooms,

(vii) food preparation and related facilities for people using the reserve,

(viii) maintenance depots,

(ix) portable lifeguard towers,

(b) environmental management works,

(c) demolition of buildings (other than any building that is, or is part of, a State or local heritage item or is within a heritage conservation area).

Clause 2.74

1) Development for any of the following purposes that is carried out in the prescribed circumstances is exempt development—

(a) construction or maintenance of—

(i) walking tracks, raised walking paths (including boardwalks), ramps, stairways or

gates, or

(ii) bicycle-related storage facilities, including bicycle racks and other bicycle parking facilities (except for bicycle paths), or

(iii) handrail barriers or vehicle barriers, or

(iv) ticketing machines or park entry booths, or

(v) viewing platforms with an area not exceeding 100m^2, or

(vi) sporting facilities, including goal posts, sight screens and fences, if the visual impact of the development on surrounding land uses is minimal, or

(vii) play equipment if adequate safety measures (including soft landing surfaces) are provided and, in the case of the construction of such equipment, so long as the equipment is situated at least 1.2m away from any fence, or

(viii) seats, picnic tables, barbecues, bins (including frames and screening), shelters or shade structures, or

(ix) portable lifeguard towers if the footprint of the tower covers an area no greater than 20 square metres, or

(x) temporary structures,

(b) routine maintenance of playing fields and other infrastructure, including landscaping,

(c) routine maintenance of roads that provide access to or within those playing fields, including landscaping,

(d) environmental management works.

(2) Development is carried out in the ***prescribed circumstances*** if the development is carried out—

(a) on land referred to in section 2.73(1) by or on behalf of a public authority, or

(b) on land referred to in section 2.73(2)(a) or (b) by or on behalf of the Centennial Park and Moore Park Trust or the Parramatta Trust, as the case may be, or

(c) on land owned or controlled by a public authority by or on behalf of the public authority, or

(d) on Crown managed land, by or on behalf of—

(i) the Secretary, or

(ii) a Crown land manager of the land (or an administrator of the manager), or

(iii) the Ministerial Corporation, or

(iv) a council having control of the land under section 48 of the *Local Government Act 1993*, or

(v) the Minister administering the *Crown Land Management Act 2016*.

(3) Development is exempt development under this section only if the development—

(a) complies with section 2.20, and

(b) involves no greater disturbance of native vegetation than necessary, and

(c) does not result in an increase in stormwater run-off or erosion.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
Clause 2.53
A minor external non-structural building alteration, such as the following— (a) painting, plastering, cement rendering, cladding, attaching fittings or decorative work, (b) the replacement of an external window, glazing areas or a door (other than those on bush fire prone land), (c) the repair to or replacement of a non-structural wall or roof cladding, (d) the installation of a security screen or grill to a door or window or a security door, (e) the repair to or replacement of a balustrade, (f) restumping or repairing structure foundations without increasing the height of the structure, (g) other remedial work necessary to repair or maintain the building, is development specified for this code if it is not constructed or installed on or in a heritage item or a draft heritage item or in a heritage conservation area or a draft heritage conservation area.

Table One on page 21 provides planning pathway information for each element of the project.

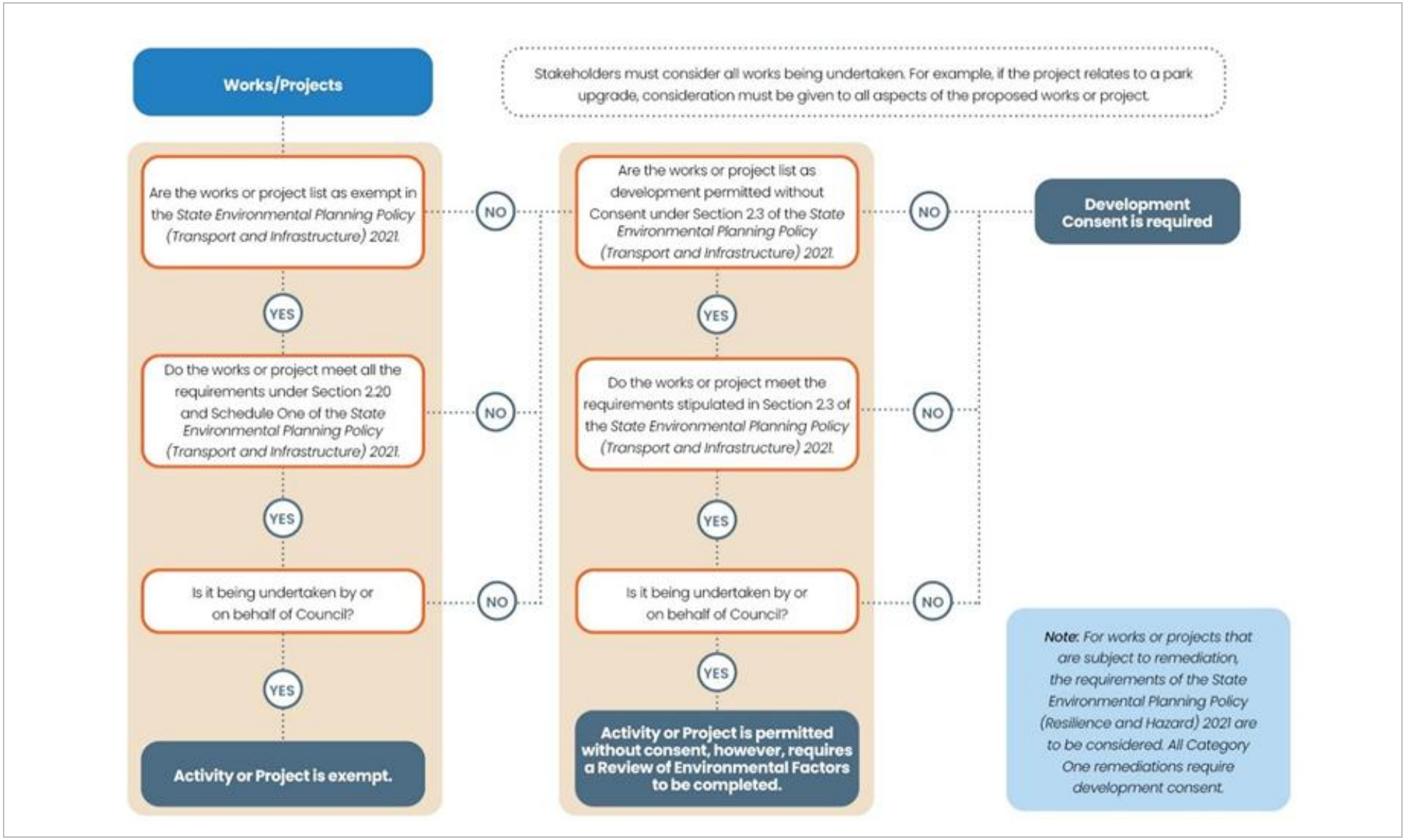
Planning Pathway Legal Advice

Legal Advice was received from Council's Legal Team on 24 November 2025 which confirmed that the proposed works at Cook Park, other than the grandstand refurbishment, can be assessed via REF and approved under Part 5 of the EPA Act via the State Environmental Planning Policy (Transport and Infrastructure) 2021.

Further discussions with Council's Legal Team has confirmed that the minor alterations to the grandstand can be made under the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

A copy of the Legal Advice can be found in Appendix H.

Picture Four: Penrith City Council Internal Planning Pathway Flowchart



Using the flowchart shown on page 20 the following table outlines the planning pathway for the activities undertaken as part of this development:

Table One: Planning Pathway for activity being undertaken as part of the project.

Development/Activity	Relevant Planning Provision	Planning Pathway
Grandstand Alterations and Maintenance to existing building	Clause 2.53 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 outlines that minor external non-structural building alteration, such as the following: • painting, plastering, cement rendering, cladding, attaching fittings or decorative work, • the replacement of an external window, glazing areas or a door (other than those on bush fire prone land), • the repair to or replacement of a non-structural wall or roof cladding, • the installation of a security screen or grill to a door or window or a security door, • the repair to or replacement of a balustrade, • (restumping or repairing structure foundations without increasing the height of the structure, • other remedial work necessary to repair or maintain the building, However, the development must not be constructed or installed on or in a heritage item or a draft heritage item or in a heritage conservation area or a draft heritage conservation area. In addition, Section 2.20 and Schedule 1 of the State	**Exempt Development**

	Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that building internal alterations are permitted in the following circumstances: • Must be non-structural alterations to existing building only, such as— – replacement of doors, wall, ceiling or floor linings or deteriorated frame members with equivalent or improved quality materials, or – inclusion of built-in fixtures. • Must not affect load-bearing capacity of any load-bearing component of building.	
Construction of a new entry gate structure, incorporating pedestrian and vehicle entry gates.	Section 2.20 and Schedule 1 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that fencing is an exempt development.	**Exempt Development**
Ticketing	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that ticketing facilities are permitted without consent if being undertaken by or on behalf of a public authority.	**Part 5 - Permitted without Consent**
Construction of a new 2 storey amenities building to the south of the existing	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that amenities for people using the reserve are permitted without consent if being undertaken by or on behalf of a public authority.	**Part 5 - Permitted without Consent**
Upgrades to existing recreational facilities • Field 1 - New Synthetic turf	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that recreation areas and recreation facilities (outdoor), are permitted without consent	**Part 5 - Permitted without Consent**

• Field 2 – Resurfacing of turf pitch • Field 3 – Resurfacing of turf training area • Bill Ball Oval – Resurfacing of material turf cricket pitch	if being undertaken by or on behalf of a public authority.	
New Amenities Building	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that amenities for people using the reserve, including toilets and change rooms, are permitted without consent if being undertaken by or on behalf of a public authority.	**Part 5 - Permitted without Consent**
Ancillary Works • fencing • walking pathways • lighting • landscaping • tree planting • carparking	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that the following development and activities are permitted without consent if being undertaken by or on behalf of a public authority: • Pedestrian pathways • Single storey car parks • Landscaping • Lighting	**Part 5 - Permitted without Consent**
Ancillary Works • Bicycle racks • Seating • shade sails	Section 2.74 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that seating, bike racks and shade structures are exempt development:	**Exempt Development**

Ancillary Works • Fencing	Section 2.20 and Schedule 1 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that fencing is an exempt development.	**Exempt Development**
Ancillary Works • grassed swale • WSUD Drainage basin	Section 2.73 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that environmental management works are permitted without consent if being undertaken by or on behalf of a public authority. It is noted that Clause 2.3 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 outlines that environmental management works is: (a) works for the purpose of avoiding, reducing, minimising or managing the environmental effects of development (including effects on water, soil, air, biodiversity, traffic or amenity), and (b) environmental protection works.	**Part 5 - Permitted without Consent**

Section Three: Strategic Context

3.1 A Metropolis of Three Cities – The Greater Sydney Region Plan

The Greater Sydney Region Plan (Greater Sydney Commission, 2018) aims to address the needs of a growing and evolving population by transforming Greater Sydney into a metropolis of three cities: the Western Parkland City, the Central River City, and the Eastern Harbour City.

As part of this vision, the Western City District Plan (Greater Sydney Commission, 2018) outlines planning priorities and actions to enhance the quality of life for residents in Western Sydney. The proposed upgrade of existing sporting and spectator facilities at Cook Park in St Marys, including the construction of a new amenities building, supports the Metropolis of Three Cities vision and aligns with the objectives of the Planning Priorities identified in the District Plan, as follows:

- Planning Priority W3 - Providing services and social infrastructure to meet people's changing needs
- Planning Priority W4 - Fostering healthy, creative, culturally rich and socially connected communities
- Planning Priority W6 - Creating and renewing great places and local centres
- Planning Priority W18 - Delivering high quality open space

3.2 Penrith Community Strategic Plan – Penrith 2041+

The Penrith Community Strategic Plan sets out the community's aspirations and proposed initiatives for the next 20 years. Community engagement has reinforced Council's commitment to delivering high-quality sports fields, parks, and playgrounds that provide diverse recreational and social opportunities for residents. Penrith boasts a strong sporting tradition, with participation rates above the state average.

Council offers venues for a wide range of sports, including athletics, cricket, rugby league, soccer, baseball, netball, softball, tennis, swimming, and touch football. These facilities enable residents and visitors to stay physically active and improve overall health and wellbeing.

This project is expected to contribute to several key community outcomes identified in Council's 2025–2029 Delivery Program. The most relevant outcomes include:

- PCC Outcome 1: protect and enhance an ecologically sustainable environment. Adapting to the changing climate by maintaining open space that is valued for the benefit of the wider community
- PCC Outcome 2: welcoming, healthy, happy and connected. Access is available to local services and spaces that are required for recreation and for mental, physical and spiritual wellbeing
- PCC Outcome 3: Plan and shape the growing City. Penrith's population is expected

to grow to 289,142 by 2036, an increase of 71,000 people based on today's population figures

- PCC Outcome 4: manage and improve our built environment. Council provides well-planned, safe, well-maintained, and inclusive spaces and infrastructure

Cook Park is easily accessible to residents, sporting groups, and visitors. The proposed upgrade works will deliver a safe, open, and modern facility that meets contemporary standards. This initiative supports Council's commitment to planning and developing appropriate infrastructure to cater for a growing population.

The project also directly contributes to this objective by providing a diverse range of walkable facilities close to residential areas, fostering community connection through sport and recreation activities.

3.3 Resilient Penrith Action Plan (2021)

Situated within the basin of Greater Sydney and adjacent to the Blue Mountains, Penrith's topography contributes to consistently higher temperatures and lower rainfall compared to Sydney's coastal areas.

A key factor driving rising temperatures is the urban heat island effect—a phenomenon where an abundance of hard, reflective surfaces in densely urbanised areas leads to elevated temperatures. In response, Penrith City Council has recognised the need to increase green cover, shade, and landscaping to mitigate surface heat.

This proposal incorporates integrated landscape treatments, including the planting of additional trees. At minimum a replacement ratio of 3:1 will be used where any trees will be removed, however, the project may plant up to 100 trees.

These will be predominantly native species integrated into the design of the precinct. In select areas, Shrubs and groundcovers will also be incorporated to boost resilience.

These measures aim to expand tree canopy cover and make a positive contribution toward reducing potential urban heat island impacts associated with the development.

3.4 Penrith Community Safety Plan 2023-2027

The Penrith Community Safety Plan 2023-2027 reinforces Council's commitment to promoting Penrith as a safe and vibrant city, highlighting the importance of a whole-of-community approach to creating places where people feel secure and well-connected. The Plan builds on the success of three previous strategies, which led to the adoption of several policies supporting community safety and crime prevention initiatives.

The project design has considered the principles of Crime Prevention through Environmental Design (CPTED). This includes consideration of views, passive surveillance, footpath connections and night time security.

3.5 Penrith Local Strategic Planning Statement 2020

The Penrith Local Strategic Planning Statement (LSPS) (Penrith City Council, 2020) sets out a local vision for land use within the Penrith Local Government Area (LGA), recognising the unique character of its suburbs. St Marys, along with several other established communities, has been identified for increased development intensity and population growth.

The proposal aligns with the objectives of the Planning Priorities outlined in the LSPS, specifically:

- Planning Priority 1: Align development, growth, and infrastructure
- Planning Priority 6: Ensure social infrastructure meets the changing needs of communities

In response, the proposed upgrade works at Cook Park have been designed to:

- Enhance the range of facilities to support a broad range of uses and abilities.
- Ensure spectator facilities comply with accessibility standards and meet contemporary community expectations
- Incorporate a variety of environmentally sustainable design elements

Section Four: Other Statutory Considerations

4.1 Penrith Local Environmental Plan 2010

The Penrith Local Environmental Plan (LEP) 2010 provides the framework for land use zoning, development controls, and environmental protection across the Penrith Local Government Area. Its key aims are to:

- Manage and conserve land for orderly and economic development.
- Promote sustainable growth aligned with Penrith's vision as a prosperous regional city.
- Provide diverse housing options near services and transport to meet community needs.
- Support employment, education, transport, and recreation opportunities.
- Reinforce urban growth limits while allowing rural living where appropriate.
- Protect environmental values and heritage, including Aboriginal and cultural sites.
- Minimize risks from flooding and bushfire through sensitive development controls.

The Penrith LEP provides for 26 land zonings which permit a range of activities within each zone. It also provides controls to protect areas of historical significance and environmental importance.

Under the Penrith LEP, the proposed development of recreation areas and recreation facilities are permitted within the RE1 Public Recreation zoning.

4.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (TI SEPP) provides a streamlined planning framework for delivering infrastructure across New South Wales (NSW). It aims to:

- Facilitate efficient development and upgrading of infrastructure.
- Support housing supply, economic growth, and community wellbeing.
- Ensure infrastructure delivery with appropriate environmental assessment and consultation.

Key Objectives of the TI SEPP are:

- Provide greater flexibility in locating infrastructure and services.
- Identify projects with minimal environmental impact as exempt or complying development.
- Outline approval processes and assessment requirements for infrastructure proposals.
- Enable consultation with public authorities and communities on infrastructure

development.

The TI SEPP provides provisions that Council can use to facilitate a range of development and activities as exempt development or development without consent.

4.3 State Environmental Planning Policy (Resilience and Hazards) 2021

The SEPP (Resilience and Hazards) 2021 Provide a state-wide planning framework for:

- Coastal Management – Protecting and managing NSW's coastal environment and ensuring development is compatible with coastal hazards.
- Hazardous and Offensive Development – Regulating industries and developments that pose risks to human health, property, or the environment.
- Remediation of Land – Ensuring contaminated land is remediated appropriately before development occurs

The proposed development does not trigger any requirements related to Coastal Management or Hazardous and Offensive Development. However, the development is required to address contamination concerns and therefore the requirements relating to Remediation of Land must be considered.

Under the SEPP (Resilience and Hazards) 2021, there are two categories of remediation. Category 1 is defined as:

Remediation work is a remediation work (not being a work to which section 4.11(b) applies) that is—

(a) designated development, or

(b) carried out or to be carried out on land declared to be a critical habitat, or

(c) likely to have a significant effect on a critical habitat or a threatened species, population or ecological community, or

(d) development for which another State environmental planning policy or a regional environmental plan requires development consent, or

(e) carried out or to be carried out in an area or zone to which any classifications to the following effect apply under an environmental planning instrument—

(i) coastal protection,

(ii) conservation or heritage conservation,

(iii) habitat area, habitat protection area, habitat or wildlife corridor,

(iv) environment protection,

(v) escarpment, escarpment protection or escarpment preservation,

(vi) floodway,

(vii) littoral rainforest,

(viii) nature reserve,

(ix) scenic area or scenic protection,

(x) wetland, or

(f) carried out or to be carried out on any land in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Minister).

Category 2 works are defined as remediation that is not Category 1.

The remediation required at Cook Park as part of the proposed development is Category 2 remediation works. In addition, the works are ancillary to the other developments proposed at the site.

4.4 Biodiversity Conservation Act 2016 (BC Act)

The BC Act contains provisions relating to the management of native vegetation. The Act provides several assessment requirements and licensing. A licence is required under this Act for works or a project when one of the following is triggered:

- Harm an animal that is a threatened species or part of a threatened ecological community.
- Pick a plant that is a threatened species or part of a threatened ecological community.
- Damage the habitat of a threatened species or threatened ecological community.

  Damage a declared area of outstanding biodiversity value.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.5 Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act protects Matters of National Environmental Significance (MNES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others).

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.6 National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act regulates the control and management of all national parks, historic sites, nature reserves, and Aboriginal areas. The main aim of the Act is to conserve the natural and cultural heritage of NSW. Where works will disturb Aboriginal objects, an Aboriginal Heritage Impact Permit (AHIP) is required.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.7 Heritage Act 1977

The Heritage Act 1977 protects and conserves environmental heritage in NSW. For works or projects that may or will impact items on the State Heritage Register or items of historical archaeology, Council will need to apply for and be granted approval before the project can be carried out or confirm if your proposal meets the criteria for an exemption. This includes works and activities on or within the curtilage of a State Heritage Register listed item or a site that has an interim heritage order.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.8 Protection of the Environment Operations Act 1997 (POEO Act)

The POEO Act is the key piece of environment protection legislation administered by the EPA. The object of the Act is the protection, restoration and enhancement of the quality of the NSW environment. Under the POEO Act, licenses are required for Scheduled Activities. Scheduled Activities are generally large-scale activities or activities that pose a particular risk to the environment.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.9 Water Management Act 2000 (WM Act)

The WM Act contains provisions relating to managing activities that can impact water resources. The Act is administered by The NSW Department of Primary Industries. Under Clause 41 of the Water Management (General) Regulations 2018, Council is exempt from having to obtain approvals for all controlled activities that are carried out on or under waterfront land.

Controlled activities refer to work or action carried out on waterfront land, as defined by the Water Management Act 2000. These activities must be designed in away to protect our waterways and ensure minimal harm as a result of the work carried out on the land.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.10 Roads Act 1993

The Road Act 1993 provides regulatory provisions for activities carried out on roads and road reserves. Under section 138 of the Roads Act 1993 all proposed works within a road reserve require Council approval including the payment of fees and bonds.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act for the purpose of the Review of Environmental Factors. Road Act approvals may be required during the construction phase of the project.

4.11 Local Government Act 1993

Section 68 of the Local Government Act 1993 provides regulatory provisions for activities that require Council approval separate to those required under the Environmental Planning and Assessment Act 1979.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.12 Biosecurity Act 2015

The Biosecurity Act 2015 establishes a general biosecurity duty to make sure responsibility for biosecurity risk is shared among government, industry and the community. This means if you deal with a biosecurity matter, you need to identify the risks it may pose and act to manage or mitigate the risk.

The 'General Biosecurity Duty' is the general obligation on people to be aware of their surroundings and take action to prevent the introduction and spread of pests, diseases, weeds and contaminants.

The proposed development **does not** trigger any licence, approval or permit requirements under this Act.

4.13 Contaminated Land Management Act 1997

The Contaminated Land Management Act 1997 (The Act) establishes a legal framework for investigating, regulating, and remediating land that is significantly contaminated to protect human health and the environment. It is administered by the NSW Environment Protection Authority (EPA) and complements other planning and environmental laws such as the Environmental Planning and Assessment Act 1979 and relevant State Environmental Planning Policies.

The Act addresses significantly contaminated land. The contamination on the subject site does not meet the definition of significantly contaminated and as such **does not** trigger any requirements under the Contamination Land Management Act 1997.

Section Five: Environmental Assessment

5.1 Assessment of Environmental Impacts – Clause 171 Assessment Requirements

The following table provides a summary of Clause 171 environmental assessment requirements under the Environmental Planning and Assessment Regulations 2021.

Assessment Requirements	
The environmental impact on the community	
Impact Level without Controls	Moderate
Impact Level with Controls	Low
There may be short-term environmental impacts on the surrounding residents and community during the construction phase of the development. These will generally relate to noise from construction vehicles and activities, dust issues during windy conditions, potential exposure risks associated with asbestos removal and potential water pollution from sediment and erosion run off. These can be effectively managed via the mitigation controls proposed in Section 7, including specific provisions to ensure there is no risk for asbestos exposure during works. No changes to the environmental impacts on the community are anticipated compared to the current operational state of the site once construction is complete.	
The transformation of the locality	
Impact Level	Low
Impact Level with Controls	Low
The proposed development involving an upgrade to an existing recreational area will have a positive impact on the locality, including improved landscaping, recreational spaces, amenities and traffic environment.	
Reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	
Impact Level	Low
Impact Level with Controls	Low
As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment. It is not expected to diminish the aesthetic, recreational, scientific, or other environmental qualities or values	

of the locality. In terms of lighting, it is proposed to upgrade the existing sporting lighting and provide new pedestrian lighting within the precinct. The lighting has been designed and will be installed to minimise light spill and light pollution and to ensure compliance with AS 4282:2019.	
The effects on any locality, place or building that has— (i) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or (ii) other special value for present or future generations	
Impact Level	Not Appliable
The proposed development does not impact any area, place or building that has any aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations. Refer to Section 5.3 for further heritage related information.	
The impact on the habitat of protected animals, within the meaning of the *Biodiversity Conservation Act 2016*	
Impact Level	Low
Impact Level with Controls	Low
The proposed development will not have a negative impact on the habitat of protected animals, as long as the recommended safeguards and controls in Section 7 are implemented. Refer to Section 5.2 for further biodiversity related information.	
The endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air	
Impact Level	Low
Impact Level with Controls	Low
The proposed development will not have a negative impact on the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air, as long as the recommended safeguards and controls in Section 7 are implemented. Refer to Section 5.2 for further biodiversity related information.	
Long-term effects on the environment	

Impact Level	Moderate
Impact Level with Controls	Low
As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, there are no anticipated long-term effects on the environment. Please refer to Section 5.11 for further information on the Synthetic Turf Field.	
Degradation of the quality of the environment	
Impact Level	Moderate
Impact Level with Controls	Low
As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, it is not anticipated that the overall development will result in a loss of ecological integrity, increase in pollution, deplete resources, increase climate change impacts and significantly disturb ecosystems. The introduction of the Synthetic Turf Field may potentially increase pollution. Please refer to Section 5.11 for further information on the Synthetic Turf Field, and Section 7 on controls to minimize impacts/risks	
Risk to the safety of the environment	
Impact Level	Moderate
Impact Level with Controls	Low
The overall development will not result in an increase or change in safety risks associated with public health, contamination, bushfire, sea level rise, flood, storm surge, wind speeds, extreme heat andurban heat.. The introduction of the Synthetic Turf Field may increase localised air temperature and surface temperature of the field during extreme heat. Refer to section 5.11 for information on the Synthetic Turf Field and Section 7 on controls to minimize impacts/risks.	
Reduction in the range of beneficial uses of the environment	
Impact Level	Not Appliable
The proposed development will not reduce any beneficial uses of the current environment.	
Pollution of the Environment	

Impact Level	Moderate
Impact Level with Controls	Low
The proposed development has the potential to cause environmental pollution both during the construction and operational phase. However, all construction related impacts will be short term and will need to be effectively managed via a Construction Environmental Management Plan. Operational impacts are considered to be minor. Refer to Sections 5.4 – 5.8 for further pollution related information.	
Environmental problems associated with the disposal of waste	
Impact Level	Moderate
Impact Level with Controls	Low
As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, it is not anticipated that the development will result in an increase in waste generation from operational use of the park. There will be short term waste generation during the construction phase, which will have a minimal impact on the environment as long as the recommended safeguards and controls in Section 7 are implemented. Refer to Section 5.7 for further waste related information.	
Increased demands on natural or other resources that are, or are likely to become, in short supply	
Impact Level	Not Appliable
The proposed development will not increase demand on any resources that are or will likely become in short supply.	
The cumulative environmental effect with other existing or likely future activities	
Impact Level	Moderate
Impact Level with Controls	Low
The Department of Planning and Environment's (DPE) Guidelines for Division 5.1 Assessments outlines cumulative impacts as impacts that are a result of incremental, sustained and combined effects of human action and natural variations over time, both positive and negative, or by the compounding effects of a single project or multiple projects in an area, and by the accumulation of effects from past, current and relevant	

<table>
<tr><td colspan="2">future projects.

Relevant future projects is defined as:
State significant development and State significant infrastructure projects
Projects classified as designated development and requires an EIS
Projects that require assessment under Division 5.1 of the EP&A Act that are likely to significantly affect the environment and require an EIS
Projects that have been declared to be controlled actions under the EPBC Act
Any major greenfield and urban renewal developments that are scheduled for the area (e.g. new areas zoned for urban development).
In relation to the Cook Park development, there are no known current projects that meet the definition of 'relevant future projects' in the area. Therefore, there are no identified environmental concerns relating to cumulative impacts.</td></tr>
<tr><td colspan="2">The impact on coastal processes and coastal hazards, including those under projected climate change conditions</td></tr>
<tr><td>Impact Level</td><td>Not Appliable</td></tr>
<tr><td colspan="2">The site is not located on the coast and therefore does not have any impacts on coastal processes or hazards.</td></tr>
<tr><td colspan="2">Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1</td></tr>
<tr><td>Impact Level</td><td>Low</td></tr>
<tr><td>Impact Level with Controls</td><td>Low</td></tr>
<tr><td colspan="2">There are no environmental impacts associated with this requirement.

Refer to Section 3 for further information.</td></tr>
<tr><td colspan="2">Other relevant environmental factors</td></tr>
<tr><td>Impact Level</td><td>Moderate</td></tr>
<tr><td>Impact Level with Controls</td><td>Low</td></tr>
<tr><td colspan="2">The development includes the installation of a new synthetic turf surface on an existing playing field. The impacts of this have been assessed and document in section 5.11 of this Review of Environmental Factors.</td></tr>
</table>

5.2 Biodiversity Assessment and Impacts

An Ecological Assessment was completed by Ecological Australia dated 26 June 2025 (Appendix B) to support the project. The Ecological Assessment assessed the impacts of the proposed upgrades on threatened species, populations and communities listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Ecological Assessment outlines:

- Under the BC Act, proponents of Part 5 activities must apply the test of significance to assess biodiversity impacts. The test of significance (under s.7.3) determines whether the proposed activity is likely to significantly affect threatened species or ecological communities, or their habitats.
- Tests of significance, in accordance with Section 7.3 of the BC Act, were conducted for 17 threatened species, and three Threatened Ecological Communities listed under the BC Act. Assessments of Significance, in accordance with the EPBC Act Significant Impact Guidelines (DotE 2013) were conducted for five threatened species, one migratory species, and two TECs listed under the EPBC Act.
- These threatened entities were considered to have potential to occur within the Study Area and be affected by the proposal. Based on these assessments, and with the implementation of the proposed mitigation measures, the proposed works are considered unlikely to result in significant impacts.
- It is noted that the Ecological Assessment is based on the information that one existing planted native tree (Tree 5 – *Eucalyptus microcorys*) is expected to be removed, and all other existing trees are to be retained. If removal of any other trees is to occur an updated impacted assessment would need to be undertaken.
- Proposed direct impacts are limited to clearing and excavating the groundcover / understorey in an existing cleared parkland and the removal of one old building which could potentially provide roosting habitat for microbats.
- The Ecological Assessment Report (June 2024) concludes that the proposed activity is not likely to significantly affect threatened species due to the minor impacts on native vegetation and the highly disturbed Study Area. The Study Area does not occur on or near declared AOBV. As such, based on the Ecological Assessment Report (ELA June 2025) the BOS has not been triggered. In turn, with the implementation of the proposed mitigation measures, the proposed works are considered unlikely to result in significant impacts.

5.3 Heritage Assessment and Impacts

Aboriginal Heritage

An Aboriginal Heritage Information Management System (AHMIS) Basic Search was conducted on 27 November 2025. The search did not identify any aboriginal object or places within the project area.

Picture Five: Screenshot of AHMIS Search (full copy can be found in Appendix G).

AHIMS Web Service search for the following area at Lat, Long From : -33.7791, 150.7616 - Lat, Long To : -33.7702, 150.777, conducted by Adrian Estreich on 27 November 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

Suitable safeguards and mitigation measures are outlined in Section 7, including the requirement for an unexpected finds protocol to be developed and implemented as part of an overall construction Environmental Management Plan.

European Heritage

A review of the Penrith Local Environmental Plan 2010 and Penrith City Council's mapping system (ESRI, 2025) has identified that there are no heritage items or areas within the proposed project footprint.

It is also noted that heritage items or areas within 1km of the development site will not be impacted by the construction or operational phase of the development.

Picture Six: ERSI Mapping of Heritage Items located near the subject site (coloured in yellow and light brown).



Table Two: Local Environment Plan Listed Heritage Places and Items

Item Name	Address	Property Description	Significance	Item No.
Dunheved Fire Station	50 Christie Street	Lot 142, DP 31911	Local	655
Explosives storehouse	146 Dunheved Circuit	Lot 131, DP 701610	Local	869
Brick cottage	38 Gidley Street	Lot 1, DP 783200	Local	298
Brick cottage	40 Gidley Street	Lot 1, DP 710777	Local	797
"Bronte", villa	50 Gidley Street	Lot 4, DP 38617	Local	299
Bennett Wagon	Pioneer Park, Great Western Highway	Lot B, DP 371329	Local	805
Milestone	Great Western Highway (between Marsden Road and Day Street)		Local	304
Victoria Park and memorial	Bounded by Great Western Highway, Pages Road, Putland and Princess Mary Streets	Lot 1, DP 1142771	Local	310
St Marys General Cemetery	175–191 Great Western Highway	Lot 7300, DP 1141971	Local	303
St Mary Magdalene Church, Hall, Cemetery and grounds	299–311 Great Western Highway	Lot 1, DP 1035601	Local	301
"Mourilyan"	329–333 Great Western Highway	Lot 1, DP 997243	Local	300
Shop	373 Great Western Highway	Lot 401, DP 601711	Local	806
Wagon Wheel Hotel	449 Great Western Highway	Lot 102, DP 1031177	Local	308
Wool Pack Inn (ruin)	556 Great Western Highway	Lot 1, DP 81099	Local	654
St Marys Council Chambers (former)	2–6 Mamre Road	Lot 6, Section 1, DP 974985	Local	305
"Margaret Farm", house, barn and tannery site	Pages Road, Barker, Wilson and Schleicher Streets	Lots 1–6, DP 30962	Local	226

Item Name	Address	Property Description	Significance	Item No.
"Mimosa", stables (former)	11 Pages Road	Lot 1, DP 745809	Local	220
"Mimosa", dwelling, fence and garden	13 Pages Road	Lot 40, DP 58974	Local	219
Brick cottage	31–33 Pages Road	Lot 101, DP 833732	Local	801
St Marys Public School	2-6 Princess Mary Street	Lot 1, DP 798964; Lot 1, DP 121443; Lot 1, DP 216092; Lot 1, DP 798965; Lot 2, DP 183835	Local	307
Brick cottage	18 Princess Mary Street	Lot 104, DP 1037465	Local	309
Weatherboard cottage	20 Princess Mary Street	Lot 13, DP 38418	Local	798
Weatherboard cottage	22 Princess Mary Street	Lot 14, DP 38418	Local	799
Gothic revival cottage	24 Princess Mary Street	Lot 15, DP 38418	Local	800
"Thompson's Tannery" site, tannery pits (former) and well	94 Saddington Street	SP 73643; Lots 1–13, SP 73643	Local	235
Brick cottage	100–104 Saddington Street	Lot 902, DP 1063929	Local	234
Moore Cottage	8 Sainsbury Street	Lot 10, SP 72555	Local	221
St Marys Railway Station	Corner Station and Queen Streets	Lot 1, DP 1040178	State	282

5.4 Air Quality

The air quality in St Marys is characteristic of an established suburban environment. The primary sources of air pollution include airborne pollutants from vehicle emissions, as well as dust and debris generated during periods of high winds.

The primary air quality impacts anticipated during construction are temporary and largely associated with dust particles and greenhouse gas emissions. These emissions may include carbon dioxide (CO_2), nitrous oxides, and polycyclic aromatic hydrocarbons (PAH) compounds resulting from the combustion of diesel fuel and petrol in construction machinery and plant equipment.

The proposal may also affect air quality through excavation and land disturbance, which have the potential to generate dust. However, these impacts are expected to be minor, short-term, and effectively managed through appropriate mitigation measures.

The operation of plant, machinery and trucks may also lead to increases in exhaust emissions in the local area; however, these are expected to be minor and short-term.

In addition, without suitable controls, there is a potential for exposure to asbestos during remediation works. Suitable controls via the Remedial Action Plan are provided in line with SafeWork NSW and NSW Environment Protection Authority.

Refer to Section 7 for proposed mitigation safeguards and controls.

5.5 Noise and Vibration

The existing noise environment is characteristic of an established suburban area. The primary sources of noise in the locality include traffic from cars, buses, and heavy vehicles, as well as pedestrian activity. The most sensitive noise receptors near the proposed works are the residential properties located along Wilson Street and John Street.

Residential properties near Cook Park may be subject to some noise impacts during the construction phase, primarily expected to be associated with construction vehicle movements and the operation of mechanical plant and equipment.

With respect to operational noise, including public address (PA) systems and noise generated from the use of recreational facilities, there are no recorded complaints from nearby residents regarding noise from the current use of the site. As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, it is not anticipated that the development will result in an increase operational noise impacts.

Refer to Section 7 for proposed mitigation safeguards and controls.

5.6 Water Pollution

The primary source of water pollution from the current operation of the site are:

- Fertilisers and pesticides
- Sediment runoff
- Litter

As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, it is not anticipated that the development will result in an increase operational water pollution impacts as long as the recommended safeguards and controls in Section 7 are implemented.

There is an elevated potential for water pollution during the construction phase of the project. This is generally from sediment and erosion related concerns. Construction related water pollution concerns can be effectively managed through a Construction Environmental Management Plan (CEMP). The CEMP is to take into consideration Volume 1 of Managing Urban Stormwater: Soils and Construction (Landcom, 2004). This will include the need to develop a project specific Sediment and Erosion Control Plan.

Water Sensitive Urban Design

Councils' Development Control Policy outlines Water Sensitive Urban Design requirements. The Policy aims to improve stormwater quality and reduce potable water consumption to help restore the natural water cycle

At the time of writing this Review of Environmental Factors, the design was at 50%. As the design elements progress, due consideration will be given to water sensitive urban design requirements where possible and within the limitations of the project.

5.7 Waste and Resource Management

Currently waste is generated by users of Cook Park and is collected and disposed of by Penrith City Council. As the proposed development involves upgrading an existing recreational area without introducing significant changes to the current environment, it is not anticipated that the development will result in an increase in waste generation from operational use of the park.

Waste will be generated during the construction phase of the project, which may include:

- surplus building materials
- asphalt and concrete
- spoil from earthworks
- green waste

- various building material wastes
- general waste, including food and other wastes generated by construction workers.

Construction waste can be effectively managed through a Construction Environmental Management Plan (CEMP). The CEMP is to take into consideration:

- NSW Environmental Protection Authority's Waste classification requirements
- Waste management disposal requirements for any contaminated waste.

Refer to Section 7 for proposed mitigation safeguards and controls.

5.8 Asbestos and Contamination

The site has been subject to a number of asbestos and contamination assessments as part of this proposed development. This includes:

- Internal Pre-Work Assessment undertaken by Divisional Assurance in September 2021
- Preliminary (Stage 1) Site Investigation prepared by JK Environments dated 15 June 2022.
- Detailed Site Investigation prepared by Trinitas Group dated 6 May 2024
- Targeted Asbestos in Soil Assessment (Field 1 Precinct only) prepared by Trinitas Group dated 17 July 2024
- Asbestos in Soil Delineation prepared by Trinitas Group dated 17 July 2024
- Remedial Action Plan prepared by Trinitas Group dated 18 July 2024

The Assessment outcomes found:

- A total of 79 test pits were conducted across the assessments.
- Aside from TP05, TP10, TP18 and TP26, no other asbestos containing material has been located within those test pits.
- Bonded asbestos was detected at TP05 and TP26. The Remedial Action Plan recommends that the appropriate remediation strategy is *'Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill'*.
- TP18 had asbestos detected, however, it was below the acceptable site criteria and therefore does not require remediation.
- Bonded asbestos was detected at TP10. Trinitas have outlined that Council can choose to remediate a 2m x 2m area around TP10.

Picture Seven: Detailed site investigation test pits



The Remediation Action plan (RAP) (appendix I) prepared by Trinitas dated July 2024 outlines that the preferred remediation strategy is excavation and removal of contaminated material. It outlines that during remediation works; the following must be undertaken:

- Undertake waste classification in line with Environment Protection Authority (EPA) requirements for any soil being taken from site.
- Specific excavation requirements for excavation within known contaminated areas.
- Disposal of excavated material to lawful waste facilities
- Backfilling excavated areas,

The requirements of the RAP must be incorporated into the construction environmental management plan.

5.9 Flooding

A flood modelling report was prepared by Cumulus Engineering dated 3 July 2025 (Appendix C). The flood modelling included:

- Hydraulic modelling
- Consideration of existing conditions
- Consideration of developed conditions
- Climate Change Analysis

The hydraulic model utilised in the St Marys (Byrnes Creek) Catchment Floodplain Risk Management Study and Plan (Lyall & Associates, 2020) has been adopted for this study, with the only modification being an upgrade to the HPC solver. To assess flood behaviour and impact of the development, the hydraulic model was run under the following scenarios for their respective durations:

- Existing Conditions – 10% and 1% AEP Storm Events
- Developed Conditions – 20%, 10%, 5%, 2%, 1%, 0.5%, 0.2% AEP and PMF Storm events.

The report concluded:

- Flood modelling has demonstrated that there are no adverse impacts as a result of the development.
- Safe access and egress from the site are maintained, with low hazard and depths less than 300mm on access routes.
- A climate change analysis has been undertaken which provides an indication of the flood mapping to refer under 2050 and 2090 climate change conditions for the 1% and 10% AEP events.

5.10 Bushfire Risks

A Bushfire Protection Assessment was prepared by EcoLogical Australia dated 14 May 2025 (Appendix D).

The Assessment outlined:

- Cook Park is considered a low bushfire risk environment with opportunities for evacuation away from the direction of likely bushfire attack.
- The vegetation within the subject land and in areas adjoining to the north and south is managed land consisting predominately of mown grass with some scattered trees.
- The only bushfire prone vegetation affecting the proposed development is a patch of vegetation to the south-west of the subject land that is conservatively classified as 'grassland'.
- Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.
- There is adequate water supplies for firefighting purposes.
- The proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.
- The building construction shall be in accordance with the general fire safety provisions of the NCC.

5.11 Synthetic Turf Assessment Requirements

The impact of synthetic turf fields on the environment and climate is an emerging area of assessment.

It is noted that currently there is no environmental regulations administered by the Environmental Protection Authority (EPA) specific to synthetic turf fields and any impacts on the environment would fall under existing legislation including, but not limited to, the Protection of the Environment Operations Act 1997.

The NSW EPA outlines that the potential impact of microplastics and the chemical components of synthetic turf on NSW waterways and soils is not well understood and work is needed to understand potential risks and to determine appropriate mitigation measures.

In 2022, the NSW Chief Scientist and Engineer completed an independent review into the design, use and impacts of synthetic turf in public open spaces report (The NSW Chief Scientist Report'). The document reviewed the following:

- Synthetic turf materials and their use in NSW
- Trends and initiatives and their applicability to NSW
- Human health impacts
- Environmental impacts

The report also made a number of recommendations relating to:

- Planning and approvals
- Sustainability and end of life
- Data
- Research

In addition, in 2025, the NSW Government released two documents to assist Council's and developers in managing synthetic turf developments.

<u>The Synthetic turf sports fields in public open space – Guide for Decision Makers</u>

The NSW Synthetic Turf Sports Fields in Public Open Space – Guideline for Decision Makers provides a structured framework to help councils and public authorities assess, plan and manage the installation of synthetic sports fields. The Guide provides a 'Plan, Design, Deliver and Manage' framework for decision makers. The Guide outlines the following:

Stage	Considerations and outcomes
Planning	• Strategic planning • Sports field strategic considerations • Synthetic turf sports field siting • Community engagement • Lifecycle planning
Design	• Division 5.1 assessment

	• Site evaluation • Community engagement • Materials and innovation • Synthetic turf options and uses • Social considerations • Health and safety considerations • Environmental considerations • Stormwater management • Management and maintenance
Delivery	• Documentation • Procurement • Construction • Built for purpose and quality control • Establishment period and warranties
Manage	• Asset management plan • Asset maintenance • Environmental management and monitoring • Evaluation and reporting

The NSW Government's Guidelines for Division 5.1 Assessments Addendum for Synthetic Turf Sports Field

The Addendum was introduced to improve the level of assessment of proposed synthetic turf developments being undertaken via the Part 5 planning pathway. In turn, the document was prepared in response to the 2022 NSW Chief Scientist and Engineer Independent Review.

The Addendum applies to the installation of synthetic turf for both new sports fields and upgrades to existing sports fields where it is proposed to be carried out as development without consent under a State Environmental Planning Policy (such as the State Environmental Planning Policy - Transport and Infrastructure 2021).

The matters for consideration within the addendum are:

- Location of synthetic turf sports fields (e.g. consideration of flooding, bushfire, climate change and heritage)
- Stormwater and soil health (e.g. consideration of microplastic pollution and determinantal impacts on soil health)
- Human health (e.g. consideration of heat-related illness, thermal comfort, urban heat island effect, chemical, microplastic, microbiological health risks, air pollutants and odour risks)

- Biodiversity
- Amenity and intensification of use
- Material selection and management

Division 5.1 assessments Addendum for synthetic turf sports field Assessment

Assessment Theme - Human Health

Heat Impacts

The *Synthetic turf sports fields in public open space – Guide for Decision Makers* outlines that synthetic turf can have significantly higher surface temperatures than the surrounding air temperature which can impact on player and user comfort even in moderately hot weather.

During very hot summer days in Western Sydney, synthetic surfaces reached average surface temperatures of 70-75°C, compared with 37°C for irrigated natural grass. The high surface temperatures of synthetic turf can cause burns.

It is noted that the 'Health Impact of Synthetic Turf Report' prepared by NSW Ministry of Health in 2022 states that there is a *'lack of studies investigated whether the ground heating of synthetic turf surfaces is capable of increasing heat-related illnesses amongst field users, although available evidence suggests that the rates of heat-related illnesses amongst field sports athletes in general are very low'.*

Notwithstanding the above, it is important that suitable controls are implemented. Please refer to Section 7 which outlines the specific controls to minimise the risk to human health relating to heat impacts.

Chemical and plastic exposure

The *'NSW Chief Scientist Report'* states the following:

- The chemical signature of synthetic turf may be associated with health risks through pathways including ingestion (direct or indirect), inhalation, or dermal absorption
- Polycyclic aromatic hydrocarbons (PAHs) within synthetic turf can volatilise into the breathing zone of the synthetic turf user or deposit onto the skin. Therefore, direct inhalation and dermal contact of PAHs are assumed to be the potential primary routes of exposure
- Ingestion of crumb rubber or dust particles from the field, and exposure to leachates released into the environment is considered secondary.
- Preliminary studies indicate that leachates containing metal and PAHs are low and generally below drinking water standards, although leaching dynamics of synthetic turf chemicals are not currently well understood.

In addition, the 'Health Impact of Synthetic Turf Report' prepared by NSW Ministry

of Health in 2022 outlines that the main chemical concerns relate to the use of crumb rubber infill as they can be potentially toxic and carcinogenic. Importantly, the proposed infill for this development is Broc Organic Infill.

Broc Organic Infill is a natural, plant-based infill material used in synthetic turf systems. Made from renewable organic fibres which assist in environmental and health concerns associated with microplastics.

Please refer to Section 7 which outlines the specific controls to minimise the risk to human health relating to chemicals and plastic exposure.

Chemical Leaching

Leachates are created when synthetic turf is exposed to rain or irrigation water. Leachates containing metals and organic compounds from the crumb rubber can discharge into ground or surface water, river catchment and drinking water resources to affect the environment and human health.

As outlines above, this Project proposes the use of Broc Organic Infill instead of crumb rubber and therefore minimise the risks associated with its use.

The 'Health Impact of Synthetic Turf Report' outlines that although the leaching dynamics of synthetic turf field chemicals are not well studied, preliminary studies indicate that leachates containing metals and PAHs are low and generally below regulatory standards

However, with consideration to these potential impacts, it is important that suitable controls are implemented. Please refer to Section 7 which outlines the specific controls to minimise the risk relating to chemical leaching.

Microbiological Exposure

The *'NSW Chief Scientist Report'*, outlines that although concerns have been raised regarding the harbourage of methicillin-resistant *Staphylococcus aureus* (MRSA) bacteria in synthetic turf, evidence from the literature does not support synthetic turf as a source of MRSA infection due to the unfavourable survival conditions for the bacteria such as high temperatures and the presence of UV in outdoor fields. As such, no controls have been proposed for microbiological exposure risks to human health as the risk does not apply to this project.

Air Pollutants and Odorants Exposure

The *'NSW Chief Scientist Report'*, outlines:

- There is evidence that suggests that certain gasses, including PAHs, VOCs and semi-volatile Organic Compounds (SVOCs) found in infill and other components are released from the synthetic turf into the air at higher temperatures.
- However, studies of sufficient sample size and longitudinal studies are needed to understand long term effects.

In turn, the 'Health Impact of Synthetic Turf Report' concludes '*The health risks of*

other synthetic turf chemicals including Volatile Organic Compounds (VOCs), plasticizers, antioxidants and additives are not well studied and generally, their levels of detection were generally low and unlikely to pose appreciable health effects'.

Notwithstanding the above, it is important that suitable controls are implemented. Please refer to Section 7 which outlines the specific controls to minimise the risk to human health relating to air pollutants and odorants.

Mental and Social Health

The *'NSW Chief Scientist Report'* states that the replacement of natural turf fields with synthetic turf may decrease local communities' access to natural green space and amenities, which may have implications for community cohesion and mental health. Replacement of natural grass with a synthetic turf represents a loss of natural green space. However, if the outcome is beneficial (e.g. improved and functional playing field, well-maintained amenities such as lighting, footpaths, playing areas) then a decrease in health benefits may not arise.

The *'NSW Chief Scientist Report'* states synthetic turf has the potential to improve individual and community health in relation to its accessibility for physical activity, particularly in a range of weather conditions.

The 'Health Impact of Synthetic Turf Report' prepared by NSW Ministry of Health in 2022 outlines that urban green spaces, which are inclusive of parks, sport spaces, trees, natural grasslands, and wetlands have powerful opportunities for public health, as they are critical to delivering a range of positive health, social and environmental outcomes.

The report proceeds to outline that there are no studies to date that explicitly investigates how the natural turf and synthetic turf fields compare in terms of their potential impact on the physical, mental and the social aspects of health. As such, no controls have been proposed for mental and social health risks to human health as the risk does not apply to this project.

It is noted that for this specific project, although it is proposed to upgrade one of the fields to a synthetic turf field, the site will still provide 3 other natural turf fields and greenspace around a playground. This greenspace which will provide sufficient natural greenspace for the community to utilise and enjoy, minimising any potential mental/social health concerns.

Assessment Theme – Stormwater and Water Pollution

The *Synthetic turf sports fields in public open space – Guide for Decision Makers* outlines that chemical leachate and microplastic pollution from synthetic turf materials and plastics, along with pesticides and fungicides used for surface maintenance may, if not managed appropriately, contaminate local waterways,

soils, and air as they disperse through the environment.

In turn, the *'NSW Chief Scientist Report'* outlines the following:

- Zinc from the synthetic turf material is considered the toxicant most likely to pose a risk to aquatic ecosystems.
- Polycyclic aromatic hydrocarbons, metals and other toxicants may be of concern in some fields.
- Both turf fibre blades and rubber infill pose a risk of being transported to waterways as plastic pollution and threatening aquatic life.
- That up to 100 kg of infill per year per field is likely to be transported from a synthetic turf field with no strategies to reduce infill migration in place and loss of turf fibres is likely to be in the 100's of kilograms per year
- The dispersal routes of small fragments of turf fibres and disintegrated infills include 'walkoff' on players' shoes, clothing or skin, maintenance equipment, removal with leaves, 'splash' from play, wind and transport through runoff to waterways

The impact on the environment relating to the proposed synthetic turf surface, in particular microplastics, has been considered as part of the project, including through the 'Cook Park Synthetic Surfaces Specification's (Appendix F). This document outlines:

The synthetic sports surface must be designed in a manner that will reduce the impacts of micro-plastics from the yarn and any infill (even organic) impacting on the community. The Contractor must adhere to Australian Standard SA TR CEN 17519: 2021 Surfaces for sports areas - Synthetic turf sports facilities - Guidance on how to minimize infill dispersion into the environment.

In addition, it is important that suitable controls are implemented. This includes the implementation of a suitable and well-defined Synthetic Turf Operational Management Plan. Please refer to Section 7 which outlines the specific controls to minimise the risk relating to stormwater and water pollution impacts.

Assessment Theme – Soil Health

Synthetic turf can negatively impact soil health primarily through compaction, sealing, and contamination.

The *'NSW Chief Scientist Report'* outlines:

- While the impact of installation directly on the soil ecosystem below it has not been studied. Research examining soil under impermeable surfaces has found an anerobic environment, which may lead to an increase in pathogens harmful to human health. Contamination from crumb rubber and other materials and additives used in synthetic turf have potential to

adversely impact surrounding environments.

- However, in order to understand the impact of surface changes such as the installation of synthetic turf, research partnerships and collection of soil health assessment and monitoring data is encouraged.

As such the proposed impact is not well understood or defined by existing research and guidelines in NSW.

However, it is still important that Council considers these impacts as part of this Review of Environmental Factors. Please refer to Section 7 which outlines the specific controls relating to monitoring and managing soil health during the life of the synthetic turf field.

Assessment Theme – Biodiversity

The Review of Environmental Factors was supported by an Ecological Assessment prepared by Ecological Australia and was subsequently reviewed by Council's Natural Systems Team.

As part of this review, the Natural Systems Team assessed the potential impacts of the proposed synthetic turf field on local biodiversity. Based on this assessment, it was determined that the installation of the synthetic turf will not result in any significant or detrimental impacts on threatened entities or local the biodiversity surrounding the site.

Assessment Theme – Climate Change

The potential impacts from climate change have been considered.

<u>Greenhouse Gases</u>

The main greenhouse gas emission concerns relating to synthetic turf is during the manufacturing phase and end-of-life disposal.

During production, synthetic turf requires higher energy consumption and generates more greenhouse gases than natural turf. In turn, during the life of a synthetic turf field, it can generate greenhouse gases through plastic degradation.

However, as the project does not influence the manufacturing/production practices of synthetic turf, no specific project controls apply in terms of greenhouse gases.

It should also be noted that the synthetic turf will be disposed of appropriately at the end of life.

Urban Heat Island Effect

The Urban Heat Island Effect (UHI) occurs when surfaces and air in the cities are hotter than nearby vegetated areas. It is noted that the *'NSW Chief Scientist Report'* outlines that the contribution of synthetic turf fields to the UHI effect is likely to be small, contained within the spatial footprint of the surface.

It is also noted that in the 'Health Impact of Synthetic Turf Report' prepared by NSW Ministry of Health in 2022 it states *'It is likely that on hot sunny days, synthetic turf may locally increase air temperatures and physiological equivalent temperatures slightly. However, the contribution to the wider UHI effect at scale is likely very small given the proportionately small area occupied by such surfaces in the city'*.

Notwithstanding the above, the *'NSW Chief Scientist Report'* identifies the following mitigation measures to minimise impacts:

- Shading
- Infill choice
- New product choices
- Irrigation

Although shading of the field itself is not practical, the overall project does include a provision to plant up to 100 trees in the precinct which will provide shading and cooling tooffset some of the potential UHI. The synthetic field will be located in an open air environment with good ventilation for the term of its useful life and surrounded by natural open greenspace, and parkland with complimentary canopy tree planting. Organic infill will be used for the synthetic turf to reduce heat buildup and minimize impacts.

Assessment Theme – Location of synthetic turf sports fields

Bushfire

As with other infrastructure, synthetic turf may be subject to an approaching bushfire via three forms of attack: radiant attack, ember attack and direct flame contact. The polymers used in synthetic turf can therefore be ignited in bushfire settings. The materials may cause additional risks due to toxic gasses and noxious emissions being released.

The Review of Environmental Factors was supported by a Bushfire Protection Assessment, which was prepared by Ecological Australia (Appendix D). This assessment considered all aspects of the development including a new synthetic playing field.

This assessment outlined that Cook Park is considered a low bushfire risk environment with opportunities for evacuation away from the direction of likely

bushfire attack.

It is noted in the *'NSW Chief Scientist Report'* that natural material such as organic infill, which is the proposed infill material for this development, have a lower peak heat release rate than standard infill material such as styrene butadiene rubber, this will further reduce impacts in the unlikely event of a bushfire.

Notwithstanding the low risk, specific controls are required as outlined in Section 7.

Heritage

Proposed synthetic turf field will not impact or trigger any heritage concerns. Refer to Section 5.3 of this Review of Environmental Factors

Flooding

Proposed synthetic turf field will not impact or trigger any flooding concerns. Refer to Section 5.9 of this Review of Environmental Factors

Assessment Theme – Amenity and Intensification of use

The primary purpose of the synthetic turf field at Cook Park is to decrease the number of days when the field cannot be used due to wet weather. This includes both games and training. The synthetic turf field at Cook Park supports the existing use of the site and does not intend to increase the use or patronage of the site.

As such, there is no anticipated increase to amenity impacts specifically from the synthetic turf field relating to noise, traffic, user numbers, hours of use and light.

Assessment Theme – Material selection and management

The Guidelines for Division 5.1 Assessments (Addendum for Synthetic Turf Sports Fields) requires an assessment of the material selection and management.

Material Selection

Council has determined that the existing playing field is required to be upgraded to a synthetic turf surface to provide an all weather playing surface for sporting groups.

The Review of Environmental Factors is supported by the 'Cook Park Synthetic Surfaces Specification's (Appendix F). These specifications provide provisions to ensure high quality outcomes in terms of synthetic turf selection and installation. This includes:

- Selection of material that complies with Australian Standard SA TR CEN 17519: 2021 Surfaces for sports areas - Synthetic turf sports facilities -

Guidance on how to minimize infill dispersion into the environment

- Implementation of a suitable ISO management system (e.g. IS 14001 Environmental Management Systems)
- Demonstration of a reduced environmental impact on the manufacturing, supply chain logistics, site establishment and method statements for the construction, installation and maintenance
- Commitment to circular economy

Material Management

This is covered in detail within Section 5 and 7 of this Review of Environmental Factors.

Assessment Theme – End of Life Management

The *Synthetic turf sports fields in public open space – Guide for Decision Makers outlines that* there are significant environmental challenges for disposing of synthetic turf at the end of its 8–10-year life cycle.

The product is purposefully designed to not breakdown quickly and has the potential to stay in landfill for a significant amount of time after disposal. Synthetic turf can cause chemical leachate from landfill into soils and waterways. There is also potential for pollution during the management of removal offsite due to breakage and crumb content.

The *'NSW Chief Scientist Report'* makes specific recommendations on end-of -life management for synthetic turf fields. The recommendation is for a synthetic turf end of life (EOL) management plan that is consistent with the intent and provisions of the NSW Waste and Sustainable Materials Strategy and the *NSW Plastic Reduction and Circular Economy Act 2021*.

Please refer to Section 7 which outlines the specific controls relating to End-of-Life Management Plan requirements.

5.12 Arboriculture

An Arboricultural Development Assessment Report was prepared by Moore Trees Arboricultural Services dated 28 November 2024 (Appendix E).

The Assessment outlined:

- The health and condition of one hundred and seventy six (176) trees located at Cook Park.
- All trees were assessed for Safe Useful Life Expectancy (SULE), health and amenity value
- Impacts from the proposed development on each tree
- The Tree Protection Zone (TPZ) calculated for each tree
- Any branch or root pruning that may be required for trees

The following table provided in the Assessment Report outlines the Retention Value for the trees assessed:

Retention Value	High (Priority for retention)	Medium (Consider for retention)	Low (Consider for removal)
Tree No.	1-3, 14, 18, 19, 21-24, 26-40, 42, 43, 45, 48-61, 85-119, 128-137, 147-162, 164-176	4-13, 15-17, 20, 25, 62-79, 80-84, 120-122, 127, 138-141, 144-146	41, 44, 46, 47, 123-126, 142, 143, 163

It should be noted that the table above is indicative of retention value as assessed by the project arborist and not an indication of trees to be removed during works, in accordance with Council's tree replacement policy, a minimum a replacement ratio of 3:1 will be used where any trees will be removed.

The assessment report also provides a number of management recommendations that have been captured in Section 7 of this REF.

Section Six: Review of Environmental Factors Community Consultation

The Environmental Planning and Assessment Regulations 2021 requires formal consultation under the following situations:

a) The activity has a capital investment value of more than $5 million, or

b) The activity requires approval or permit as referred to in any of the following provisions before it may be carried out—

- Fisheries Management Act 1994, sections 144, 201, 205 or 219,
- Heritage Act 1977, section 57,
- National Parks and Wildlife Act 1974, section 90,
- Protection of the Environment Operations Act 1997, sections 47–49 or 122, or

c) The determining authority considers that it is in the public interest to publish the review.

d) Where there is substantial impacts on Council-related infrastructure or Services.

In addition, Part 2.2 – Division 1 of the Transport and Infrastructure SEPP provides recommendations for consultation with affected stakeholders. These relate to:

- Impacts on Council-related infrastructure or services
- Impacts on Local Heritage
- Development Flood Liable Land
- Other Public Authorities

This Review of Environmental Factors will need to be placed on public exhibition as it triggers the *'capital investment value of more than $5 million'* under the Environmental Planning and Assessment Regulations 2021.

Public Consultation relating to the Review of Environmental Factors was conducted between 18th October 2024 - 7th November 2024. The outcome of the consultation was:

- A total of 66 submissions were received.
- 97% of submissions were supportive of the project.
- 53 submissions related to carparking and traffic safety and comments on specific design elements of the project
- 11 respondents were in favour of the proposed installation of the synthetic turf surface
- 2 respondents raised concerns regarding the proposed installation of the synthetic turf surface

The Review of Environmental Factors was amended to address concerns raised regarding the potential impacts from the synthetic turf surface.

Section Seven: Mitigation Safeguards and Controls

The following mitigation safeguards and controls must be implemented as part of project:

Construction Related Controls	
7.1	**General**
7.1.1	All conditions of the REF document are to be implemented as part of the scheduled works.
7.1.2	Prior to commencement of work, a Project Specific Construction Environmental Management Plan (CEMP) is to be developed and approved by Penrith City Council. The CEMP is to address the environmental aspects of the construction and is to include details on the environmental management practices and controls to be implemented on the site. The CEMP must be prepared by a suitably qualified person to Council's acceptance and is to address, but is not limited to the following: • Water quality management • Soil management • Asbestos removal • Wastewater management • Stormwater management and drainage • Noise control and hours of operation • Dust suppression. • Waste management (including solid and liquid waste) • Vehicle movements • Chemical storage (including dangerous/hazardous goods), transport, spill contingency and emergency response. • Erosion and sediment control • Air quality including odour and dust control. • Vegetation and weed management. • Pest management • Environmental monitoring All activities on the site are to be implemented and carried out in accordance with the CEMP.

7.1.3	Prior to the commencement of any works associated with this development, a Traffic Management Plan (TMP) must be prepared. The TMP shall: • Be prepared by a suitably qualified and experienced traffic management professional in accordance with the appropriate NSW legislative requirements. • Detail measures to ensure the safe and efficient movement of vehicles, pedestrians, and cyclists during all stages of construction. • Include provisions for: – Temporary traffic control devices and signage. – Access arrangements for construction vehicles. – Pedestrian safety and alternative routes. – Emergency vehicle access. – Minimisation of impacts on surrounding road network and public transport. • Be implemented and maintained for the duration of the works.
7.2 Waste and Resource Management	
7.2.1	Prior to commencement of work, a detailed fill and spoil management plan shall be prepared and provided to Penrith City Council for approval. The Plan, which must form part of the Construction Environmental Management Plan (CEMP) must include provisions for the following: • Plan showing locations of all spoil/stockpile areas, reuse area, barricades and sediment and erosion control measures. • Details on how fill and spoil material will be stored on site. This is to include information on: – Spotter and inspection details – Sediment and erosion control protections – Dust and air pollution control. – Prevention of cross contamination between clean and contaminated fill and spoil. • A detailed unexpected finds protocol • All excavated material that is to be stockpiled is not to be mixed with material that has a different classification. Specific strategies are to be outlined in the plan to demonstrate how this will be achieved.

	• Suitable measures are to be implemented to minimise the risk of cross contamination between clean and contaminated material. This should include: – The use of spotters – Creation of smaller stockpiles of material to allow for suitable inspection and classification, instead of creating larger stockpiles. *For example, instead of creating 1 x 1000 cubic metre stockpile, create 10 x 100 cubic metres stockpile*. • If soil is proposed to be reused what procedures will be in place, including sampling requirements to ensure the reused material is not contaminated and suitable for reuse. • Where material is removed and disposed of off-site, the material must be classified in accordance with the Environment Protection Authorities (EPA) requirements and taken to a waste facility that can lawfully accept that material. Proof of lawful disposal is to be provided to Council upon request. • Material shall not be permitted to be reused on any other site without the written approval from Penrith City Council.
7.2.2	All material imported onto site that is covered by the Environment Protection Authority's Resource Recovery Framework, is to comply with: • Any relevant Orders and Exemptions that apply to that material. • The Protection of the Environment Operations Act 1997
7.2.3	A Waste Management Plan is required to be prepared and implemented as part of the CEMP. The WMP will outline: • method of containment and/or treatment of contaminated soil • adequate safe removal techniques management measures to prevent the spread of contamination • location of acceptable waste facility • measures of transport of material to ensure loads are covered and waste is not dispersed during transport.
7.2.4	All mulch used as part of the project must not contain the following: • Asbestos. • Engineered wood products such as particle/chipboard board, masonite and plywood. • Preservative treated or coated wood such as treated pine or painted timber.

	• Glass, metal, plastics, or polystyrene. In turn all mulch is to comply with the following: • The Protection of the Environment Operations Act 1997 - The Environment Protection Authority (NSW) Mulch Order and Exemptions • Australian Standard 4454-2003.
7.3	**Biodiversity and Tree Management**
7.3.1	Works are not to impact native vegetation unless pre-identified, assessed and approved as being suitable for removal.
7.3.2	The recommendations of the 'Ecological Assessment' developed by Ecological Australia dated 26 June 2025 are to be implemented and managed appropriately during the project.
7.3.3	The recommendations of the 'Arboricultural Development Assessment Report' developed by Moore Trees Arboricultural Services dated 28 November 2024 are to be implemented and managed appropriately during the project.
7.4	**Water Pollution**
7.4.1	Prior to works commencing on site, the contractor is to prepare a Sediment and Erosion Control Plan and provide to Council for approval. The plan is to comply with the requirements of the 4th edition of Managing Urban Stormwater: Soils and Construction [Blue Book] - (Landcom, 2004). This must be approved by Council prior to works commencing on site. In addition to the requirements outlined in the Blue Book, the plan must include provisions for: • Both erosion control and sediment control measures suitable for the site. • Consider the soil type on the site and utilise the most appropriate erosion and sediment control measures for that soil. • Provide induction and training to workers on site on the requirements of the Sediment and Erosion Control Plan. • Undertake regular inspections of the controls and keep accurate records of those inspections and any action that was taken to rectify any issues found. • Emergency response for when sediment and erosion controls fail. • Pre-rainfall procedures for the site. • De-watering of the site after rain events.

7.4.2	Sediment and erosion control measures required as part of the approved Sediment and Erosion Control Plan are to be installed prior to works commencing.
7.4.3	All sediment and erosion control measures are to be maintained in a satisfactory condition to ensure they perform as designed.
7.4.4	The installation of the Synthetic Turf material is to comply with Australian Standard SA TR CEN 17519: 2021 Surfaces for sports areas - Synthetic turf sports facilities - Guidance on how to minimize infill dispersion into the environment
7.5	**Heritage**
7.5.1	If any suspected heritage or aboriginal items are identified throughout the construction period, the contractor is to immediately cease work in that area and contact Council's Project Manager to determine what action is required.
7.6	**Asbestos and Contamination**
7.6.1	All requirements of the Remedial Action Plan developed by Trinitas Group dated July 2024 are to be complied with.
7.6.2	At the completion of remediation works, a Site Validation Report is to be prepared by a suitably qualified environmental and asbestos consultant. The Validation Report is to comply with the NSW Environment Protection Authority Guidelines and Requirements.
7.6.3	The Project Contractor is to engage a Licensed Asbestos Removal Contractor to undertake all asbestos works.
7.6.4	Air monitoring is required to be undertaken by the Licensed Asbestos Assessor while any asbestos on is being disturbed or removed from site.
7.7	**Communication and Complaints**
7.7.1	The Principal Contractor for the project is to establish a communication and complaints management plan. This is to include the following provisions: • Notifications to residents, businesses and stakeholders about construction works and its expected duration as per council requirements. • Our of hours works notifications, detours, road and path closures. • Provision to a minimum of two weeks' notice to Council and one week notice to residents, businesses and affected stakeholders for above notifications.

	• Provide a representative to assume the role of Community Liaison Officer (CLO). The CLO will have to be available for contact by Council and residents / businesses while the Works are carried out. • Provide contact details (post and email) and 24-hour community contact number / hotline. • The Principal Contractor is responsible for responding to enquiries complaints management. The Principal Contractor must also respond within reasonable timeframes dependent on the severity of the issue. • The Principal Contractor must keep a log of all community contact and provide Council Officers l an update of this register upon request.
7.8 Operational Related Controls	
7.8.1	Prior to the completion of construction works, Council must develop a Synthetic Turf Operational Management Plan (STMP). The STMP is to consider the following: • Implement appropriate methods to monitor and manage the potential impacts from microplastics and chemicals from the synthetic turf field on the environment, including on soil and nearby waterways. • Implement management strategies to minimise the risk of surface heat from the synthetic field on people using the field. • Provide mechanism to review and action and air pollutants and odorants that may be caused by the synthetic turf field. • Develop appropriate scheduled and reactive maintenance requirements for the synthetic turf field. • Review and consider existing literature, research and projects which aim to reduce the impact on waterways from synthetic fields. These may include (but is not limited too): – *Health Impact of Synthetic Turf (Artificial Grass)* Surveillance and Risk Unit, Environmental Health Branch, Health Protection NSW, NSW Health – *Synthetic turf in public spaces - systematic assessment of heat and environmental impacts* Urban Planning and Management, Western Sydney University Associate Professor Sebastian Pfautsch, Dr Agnieszka Wujeska-Klause – *Environmental Impact of Synthetic Turf: A Life Cycle Analysis (LCA) Review and Circular Economy Perspective.* Waste Transformation Research Hub, School of Chemical and

	Bimolecular Engineering, The University of Sydney Professor Ali Abbas, Mr Eric Sanjaya, Dr Gustavo Fimbres Weihs – *Synthetic Turf in Public Spaces – Chemical composition of materials* University of Technology Sydney Institute for Sustainable Futures Associate Professor Nick Florin, Dr Melita Jazbec
7.8.2	Within 2 years of the development being completed, Council must develop an Asset Management Plan for the synthetic turf field. The Asset Management Plan must consider the provisions of the Synthetic Turf Operational Management Plan and the Synthetic Turf End of Life (EOL) Management Plan.
7.8.3	Within 2 years of the Review of Environmental Factors being approved, Council must develop a suitable Synthetic End of Life (EOL) Management Plan. The EOL Management Plan must: • Consider any available options to recycle or reuse the material • Where required provide for suitable disposal at a lawful waste facility Ensure the recycling, reuse or disposal meets all relevant legislative requirements
7.8.4	Users of the Cook Park synthetic field are required to minimise the risk of surface heat from the synthetic field on people using the field, through appropriate operational management plans. This may include: • Reduce or cease using the field during extreme heat or heatwave • Scheduling use during the cool periods of the day Implement a monitoring procedure to measure the surface temperature of the playing field to determine when it is no longer safe to use
7.8.5	Prior to the completion of construction works, Council must develop an Emergency Management Plan for the site. This Plan must include provisions to minimise risks and hazards caused if the synthetic turf was to catch fire. In preparation of this Plan, Council shall consider the 'Use of Synthetic Turf in Bushfire Prone Areas' report prepared by ARC Training Centre for Fire Retardant Materials and Safety Technologies, UNSW Sydney, Professor Guan Yeoh, Dr Cheng Wang