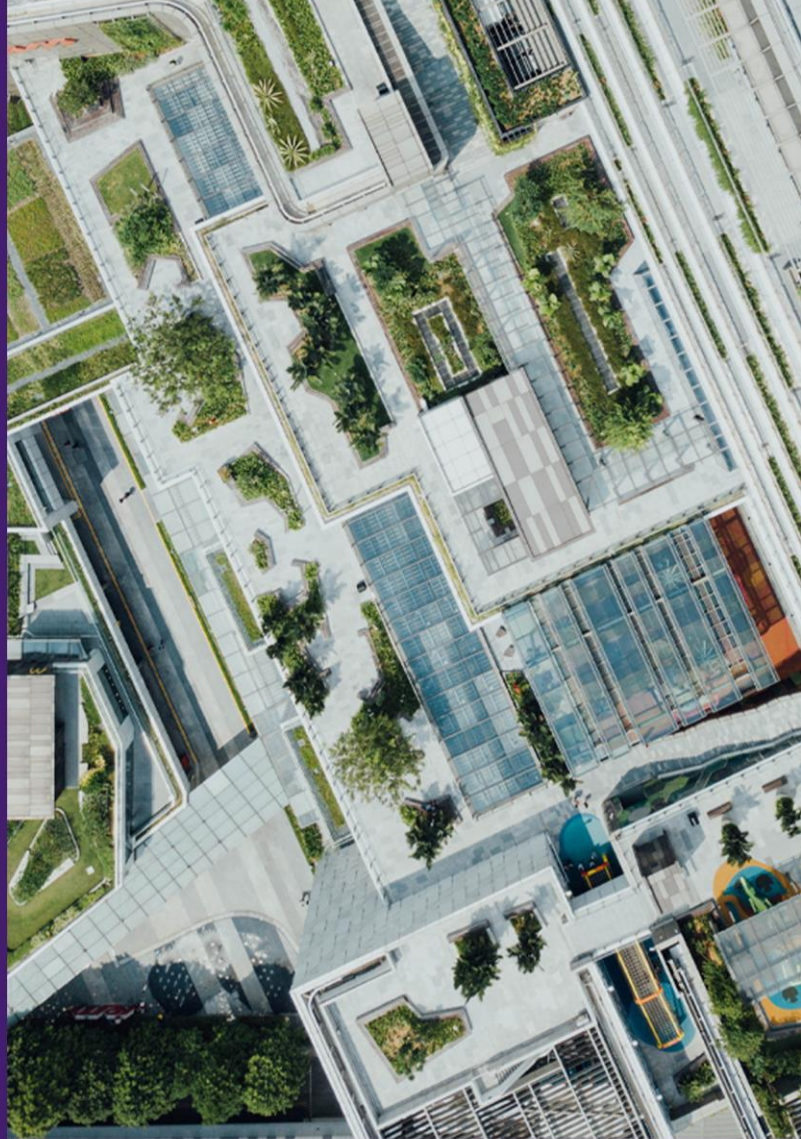




Central Park, St Marys NSW 2760

Review of Environmental Factors (REF) – Part 5 of the Environmental Planning & Assessment Act, 1979

On behalf of Penrith City Council

22 July 2025

The Planning Studio acknowledges the traditional custodians of the lands + waters of Australia, particularly the Gadigal People on whose traditional lands our office is located, and pay our respects to Elders past, present + emerging. We deeply respect the enduring Connection to Country + culture of Aboriginal and Torres Strait Islander peoples and are committed to walk alongside, listen + learn with community as we plan for equitable, sustainable, generous, and connected places. Always was, Always will be.

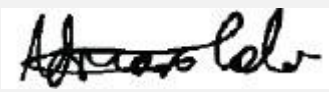
Declaration and Determination

This Review of Environmental Factors (REF) has been prepared by The Planning Studio NSW Pty Ltd on behalf of Penrith City Council (Council) to assess the potential environmental impacts that could arise from the development of St Marys Central Park, located across multiple sites at 21 Carinya Avenue, 28 Carinya Avenue, 2A Charles Hackett Drive and 129 Queen Street at St Marys NSW 2760.

This REF has been prepared in accordance with the Environmental Planning and Assessment Act 1979 and other applicable Commonwealth and State Legislation including Environmental Protection and Biodiversity Conservation Act 1999.

On the basis of the consideration of key environmental aspects and the information presented in this REF, it is concluded that by adopting the mitigation measures identified in this assessment it is unlikely that there would be any significant environmental impacts associated with the development of St Marys Central Park.

This REF provides a true and fair review of the Proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the development of St Marys Central Park. The information contained in this REF is neither false nor misleading and on balance, the proposal is recommended to proceed given its stated need and justification.

The Planning Studio Consultants who prepared the REF	
We confirm that we have prepared and reviewed this REF and are satisfied that it addresses to the fullest extent possible, all matters affecting or likely to affect the environment.	
Name	Adrian Melo (M.U.R.P & M.U.D)
Position	Associate Director
Signature	
Date	22 July 2025

Penrith City Council Endorsement

I have delegation to accept this REF on behalf of Penrith City Council as the determining authority and determine that the development of St Marys Central Park can proceed subject to the mitigation measures identified being implemented.

Name

Position

Signature

Date

Contact

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1

Introduction

This Review of Environmental Factors (REF) has been prepared by The Planning Studio NSW Pty Ltd on behalf of Penrith City Council (Council) to assess the potential environmental impacts that could arise from the development of St Marys Central Park, located across multiple sites at 21 Carinya Avenue, 28 Carinya Avenue, and 129 Queen Street, St Marys NSW 2760.

The proposed development involves the establishment of St Marys Central Park as a new public space and entertainment precinct within the Penrith LGA. The proposal will redevelop the existing sites of Kokoda Park and Coachmans Park, including reallocation of part of West Lane as part of the open space.

The redevelopment, expansion and enhancements of Coachmans Park and Kokoda Park into St Marys Central Park includes improving the facilities and amenity of the site, and the provision of community infrastructure and open spaces, including:

- A new Pavilion
- A new Amenities Block
- A new Storage Building
- Plaza spaces and seating
- Open lawn spaces
- Waterplay and water features
- Playgrounds
- Picnic tables
- Bicycle racks, waste bins, and drinking fountains
- supporting roadworks

The proposed works also include:

- Demolition of existing structures;
- Site establishment works, including vegetation and tree removal;
- Closure of the northern end of West Lane south of Charles Hackett Drive;
- Repurpose of car parking spaces at the Kokoda Park car park;
- Installation of a new pedestrian crossing over Carinya Avenue;
- Allowing a new one-way eastbound link between Carinya Avenue and West Lane through the existing Kokoda Park car park; and
- Provide loading bays for heavy vehicles servicing the properties at the northern end of West Lane.

The REF considers the impact of the proposed development and uses, including the associated proposed road closures and the potential need for land reclassification for the creation of the new lots from the closure of the roads.

For the purposes of the activity, Penrith City Council (Council) is the proponent and the determining authority under Part 5 of the Environmental Planning and Assessment Act 1979



(EP&A Act). The purpose of this REF is to describe the proposal, document the likely environmental impacts and to detail potential risks and mitigation measures.

The description of the proposed activity and the assessment of environmental impacts have been undertaken in the context of the Department of Planning, Housing and Infrastructure's (DPHI) Guidelines for Division 5.1 Assessments (the Guidelines), section 171(2) of the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) and the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The REF fulfils the requirements of Section 5.5 of the EP&A Act, which requires Council to examine and take into account, to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of the proposed activity.

This REF has been prepared by Adrian Melo, Associate Director who has completed a Masters of Urban and Regional Planning, a Master of Urban Design and has over 18 years experience working as a Town Planner in various capacities in both private and public sector.

1.1 Need for the Proposal

Penrith is undergoing extensive planning and change for city-shaping projects. The St Marys Central Park is a key project in the realisation of Council's aspiration to support a heart for the Town Centre as identified in the St Marys Structure Plan. To enhance liveability for existing and future residents and to welcome visitors in the coming years, St Marys will be transformed into a modern and connected city centre, complete with a new green civic heart, Central Park.

The \$21 million St Marys Central Park and Entertainment area project will provide a central meeting place for the community to gather and meet, while the pavilion will facilitate local and regional groups and performers to showcase and highlight the area's abundant talent.

1.2 Purpose of the report

This Review of Environmental Factors has been prepared by The Planning Studio on behalf of Penrith City Council (PCC). For the purposes of the proposed works, PCC is the proponent and the determining authority under Part 5 of the Environmental Planning and Assessment Act 1979.

The purpose of the Review of Environmental Factors is to describe the proposed works, to document the likely impacts of the proposed works on the environment, and to detail any necessary safeguards and management measures to be implemented in order to reduce or avoid potential environmental impacts as a result of the proposed works.

The description of the proposed works to be undertaken at Central Park and the associated environmental impacts has been undertaken in context of the Environmental Planning and Assessment Regulation 2021, the Environmental Planning & Assessment Act, 1979 and other relevant environmental legislation including the Commonwealth's Environment Protection and Biodiversity Conservation Act, 1999.

In doing so, the Review of Environmental Factors helps to fulfil the requirements of Section 5.5 of the Environmental Planning & Assessment Act, 1979 that PCC examine and take into



account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

1.3 Structure of the Review of Environmental Factors

The Review of Environmental Factors is divided into the following sections:

- Introduction (Section 1) – introduces the proposal and purpose of the report;
- Site Overview (Section 2) – identifies the site in detail and its surrounding context
- Need for the proposal (Section 3) – provides a description of the need for the project;
- Description of the proposal (Section 4) – provides a detailed description of the proposed works;
- Statutory and planning framework (Section 5) – provides information on the statutory and policy requirements for the proposed works;
- Community and stakeholder consultation (Section 6) – provides information on the stakeholder / community consultation that has been undertaken;
- Environmental assessment (Section 7) – describes the existing environment and potential environmental impacts, and identifies the corresponding impact safeguards and environmental management/mitigation measures;
- Environmental management (Section 8) – summarises the proposed safeguards and environmental management/mitigation measures associated with the works;
- Conclusion (Section 9) – provides justification for the proposed works and concluding remarks as to whether the adverse environmental impacts are balanced or outweighed by the beneficial effects of the proposal;
- Certification (page following the cover page) – certifies that the Review of Environmental Factors provides a true and fair review of the proposal in relation to its potential effects on the environment; and
- Appendices – contains a list of the documents used in the preparation of the Review of Environmental Factors.



1.4 Project Team

The following consultants were engaged as part of the broader project team:

Table 1 – Project Team	
Specialty	Consultant
Town Planning	The Planning Studio
Landscape, Safety in Design, Water Feature Design Intent, Play Structure Design Intent, and Demolition Plans	Moir Studio
Architecture	Besley & Spresser
Early First Nation Consultation	Murrawin
Contamination + Geotech	Douglas Partners
Civil, Structural, Mechanical, Acoustic, Hydraulic	Northrop
Traffic and Transport	SCT
Lighting and Electrical Plans	Electrical Projects Australia
Arborist	Tree Report Pty Ltd
ASP3	Power Solutions
Safety in Design	
BCA	Report AI



2 Site Overview

2.1 Site + Context

The proposed St Marys Central Park is located at 21 Carinya Avenue, 28 Carinya Avenue, 2A Charles Hackett Drive and 129 Queen Street, St Marys NSW 2760 which lies within the Penrith LGA. The site is approximately 1.5 hectares and made up of four pieces of land that are currently disconnected by adjoining roads. The different components of land include Kokoda Park, Coachmans Park, the carpark and adjacent park to the north.

The site is bounded by Charles Hackett Drive to the north and west, Queen Street to the east, and Crana Street to the south and intersected by Carinya Avenue and West Lane also to the east.

It is surrounded by shopping precincts along Queen Street in the east and St Marys Village in the west with St Marys Station approximately 500m to the north of the site. To the south are Lang Park, St Marys Public School, and St Marys Library. Further west and northwest, the site is within walking distance from Ripples Leisure Centre, sporting facilities at South Creek Park, and St Marys Senior High School.



Figure 1: Subject Site (adapted by Moir)



2.2 Site Description

Table 2 below provides the legal description and a brief summary of the site and surrounding context.

Table 2 – Site Description	
Item	Description
Legal Description	21 Carinya Avenue: 14/DP1300752 28 Carinya Avenue: 5-6/DP1300752 129 Queen Street: 1-4/DP1300752 2A Charles Hackett Drive: 15/DP1300752
Site Addresses	21 Carinya Avenue, St Marys NSW 2760 28 Carinya Avenue, St Marys NSW 2760 129 Queen Street, St Marys NSW 2760 2A Charles Hackett Drive, St Marys NSW 2760
Total Area	Approximately 1.6 hectares
Site Description	The site is made up of four pieces of land that are currently disconnected by adjoining roads. The different components of land include Kokoda Park, Coachmans Park, the carpark and adjacent park to the north. The site is bounded by Charles Hackett Drive to the north and west, Queen Street to the east, and Crana Street to the south and intersected by Carinya Avenue and West Lane also to the east. It is surrounded by shopping precincts along Queen Street in the east and St Marys Village in the west with St Marys Station approximately 500m to the north of the site. To the south are Lang Park, St Marys Public School, and St Marys Library. Further west and northwest, the site is within walking distance from Ripples Leisure Centre, sporting facilities at South Creek Park, and St Marys Senior High School.
Public Transport	St Marys town centre is serviced by both train and bus services. The future Sydney Metro Western Sydney Airport Line will stimulate sustainable growth and investment in the town centre as a key transport interchange at the end of the metro line. Once complete, Central Park will be within 500m from St Marys Station on the T1 Western Line and St Marys Metro Station on the



Table 2 – Site Description

Item	Description
	Sydney Metro Western Sydney Airport Line. While Central Park is envisaged to anchor the town centre and attract mainly the local population, its location close to St Marys train and metro stations will facilitate visits by people from the surrounding areas, including Penrith, Werrington, and the future Western Sydney Airport. Various bus stops are also within a short walking distance from the site. The stops are serviced by bus routes 770, 771, 774, 775, 776, 779, and 781, connecting major hubs in Penrith City, from Penrith to Mt Druitt and Erskine Park.



3 Need for the proposal

3.1 Strategic Need for the proposal

In 2026, St Marys will be connected to the new Western Sydney International (Nancy Bird-Walton) Airport and Aerotropolis via the 23 kilometre Sydney Metro - Western Sydney Airport (WSA) line. This connection will bring residential areas and job hubs closer as well as connect travellers from the new airport to the rest of Greater Sydney's public transport system via St Marys in 15 minutes.

This significant investment in city-shaping infrastructure will support the future growth of St Marys as a strategic centre, and provide an opportunity for the Town Centre to be highly connected and accessible, making it a place where people will want to live, work and visit.

In response, Council commenced St Marys 2041 – a proactive strategic planning response to position St Marys as a strategic centre in Western Sydney. This leverages the opportunities created by the Western Sydney International (Nancy Bird-Walton) Airport and its direct link to St Marys via a station on the Sydney Metro - WSA line. Stage 1 of St Marys 2041, the St Marys Town Centre Structure Plan, was endorsed by Council in 2022. The Structure Plan established a new vision for the Town Centre, as well as a framework to guide its growth, by capitalising and matching the quality of the transformational infrastructure being delivered.

The St Marys Town Centre Structure Plan forms part of Council's Places of Penrith Strategic Framework and is a key component of the planning pathway for St Marys Town Centre. It adopts a place-based and design-led approach to guide the growth of St Marys Town Centre over the next 20 years.

The St Marys Structure Plan establishes a Place vision for the strategic centre as the interchange of two major regional transport corridors and at the apex of Penrith's Economic Triangle, St Marys is of great strategic significance for delivering new growth in housing, jobs and infrastructure within Penrith City.

The place vision is supported by a Spatial Framework Plan that identifies the delivery of a new Central Park which will support the establishment of one of the 4 key hubs – a new Central Park and community hub. Direction 1 of the St Marys Town Centre Structure Plan is 'Create a Civic Heart'. The Structure Plan envisages the creation of a Civic Heart that will be a magnetic, attractive and welcoming community hub and Central Park, fostering civic pride, social cohesion and social connection. Located at the centre of St Marys Town Centre, the Civic Heart will be accessed by green, safe and walkable activity spines and streets. A key component of the Civic Heart is the St Marys Central Park, which is anticipated to be a high-quality green open space. The Figure below identifies the future location of the Central Park and identifies the anticipated qualities of the space.





Figure 2: Future Central Park (St Marys Town Centre Structure Plan by Penrith City Council)

Key objectives for the future Central Park identified by the St Marys Town Centre Structure Plan include:

- Create an accessible civic park with a state-of-the-art performance space for local concerts, festivals, markets, fetes and celebrations, new amenities and landscaping
- Provide opportunities for passive and active recreation across a range of ages and abilities
- Facilitate participation and engagement in community arts and cultural experiences
- Improve environmental outcomes through tree planting, landscaping and water sensitive urban design (WSUD)
- Enhance social connections, community pride and belonging and improve emotional wellbeing, physical health and emotional and cognitive development in children

In late 2024, Council exhibited the St Marys Town Centre Master Plan. The Master Plan and supporting Explanation of Intended Effects was endorsed by Council in March 2025. The Master Plan provides a comprehensive and coherent planning, urban design and implementation framework to ensure that St Marys Town Centre realises its potential as a thriving destination in the Western Parkland City. The Master Plan includes:



- Detailed strategies and design principles that respond to the vision, established place outcomes and strategic directions for the Town Centre
- Proposed planning controls including land use zones, floor space ratios, building heights and setbacks that are critical to delivering the vision
- An achievable and affordable infrastructure list that delivers the outcomes required to support the planned growth and make St Marys an attractive investment opportunity
- Identified pathways for implementation, including potential funding mechanisms
- Actions to convert the Master Plan into meaningful change

The Master Plan includes a Precinct Plan of the Civic Heart Precinct that identifies the future road network, including the closure of West Lane and the delivery of Central Park, as identified in the figure below.

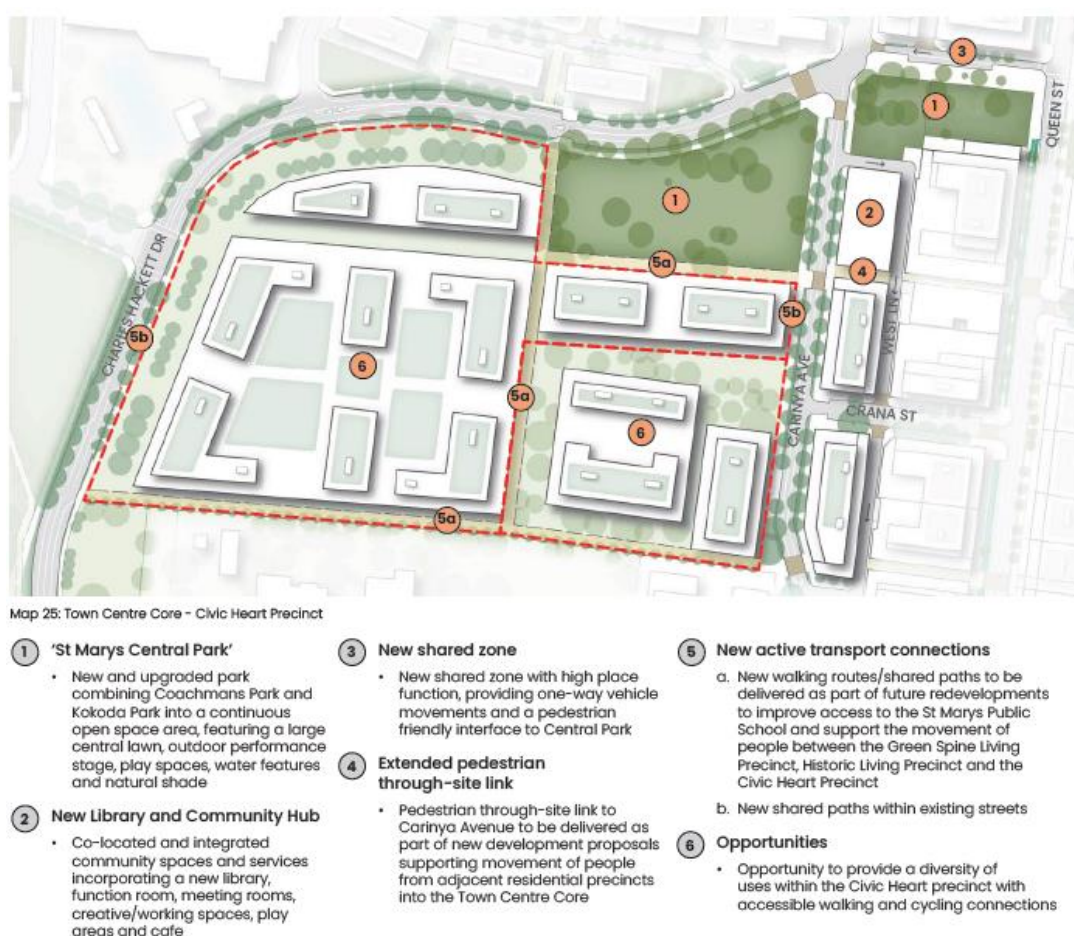


Figure 3: Civic Heart Precinct Plan (draft St Marys Town Centre Master Plan by Penrith City Council, 2024)

As detailed above, the delivery of the future Central Park is clearly aligned with the broader strategic objectives and future planning of Council.



3.2 Proposal objective

The primary objective of the objective of the proposal is to demolish existing structures and construct a new high quality public park and plaza that will support the broader renewal of St Marys. This will include:

- Demolition of existing structures;
- Site establishment works, including vegetation and tree removal;
- Closure of the northern end of West Lane south of Charles Hackett Drive;
- Repurpose up to 30 car parking spaces at the Kokoda Park car park;
- Install a new pedestrian crossing over Carinya Avenue;
- Allow a new one-way eastbound link between Carinya Avenue and West Lane through the existing Kokoda Park car park;
- Provide loading bays for heavy vehicles servicing the properties at the northern end of West Lane; and
- Construction of a new park and supporting ancillary structures.



4 Description of the Proposal

The proposed development involves the establishment of St Marys Central Park as a new public space and entertainment precinct within the Penrith LGA. The proposal will redevelop the existing sites of Kokoda Park and Coachmans Park, including the crossover to Carinya Avenue and West Lane.

The redevelopment, expansion and enhancements of Coachmans Park and Kokoda Park into St Marys Central Park includes improving the facilities and amenity of the site, and the provision of community infrastructure and open spaces, including:

- A new Pavilion
- A new Amenities Block
- A new Storage Building
- Plaza spaces and seating
- Open lawn spaces
- Waterplay and water features
- Playgrounds
- Picnic tables
- Bicycle racks, waste bins, and drinking fountains
- supporting roadworks

The proposed works also include:

- Demolition of existing structures;
- Site establishment works, including vegetation and tree removal;
- Closure of the northern end of West Lane south of Charles Hackett Drive;
- Repurpose of car parking spaces at the Kokoda Park car park;
- Installation of a new pedestrian crossing over Carinya Avenue;
- Allowing a new one-way eastbound link between Carinya Avenue and West Lane through the existing Kokoda Park car park; and
- Provide loading bays for heavy vehicles servicing the properties at the northern end of West Lane.

St Marys Central Park is envisaged to be a vibrant destination and meeting place for the community to gather, relax and play, which will transform the area into the green heart of an exciting urban centre.

The REF considers the impact of the proposed development and uses, including the associated proposed road closures and the potential need for land reclassification for the creation of the new lots from the closure of the roads.





Figure 4: Photomontage of proposed St Marys Central Park (Besley & Spresser)

4.1 Site Strategy

The preferred site layout places the Music Pavilion to the west of Kokoda Park, adjacent to a swale and rocky sandstone area to the north and south, and a large central lawn to the east. The Music Pavilion is oriented east towards Coachmans Park and the central lawn. The Amenities Block and Store/Temporary Green Room sit against the southern boundary of Kokoda Park, reutilising service routes to the existing amenities and providing a buffer to the southern car park. The hierarchy of these three buildings is such that the Pavilion remains centred in the plan whereas the Amenities and Store are on the periphery.

The site has several constraints that have dictated the positioning of its buildings. A contamination map provided by Council shows encapsulated contamination to the south-east of Kokoda Park, as well as surface asbestos fragments found to the south-east and east of Kokoda Park. Therefore, the Design Team have chosen to avoid positioning buildings in these areas. A series of stormwater and sewer pipes, inlets and manholes across the site have also dictated the positioning of buildings. Northrop have advised that building should be 2m clear of the edges of stormwater pipes and 2m clear to the centre of sewer pipes.





Figure 5: Proposed site plan (Moir)

4.2 Events

The new designs for St Marys Central Park will facilitate existing and new cultural, community and performance events. The new Music Pavilion and associated Store/Green Room and Amenities will provide a home and provision for various events year-round. Potential events include:

- Local festivals;
- Christmas in the park; and
- Halloween and Easter Trails.

These events would be subject to separate approval / existing planning provisions within the broader NSW Planning System.

4.2.1 Large Events

The strategy for large events, such as NAIDOC performances or movie night, is to bump-in events lighting, speakers, projection screen, portaloos, marquee and other provisions such as food trucks and waste. Permanent rigging points (ferrules) on the underside of the pavilion roof allow for a projection screen or events trusses to be suspended; rigged with lights and speakers. The Store/Green Room with adjacent marquee area provide both storage for events setup and a space for performers to prepare.

Power and communications for events are located in the void under the pavilion stage. The strategy, when events trusses are rigged, is to make use of secondary rigging points adjacent to columns to track cables from either end of a truss and down the face of the columns. Floor boxes are located close to column bases.





Figure 6: Event categorisation – Large (Besley & Sprester)

4.2.2 Medium Events

Medium-sized events, such as smaller stage performances, can utilise bump-in freestanding or floor-based speakers connected to power/comms via floor boxes.

In this case, the Green Room, stored marquee and bump-in provisions e.g. portaloos, food trucks and waste can be utilised to suit the event. For example, a market may require additional provision for waste but be less reliant on specialised sound projection from the stage.



Figure 7: Event categorisation – Medium (Besley & Spresser)

4.2.3 Small Events and Passive Mode

Small events, such as busking or single-speaker events, can utilise bump-in, freestanding or floor based speakers (if needed), similar to medium sized events. The open, slightly elevated nature of the stage is ideal for small, casual as well as large performances.

During “passive mode”, when there are no planned events, it is envisaged that the stage will be used casually as a covered gathering space. Its open, accessible, and safe design ensures that the stage does not need to be closed or locked when not in use for formal events.



Figure 8: Event categorisation – Small and Passive (Besley & Spresser)

4.3 Buildings and Amenities

Besley & Spresser have prepared architectural drawings and an architectural design response for the development of St Marys Central Park. These documents are provided at Appendix 3: Architectural Drawings by Besley & Spresser and Appendix 4: Architectural Concept Design Report by Besley & Spresser. Their response to the proposed development is discussed below along with supporting drawings of the architectural design.

4.3.1 Music Pavilion

The primary intent for the Music Pavilion is a stage for performances of varying scales. The stage can be used for dance performances (e.g. a NAIDOC performance with temporary Sand Circle), band and instrumental performances, single speaker events and buskers. For maximum flexibility, the stage will provide provision for bump-in elements such as event trusses, lighting, speakers etc.

The pavilion has been designed to be an open, simple and flexible structure so that it can be used in myriad ways even when a performance is not taking place. For example, it can be used as a shaded place to sit and spend time during the day, or as a hireable park pavilion. The structure has been designed to be fully Accessible, with a level connection point to the pathway to the west.



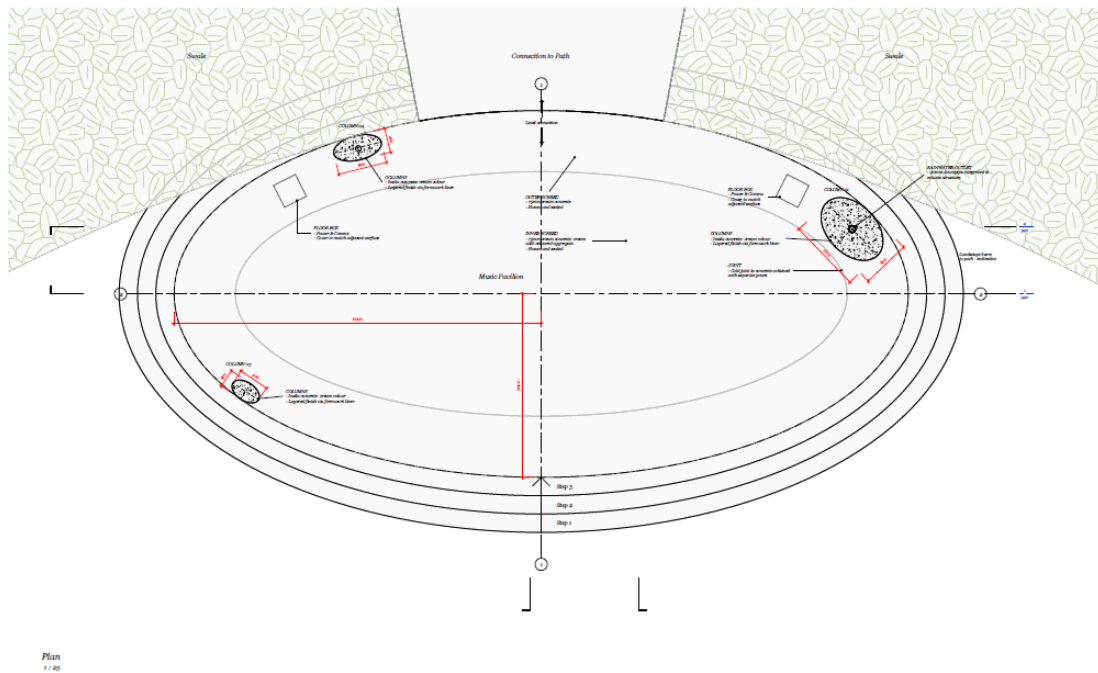


Figure 9: Proposed plan for the Music Pavilion (Besley & Sprester)

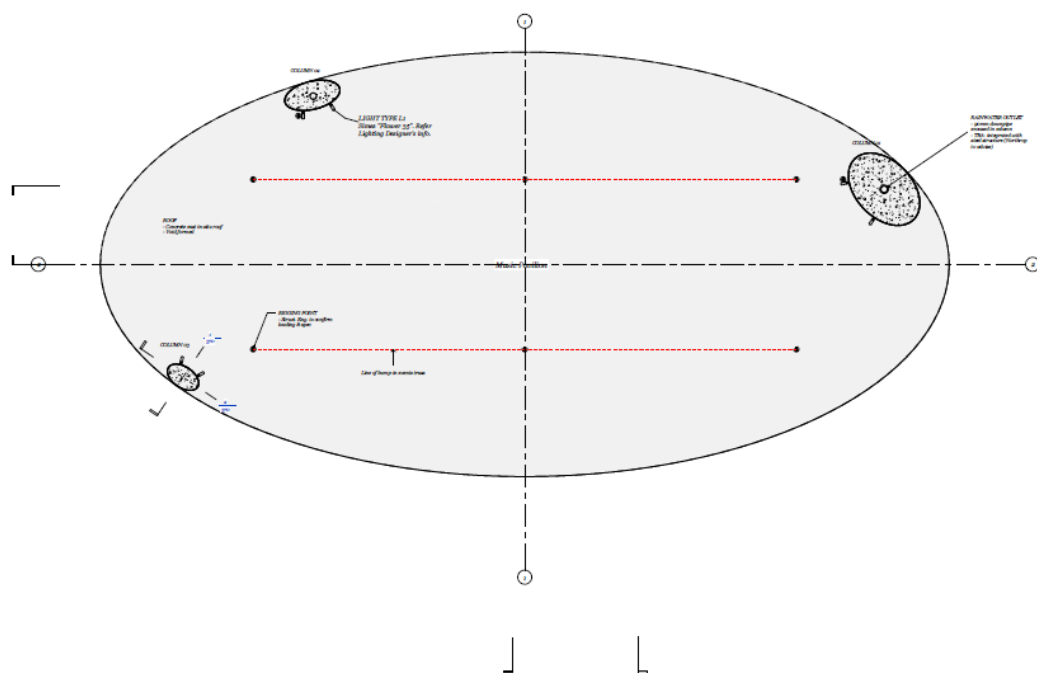


Figure 10: Proposed reflected ceiling plan for the Music Pavilion (Besley & Sprester)



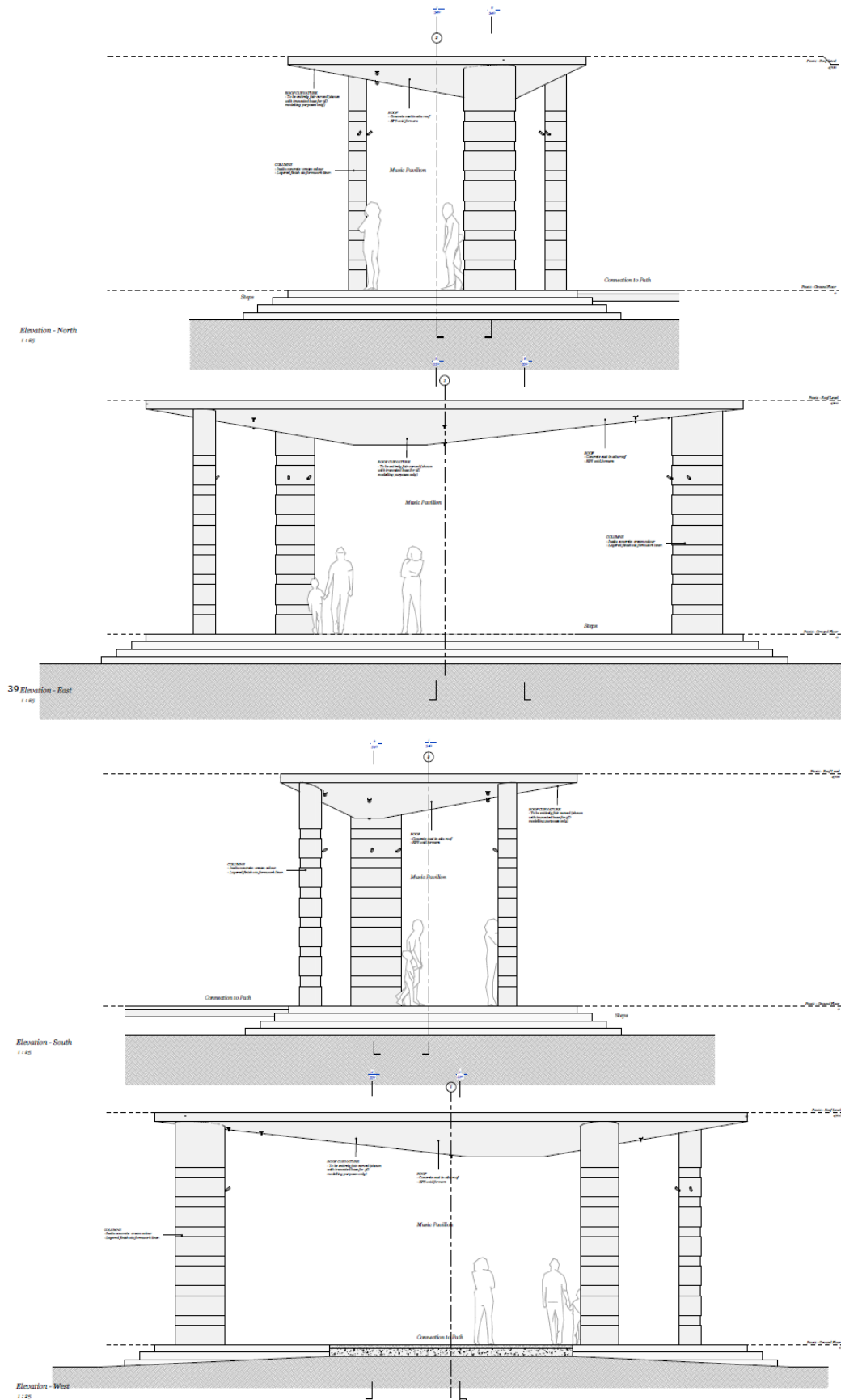


Figure 11: Proposed elevations for the Music Pavilion (Besley & Sprester)



Principals of Country

The pavilion makes reference to natural elements that compose the site, as well as its fluvial history. Its elliptical shape, concentric concrete pours and corresponding steps can be read like water ripples. The columns are horizontally banded as though sedimented pieces of earth rising above the ground.

Materials

The pavilion roof is made of a cream/light-grey coloured concrete. Its columns are a series of concrete pours containing different coloured mixes, from cream to light grey to mid grey. The outer-portion of the stage and the steps is of a mid grey concrete with exposed aggregate. The inner portion is of a lighter grey exposed aggregate concrete. As the detail of the project develops, the material strategies and details such as aggregate mix, extent of honing will be refined.



Figure 12: Proposed materials for the Music Pavilion (Besley & Sprester)

Structure

The pavilion proposes several distinct structural strategies in order to achieve the desired form, material concepts and reduce costs. The columns are structural steel encased in concrete. This is in order to achieve the cold-pours of different concrete mixes and to house services such as downpipes. Each column loads onto a pile, to be detailed by the structural engineer. The “bellied” roof shape is proposed as reinforced in-situ concrete with foam void formers. The void formers will create both the base formwork to achieve the roof shape and sit within the centre of the roof to reduce the overall weight and quantity of concrete. The stage and steps are reinforced in-situ concrete with a topping screed. The two separate screed pours are achieved by first pouring the outer portion, with vertical separator to the inner portion. Once set, the outer screed can be used as formwork for the inner portion.



Services

Drainage is via a rainwater pipe through the centre of the largest column, using the void at the centre of the structural steel. The concrete roof requires 1:100 minimum roof falls, which can be achieved while maintaining a level perimeter. Power and communications are via floor boxes at the level of the stage near its rear columns. Lighting is via column-mounted fixtures which project onto the underside of the roof, creating a glowing, crescent-moon shape at night.

4.3.2 Amenities

The Amenities Block is designed to be used by visitors to St Marys Central Park during both passive and events modes. For larger events, temporary additional WCs will be provided.

The building is primarily comprised of bathrooms and changing facilities, with some capacity for storage and services. It contains 1x Adult Changing facility, 1x Accessible WC, 2x Ambulant unisex WCs, 1x unisex WC with baby change, washbasins, a Cleaners' Store with provision for additional storage, and a space for EDB and Comms cupboards.

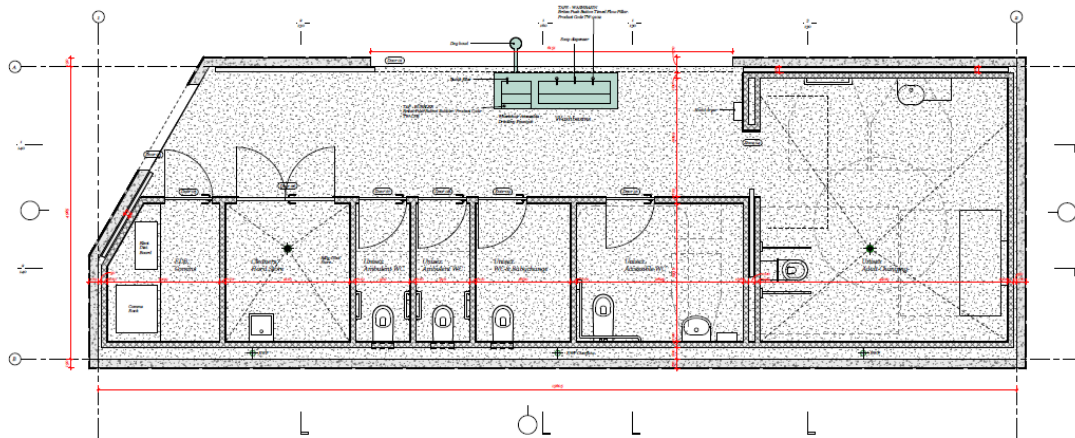


Figure 13: Proposed floor plan for the Amenities Block (Besley & Spreser)

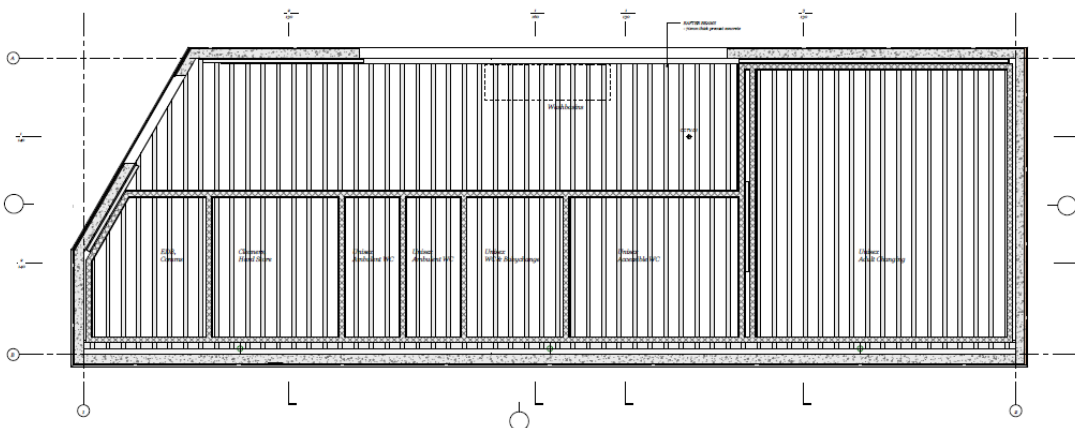


Figure 14: Proposed reflected ceiling plan for the Amenities Block (Besley & Spreser)



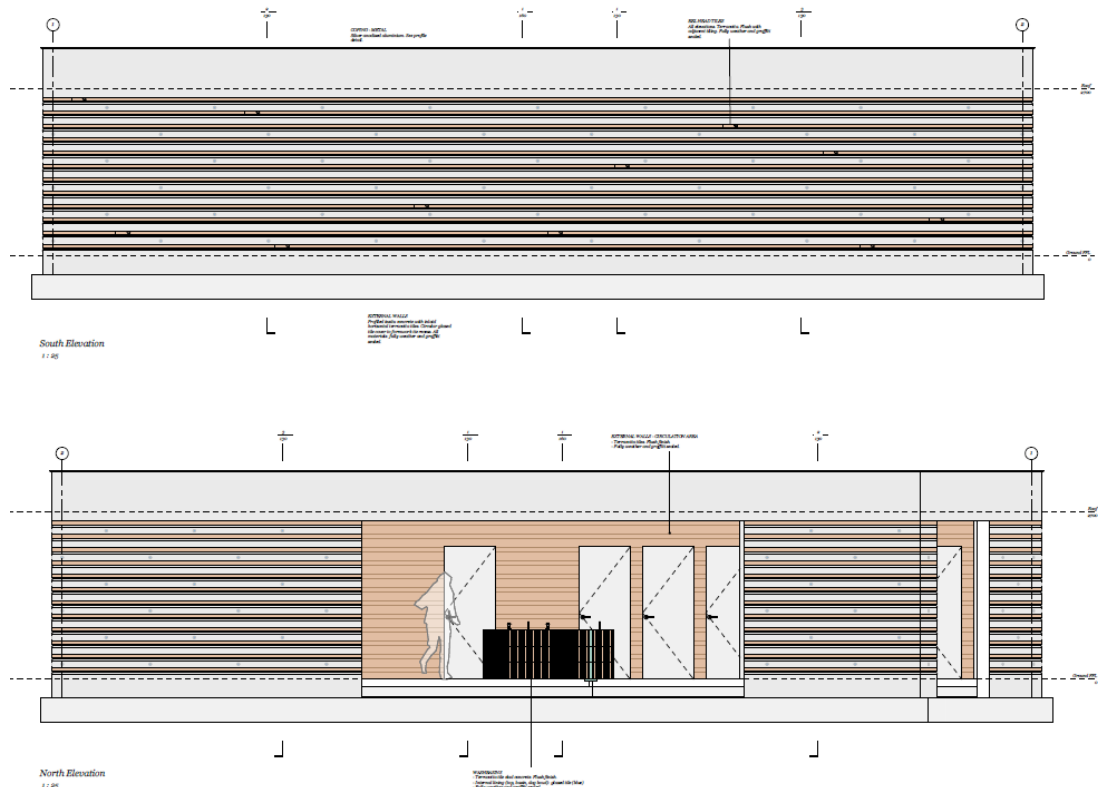


Figure 15: Proposed north and south elevations for the Amenities Block (Besley & Spresser)

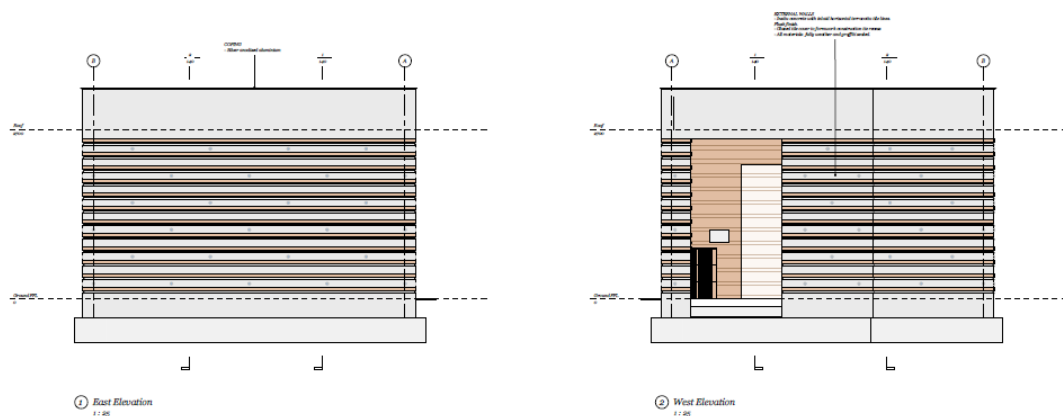


Figure 16: Proposed east and west elevations for the Amenities Block (Besley & Spresser)

Principals of Country

The Amenities Block, echoing the Music Pavilion, references the site's fluvial and sedimentary history through its materiality. The facade is horizontally striated, reflecting the layered columns of the Pavilion. An earth-tone is used for the building's outer shell, and river-pebbled tiles line internal walls.

Materials

Materials selected for the Amenities Block are high quality, self-finishing and robust. The building shell is of an earth coloured, in-situ concrete. The formwork is shaped so the



concrete seeps out in horizontal increments, which is then struck off once hardened. This gives the effect of horizontal banding or sedimentary layers, using a different method to that of the pavilion which is cold-poured. The struck-off bands show the rough, aggregate particles in the concrete whereas the alternating bands are smooth.

Internally, walls are tiled in a 20mm terrazzo containing river pebbles of varying colours and sizes. The hit-and-miss concrete roof beams are coloured in a light grey/cream coloured concrete to match the colour of the Music Pavilion. Above these beams is a layer of clear polycarbonate profiled roof sheeting which allows natural light to enter the space. Doors are externally clad in stainless steel sheet for durability. The sheet externally features an abraded finish.

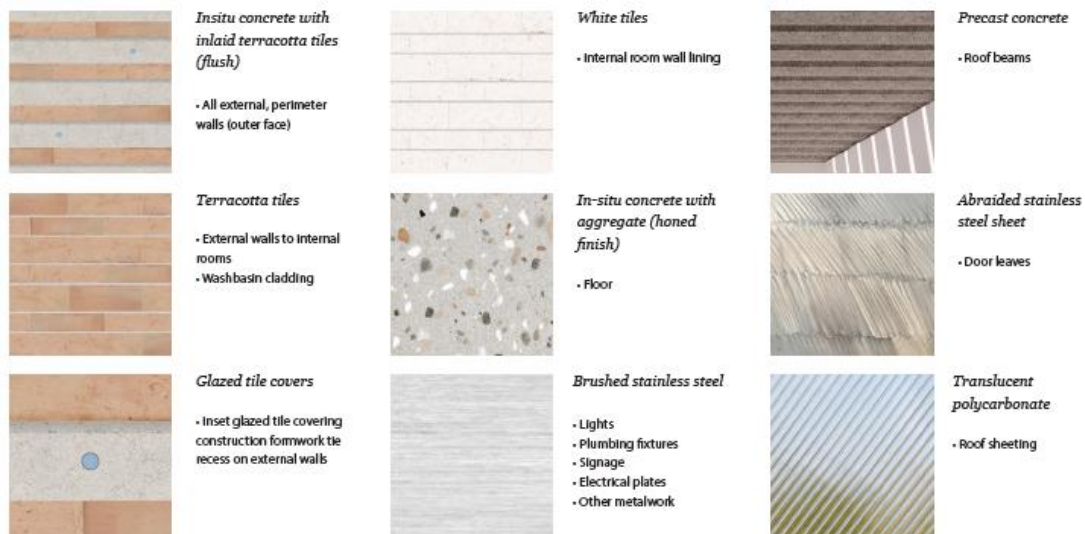


Figure 17: Proposed materials for the Amenities Block (Besley & Spresser)

Structure

The outer walls of the Amenities Block are reinforced and structural in-situ concrete. The internal wall leaves, and cubicle partitions are of a 90mm concrete block, providing robust surfaces on which to tile, which are intended to last the lifespan of the building. The concrete roof beams double as purlins and are shaped to support the 3-degree roof pitch required of the Danpalon polycarbonate roofing.

Services

Rainwater is captured by a concealed gutter running along the southern, long edge of the building. Drainage is via concealed rainwater pipes and overflows which runs between the outer shell and internal blockwork leaf wall. Plumbing from WCs can either run through the floor directly or be ganged between rear wall leaves. Electrics may run in the wall cavity and/or be chased in the blockwork. The lighting strategy is to make use of the hit-and-miss roof beam configuration, with lights concealed at high level between beams.

4.3.3 Store Building and Green Room

The Store building is used to house equipment for maintenance and events, including a foldable marquee, a foldable platform ladder and foldable partitions to be used for the Green Room in the same space. The Green Room space, within the same building, will be used temporarily by performers during events. Space to sit for three performers, with a



bench and mirror, has been provided. Externally, a hardstand area for the marquee sits both adjacent to this building and close to the Music Pavilion.

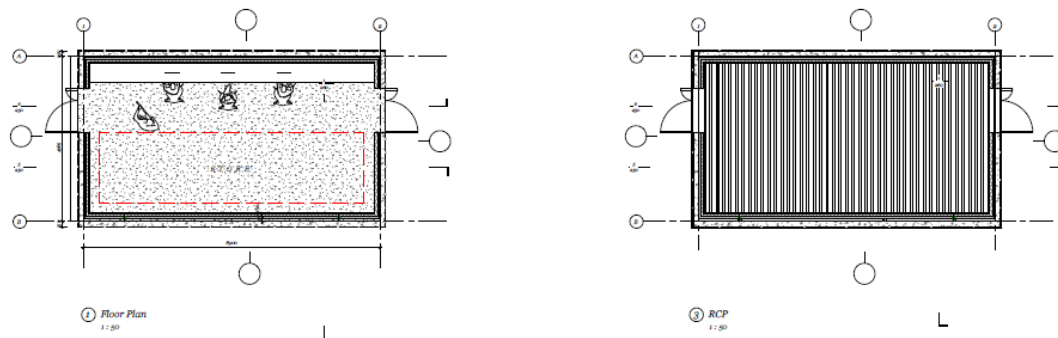


Figure 18: Proposed plans for the Store Building and Green Room (Besley & Sprester)

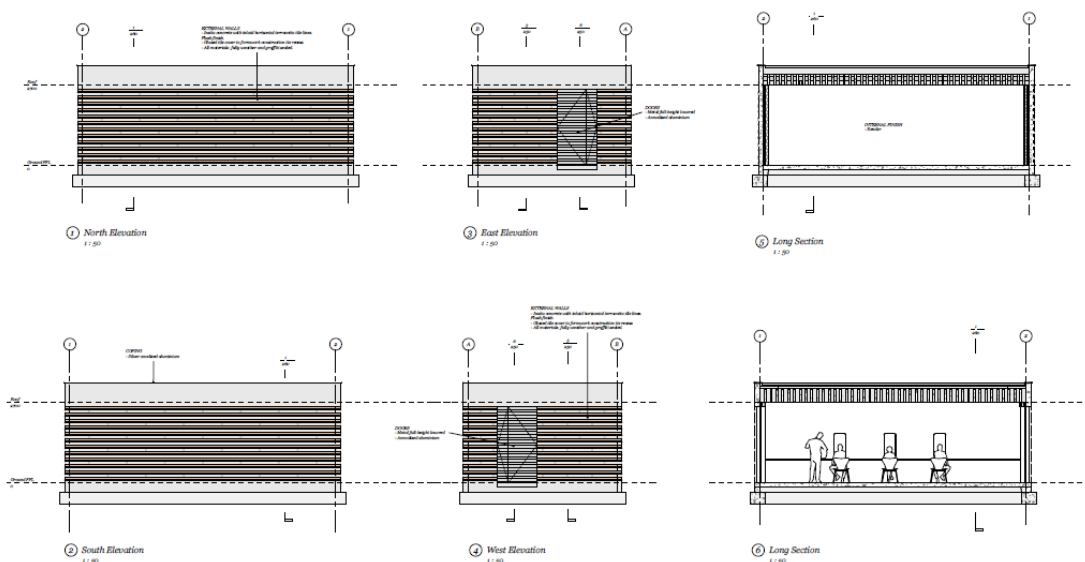


Figure 19: Proposed elevations for the Store Building and Green Room (Besley & Sprester)

Principals of Country

Like the Music Pavilion and the Amenities, the Store references the natural, fluvial history of the site, for example the South Creek floodplain which contains a sedimentary soil landscape. The materials of the Store reflect this sedimentary history via earth coloured, horizontal striations in the facade, as well as river stones imbedded in the floor aggregate and internal wall tiling.

Materials

The materials for the Store building are externally identical to that of the Amenities, as they are intended to have a family relationship as buildings in the landscape. Internally, the materials of the Store are simpler. The block walls are finished with a textured render, for example. Like the Amenities, the hit-and-miss concrete roof beams are coloured in a light grey/cream coloured concrete to coincide with the colour of the Music Pavilion.



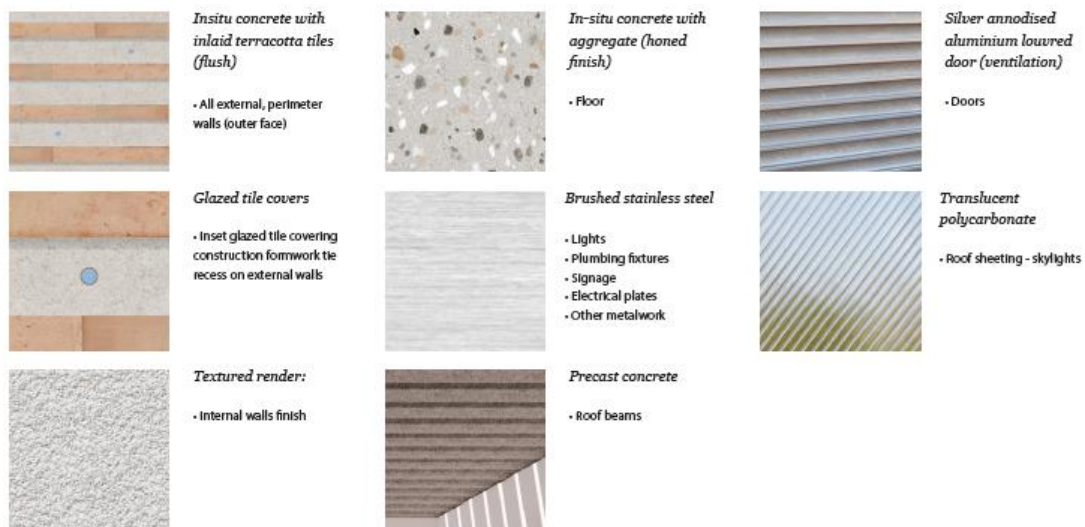


Figure 20: Proposed materials for the Store Building and Green Room (Besley & Sprester)

Structure

The structure for the Store building is identical to that of the Amenities, though it has an even simpler geometry. The external walls are in-situ reinforced concrete and are structural. The internal leaf walls are 90mm concrete blockwork.

Services

The services strategy for the Store is also similar to that of the Amenities. Rainwater is captured via a concealed gutter and downpipe running between the external and internal walls. Unlike the Amenities, there is no water supply or plumbing intended for the Store. The lighting strategy is a simplified version of the Amenities, with concealed lights similarly running between concrete beams at ceiling level.

4.4 Landscape Design

Moir have prepared a landscape design response for the St Marys Central Park proposal, which is provided at Appendix 1: Landscape GA Plan by Moir Studio and Appendix 2: Landscape Concept Design Report by Moir Studio.

4.4.1 Concept

The site of Central Park has historically had watercourses, both natural and man-made, flow through the low lying grounds that connect to South Creek.

The First Nations community connection to South Creek is a fundamental part of their stories and history.

Embedded within the principles developed in First Nations engagement, the concept explores how watercourses have transformed over time, been a source of life, refuge, community and wellbeing. As the river weaves through the land it creates both the means of connection and separation.

Central Park looks to cultivate the “creek line” as it flows through the site, inviting and guiding the community through the various activities. A linear plaza, the pathway also acts



to define zones within the park. Like a creek, it expands and contracts with the land and use, its pace varies through time and season, speeds up like the flow of water and runs dry and transforms.

The design aims to re-create the connection to Country, to South Creek and in so doing, a greater connection to each other.

The design has been split into three distinct areas; event space and amenities, play space and urban plaza, which is illustrated in the overall landscape plan below.



Figure 21: Overall landscape plan (Moir)

4.4.2 Urban Plaza

The urban plaza will include the following elements and amenities:

- Access from Queen street
- Water feature
- Seating area under fig tree
- Cafe alfresco deck
- Outdoor opportunities
- Raised planter with seating
- Civic gathering space
- Existing carpark/ future library
- Water jets
- Future road
- Pedestrian Crossing





Figure 22: Urban Plaza landscape plan (Moir)

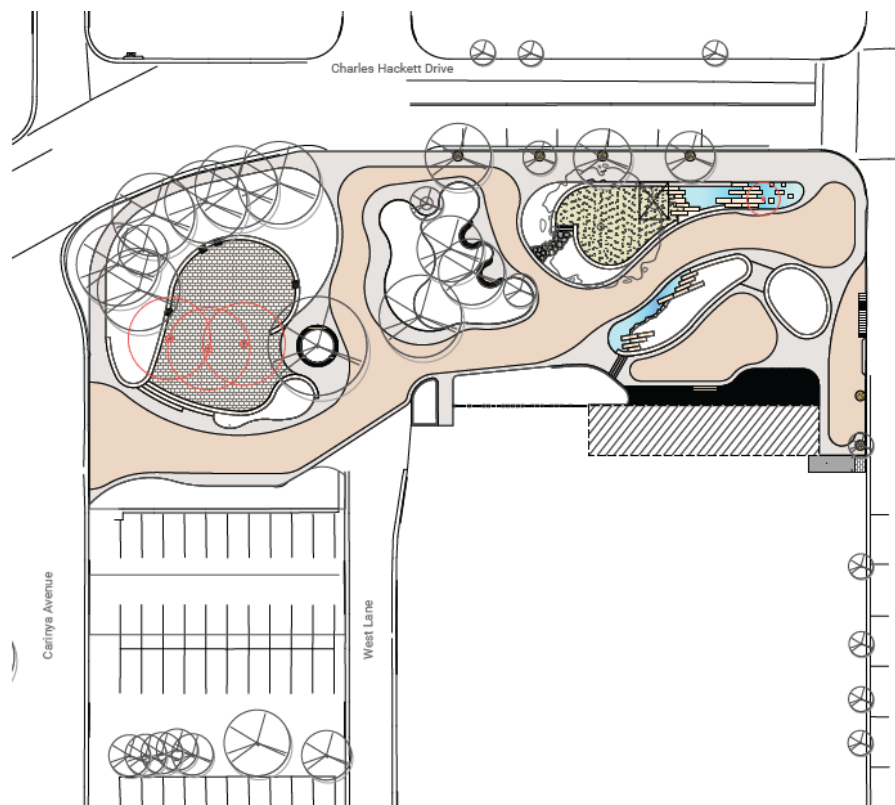


Figure 23: Urban Plaza finishes plan (Moir)





Figure 24: Photomontage of Urban Plaza (Moir)

4.4.3 Active and Passive Recreation

The playground will include the following elements and amenities:

- Water hand pump
- FRP ramps
- Timber platforms
- Rope climbing tube
- Slides
- Flying fox (inclusive)
- Bins
- Picnic tables
- Shelters
- Shade sail
- Boardwalk
- Timber bridge





Figure 25: Playground Detail plan (Moir)

Nature Play

The play area will focus heavily on encouraging interaction with nature and developing a sense of adventure. The play area will also leverage on the sites natural topography to allow for play opportunities across the different levels.

During the Walk on Country, the First Nations participants voiced the importance of nature play as a key desire to reinforce a connection to nature and respect for Country.

The benefits of nature play include increasing problem-solving skills, encouraging collaborative learning, reduced levels of aggression and frustration and developing stewardship of the environment.

Nature play elements include dry creek bed, sandstone climbing walls, timber log hoppers and mounded gardens.

Water Play

As a result of the high ambient temperatures that St Marys experiences during the summer months, incorporating cooling opportunities is beneficial for enhancing community amenity. Providing a space for respite and to cool off is a key part of the design.



The design seeks to incorporate a nature-based approach to water play that includes water jets, misters, a small cascading waterfall, water hand pump and a dry creek bed.

Structured Play

A number of structured play elements are proposed including an elevated structure with ramps and platforms, climbing tube and slides. This structure protrudes from the higher elevation to extend out over the rest of the playground. In addition to offering climbing and sliding opportunities, the highest platform also provides views over the event lawn, music pavilion and areas beyond the park.

Other structured play elements include a mound slide for small children, climbing elements and a flying fox.

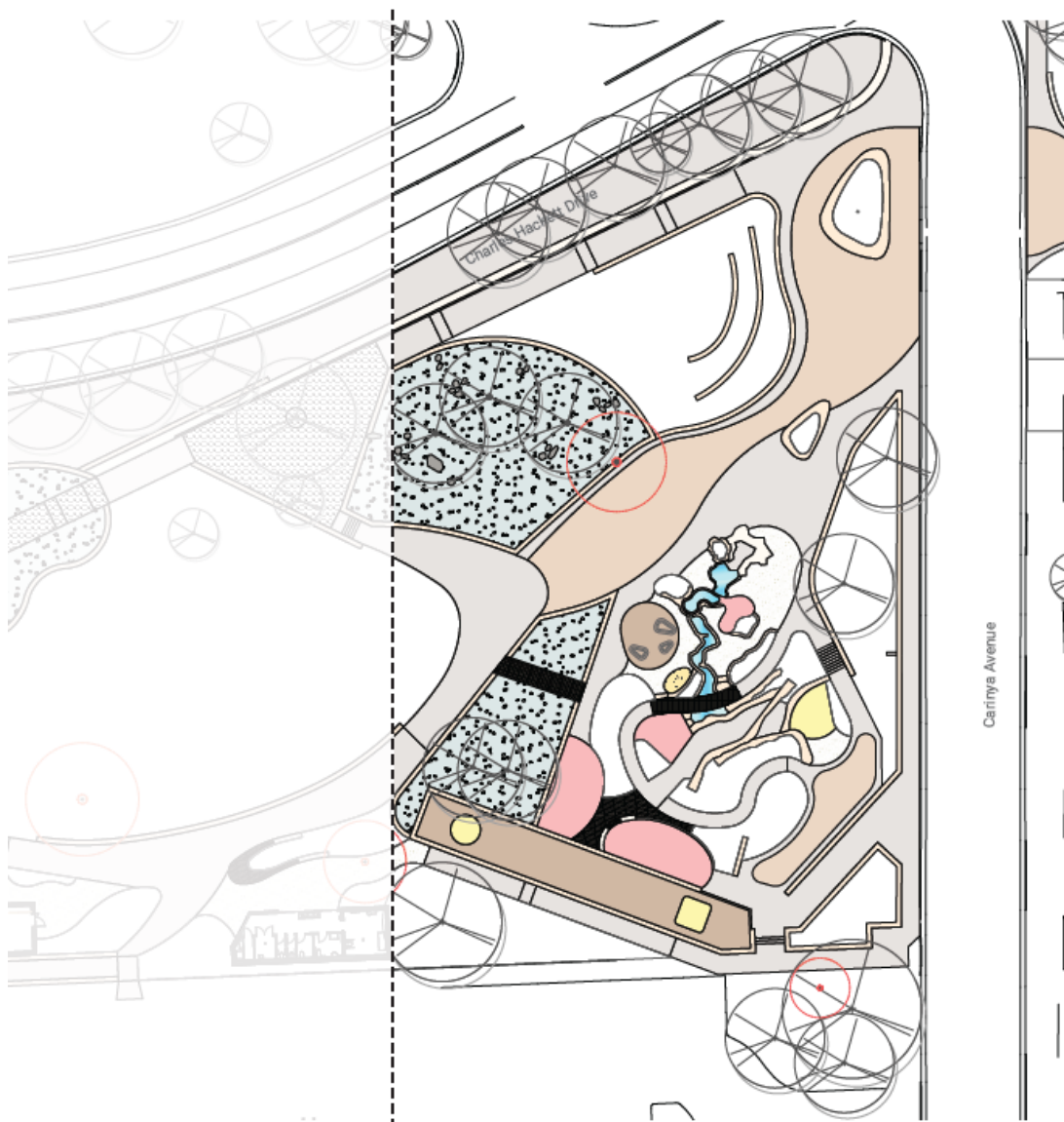


Figure 26: Active and passive recreation finishes plan (Moir)





Figure 27: Photomontage of Active and passive recreation (Moir)

Raingarden and Events

The playground will include the following elements and amenities:

- Music pavilion
- Store/changing
- Amenities
- Lawn
- Small gathering space
- Rain garden





Figure 28: Raingarden and events landscape plan (Moir)

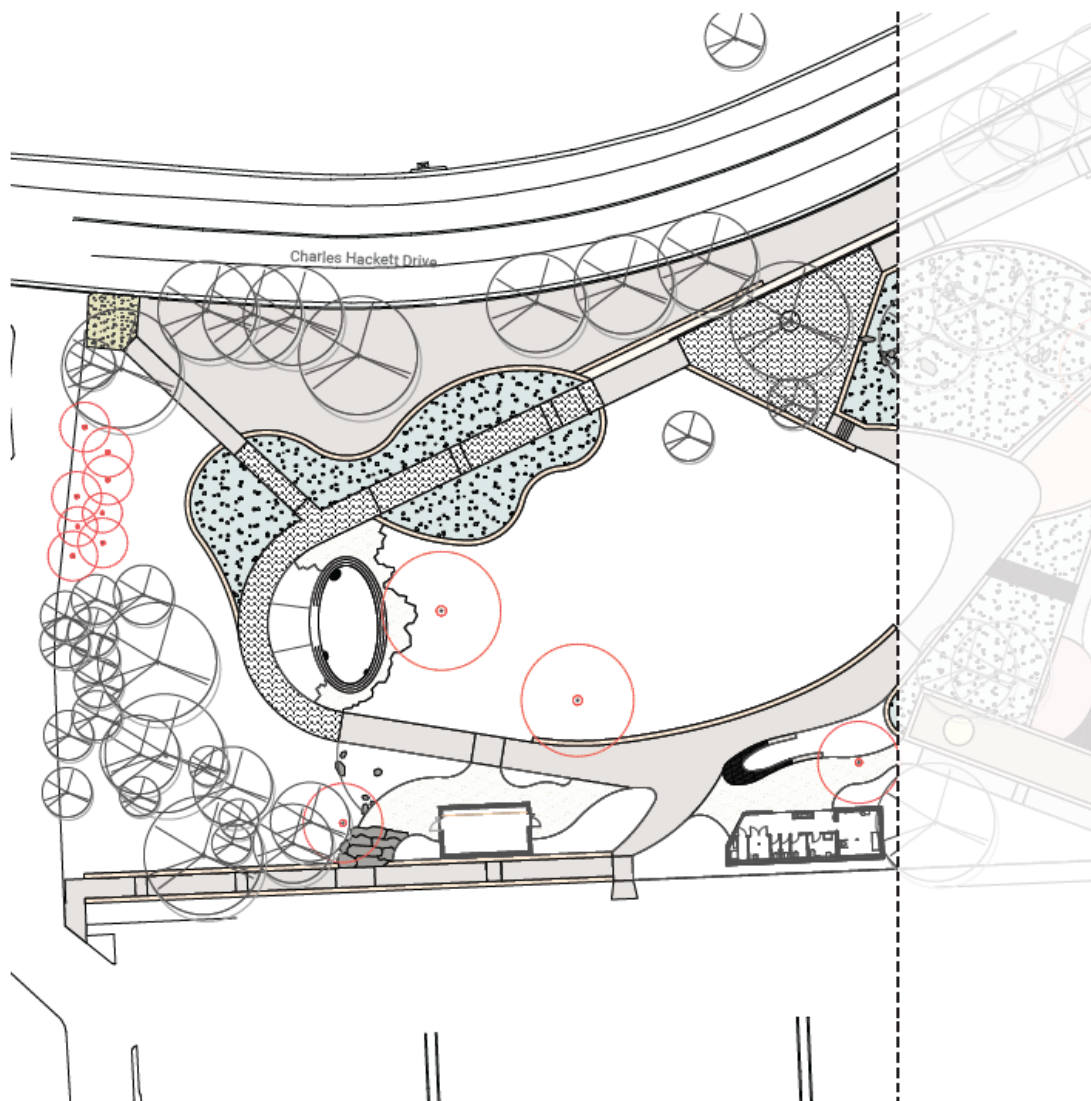


Figure 29: Raingarden and events finishes plan (Moir)

4.4.4 Connection to Country

A Walk on Country was undertaken on Friday 24 May 2024, with local indigenous representatives. The walk involved discussions and sharing of cultural knowledge about the rich and unique heritage of the local area including the importance of the Wattle as a seasonal indicator for the Eel migrations in Wianamatta Creek.

Opportunities to integrate Indigenous cultural design principles, education and concepts of 'Country' were explored in order to acknowledge the history of Indigenous people.

Consultation revealed that there is a strong desire for Indigenous culture to be seamlessly layered into all aspects of the design and potentially be achieved through interventions including:

- Planting
- Story-telling through signage, sculptures or play elements
- Traditional naming and language
- Structures or spaces for cultural events

Connectivity and Flow



The significance of the Wianamatta Creek and South Creek and their connectivity and importance to all Darug clans, was highlighted in the consultation. These creeks acted as important resources and pathways for the Darug people and were utilised for fishing, meeting and camping.

The act of Cultural Flows through reconnecting First Nations people with the water systems is an element to be represented throughout the park. The design seeks to emphasise the connectivity and flow of the creek line through the organic path system that expands and contracts, guides users through the spaces and defines zones for shelter, refuge and gathering.

Significance of the eel

Cultural connection to the eel was a strong theme within the consultation process. The eel was a key source of food for Darug people and were caught by directing them upstream into traps and weirs. Eels frequently appear in aboriginal artwork and traditional legends which attribute the eel to the creation of a number of watercourses in the area.

This cultural heritage offers opportunities to tell the stories of the Darug people through features and design within the park. Educational and interpretive tools assist in conveying these stories and continuing the history for all to understand the importance of the traditional culture.



Figure 30: Connection to Country landscape plan (Moir)

4.5 Construction Activities

4.5.1 Work methodology

Prior to the commencement of any work, 'construction zones' will need to be established around the perimeters of the work sites within St Marys Central Park, the existing carpark and West Lane. The final details of the construction methodology are still under consideration and therefore were not available at the time of preparation of this Review of



Environmental Factors. However, prior to any works commencing, the pedestrian and traffic management controls and other environmental controls recommended in this Review of Environmental Factors will need to be implemented.

The construction zones may have an impact on the surrounding road network.

Construction activities will vary throughout the works period, however, are anticipated to include (but not be limited to):

- Tree removal and protection;
- Site remediation and earthworks associated with cut and fill and site preparation works;
- Formwork and concreting and construction of pathways, stairs, ramps, retaining walls and custom concrete benches (spectator bleachers);
- Construction/installation of the new playground equipment;
- Construction of the new amenities building adjacent to the new playground;
- Construction of the raised threshold priority cyclist/pedestrian crossing in Gray Street;
- Electrical works associated with the electricity supply, installation of conduits, wiring, communications and the electrical systems and public domain lighting;
- Installation of furniture, including seating, benches, bleacher seating, waste bins, drinking fountains (bubblers) and picnic tables;
- Works associated with the installation of upgraded stormwater management infrastructure;
- Installation of signage;
- Landscaping, including planting and mulching, paving, turfing.

4.5.2 Plant and equipment

The plant and equipment that will be required for the works will vary throughout the ongoing stages of the work activities. Typical equipment and plant will generally include (but not be limited to) the following:

- Construction and/or earthmoving equipment including bobcats, rollers, crane etc;
- Various trucks and trade vehicles;
- Various powered and unpowered hand tools.

During the course of the works various forms of environmental control equipment such as silt fences / socks, rubbish skips will be required.

4.5.3 Waste management

All waste material will need to be either removed from the site immediately, or stored on site in skip bins (or similar), sorted as per waste classification guidelines and either recycled or disposed of at a licensed waste management facility.



4.5.4 Transport and accessibility

Where and when necessary, traffic and pedestrian management measures will need to be put into place prior to the commencement of works in order to provide a safe environment for road users, cyclists and pedestrians, and to manage access to the work site/s.

All changes to the existing traffic, cyclist and pedestrian conditions in the vicinity of the works area/s will need to be accompanied by appropriate signage etc to notify users of the temporary arrangements.

Interim changes to the surrounding road network have been proposed to facilitate early works of the Central Park development. Nevertheless, changes to the road network at full completion of Central Park will likely remain fundamentally similar to the interim arrangements. The proposal specifically concerns West Lane and the Kokoda Park car park, as provided in the extract of the Transport and Accessibility Impact Assessment below.

The proposed interim changes are as follows:

1. Close the northern end of West Lane south of Charles Hackett Drive to vehicles
2. Repurpose up to 40 car parking spaces at the Kokoda Park car park to be incorporated into Central Park
3. Install a new pedestrian crossing over Carinya Avenue
4. Install appropriate physical barriers to separate pedestrians in Central Park and vehicles on adjacent carriageways
5. Allow a new one-way eastbound link between Carinya Avenue and West Lane through the existing Kokoda Park car park
6. Provide loading bays on the new link for heavy vehicles servicing the properties at the northern end of West Lane (heavy vehicles will not be permitted to access these properties as there is insufficient space to accommodate their manoeuvring)
7. Allow other light vehicles to access the properties at the northern end of West Lane via a two-way segment.



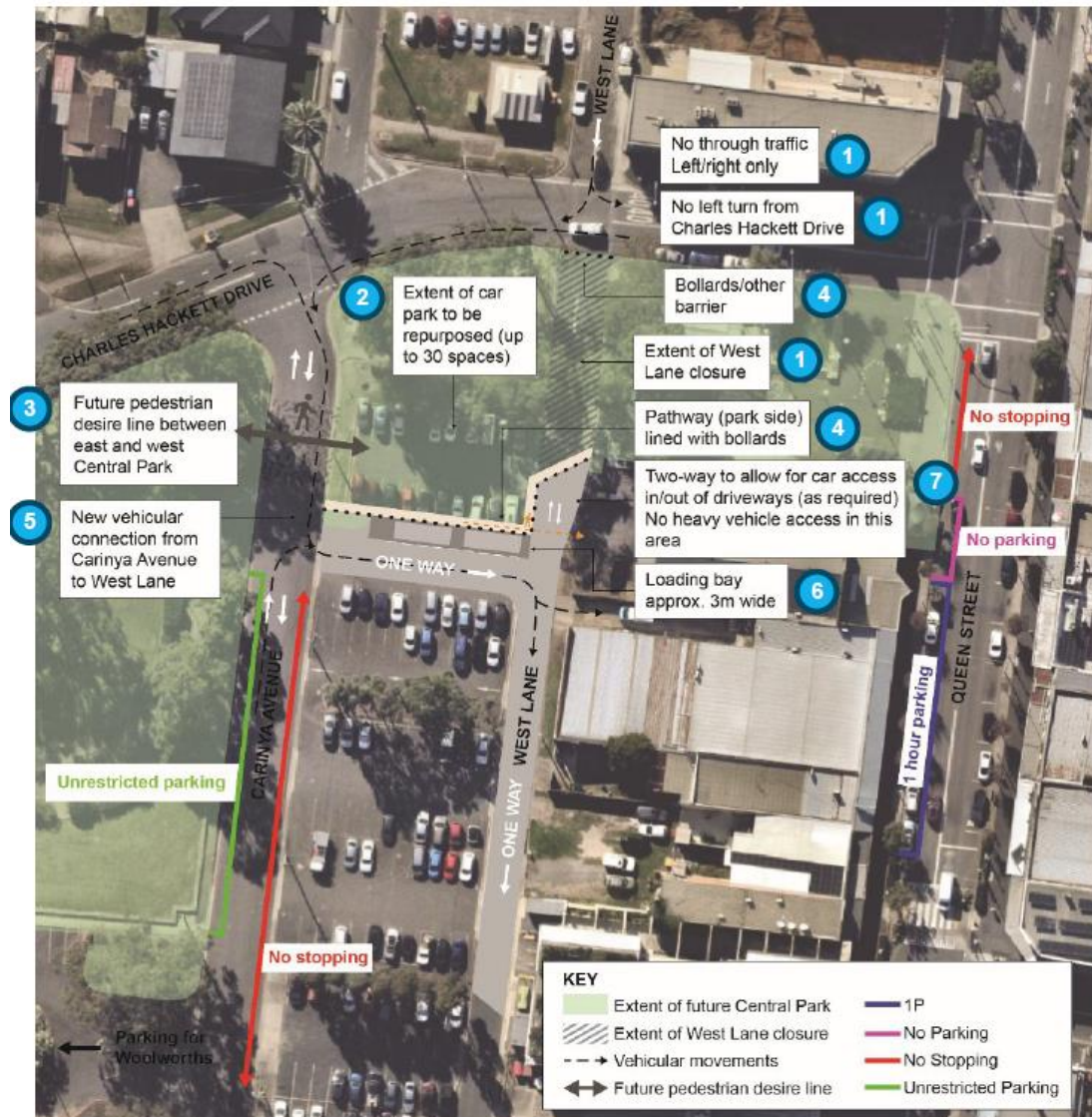


Figure 31: Proposed temporary closure of West Lane (SCT Consulting)

The figure below demonstrates the key approach routes to West Lane for freight and service vehicles, which are likely to come from all directions:

- Vehicles accessing West Lane from Charles Hackett Drive will need to turn onto Carinya Avenue and then turn left towards West Lane via the proposed eastbound link through the existing Kokoda Park car park
- Vehicles coming from the southeast may get to West Lane also by turning left from Queen Street onto Crana Street, then turn right onto Carinya Avenue, and turn right towards West Lane via the proposed eastbound link through the existing Kokoda Park car park



Figure 32: Key approach routes to West Lane (SCT Consulting)

Access Arrangements

Access to Central Park is largely similar to the current arrangements of the existing Coachmans Park and Kokoda Park, except for minor vehicle rerouting as a result of the proposed closure of West Lane. Access to surface car parks from Carinya Avenue is retained, which is reachable from either Charles Hackett Drive in the north or Crana Street in the south.

Pedestrians and cyclists benefit from the park's central location that addresses two street frontages. They can access the park from all sides, especially Queen Street and Charles Hackett Drive.

The landscape plan shows that the public domain on the existing Coachmans Park site will remain prominent with wide paths provided to accommodate likely busy pedestrian traffic. The main path traverses in the east-west axis across the eastern side of Central Park and links to the park's western side via the proposed pedestrian crossing over Carinya Avenue.

The closure of part of West Lane will create a much larger public open space and limit pedestrians' interface with vehicles to only one location on Carinya Avenue. The proposed pedestrian crossing is designed to visually prioritise pedestrian movements over vehicular traffic.

4.5.5 Public utility adjustment

All utilities, including water, sewer, electricity and communications infrastructure are currently available to the site. The proposed works are unlikely to require any adjustment to existing water, or sewer infrastructure beyond the site.



4.5.6 Remediation

The site is to be remediated and validated in accordance with the Remediation Action Plan (RAP) prepared by Douglas Partners, dated April 2025 in order for it to be suitable for ongoing public open space / recreational use without posing an unacceptable risk to human health or the environment.

The site is currently closed off to the public due to risk of contamination and the project will facilitate its reopening to the public for use. On completion of remediation works, an long term environmental management plan (LTEMP) prepared in accordance with NSW EPA guidelines will be required to outline management procedures for future works to maintain the integrity of the cap. The obligations within the LTEMP must be legally enforceable.

4.5.7 Demolition

The existing playground, amenities building, seating, landscaping, street furniture and roads are to be demolished. The structures to be demolished are detailed in Appendix 27: Demolition Plan by Moir Studio.

4.5.8 Tree Removal

The proposal is supported by an Arborist Report which is provided at Appendix 20: Arborist Report by Tree Report. A total of eighty-eight individual trees have been identified and documented for assessment within this report. Of these:

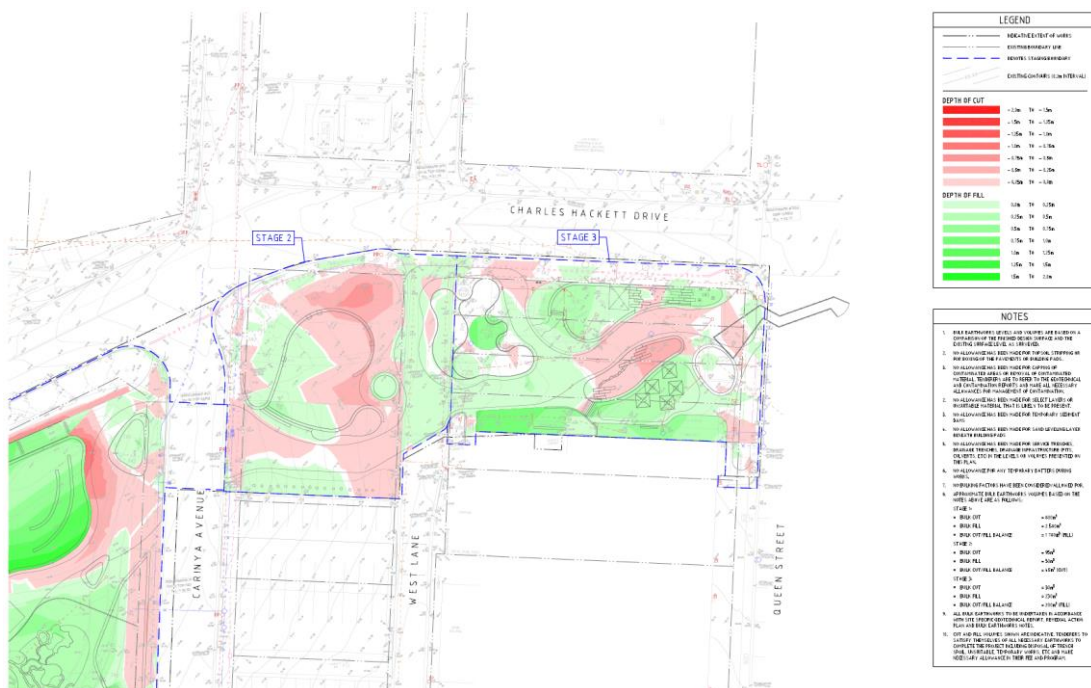
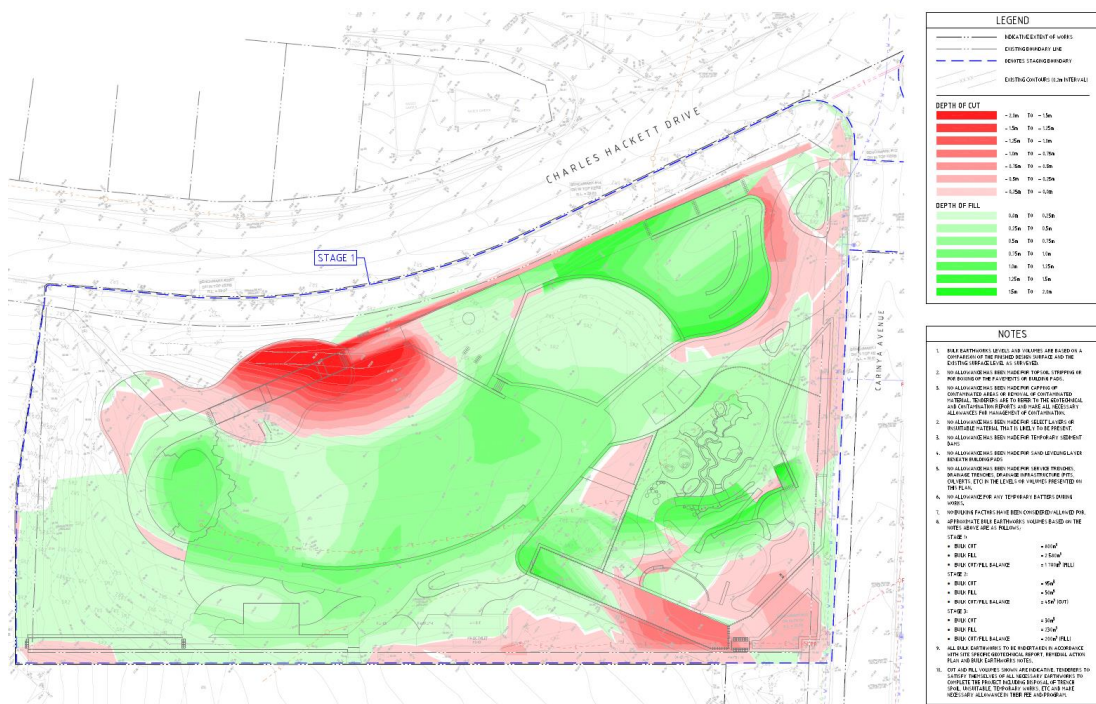
- Twenty-eight Subject Trees (id. 5, 8, 9, 10, 11, 12, 17, 33, 38, 45, 50, 53, 54, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 73, 75, 78, 81 & 82) are of high retention value.
- Twenty-one Subject Trees (id. 1, 2, 3, 4, 6, 15, 16, 18, 27, 37, 52, 57, 66, 70, 71, 72, 74, 76, 77, 79 & 85) are of medium retention value.
- Thirty-nine Subject Trees (id. 7, 13, 14, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 34, 35, 36, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 51, 68, 69, 80, 83, 84, 86, 87, 88 & 89) are of low retention value.

The proposal will result in the removal of 21 trees and retention of 67 trees. An appropriately qualified arborist has reviewed the trees and determined that the identified trees are appropriate for removal.

4.5.9 Site Preparation/Bulk Earthworks

Following the stripping of the existing surface, cut and fill works will then be required in order to establish the base levels for Central Park. The figures below detail the extent of cut and fill required. This is detailed in the Civil Plans provided at Appendix 12: Civil Drawings (50%) by Northrop.





4.5.10 Public Domain Lighting

In order to light the new park and supporting infrastructure, including pedestrian pathways, amenities buildings, music pavilion, play ground and other areas, existing public domain lighting is to be supplemented with a series of new public domain lights.

The public domain lighting will need to meet the requirements of AS/NZS 1158.3.1 – “Lighting for roads and public spaces”: Pedestrian area (Category P) lighting – Performance and design requirements; and AS 4282 “Control of the obtrusive effects of outdoor lighting”. A Lighting Design Concept Report has been prepared by Electrical Projects Australia that considers the aesthetic, functional and technical requirements for each of the areas in scope and illustrate the general design concepts including any potential opportunities.

This report is provided at Appendix 17: Lighting Concept Design Report (50%) by EPA .

4.5.11 Flood and Stormwater Management Works

The site generally falls to the west towards the existing flood storage area. Runoff from the site falls towards the existing pit and pipe infrastructure. It appears that there are no stormwater quality management controls currently onsite. An increase in impervious area resulting in increased site runoff, may impact the existing stormwater infrastructure and local flood behaviour.

A Flood Impact and Risk Assessment has been undertaken by Northrop and is provided at Appendix 10: Flood Impact and Risk Assessment Report by Northrop. The Study was prepared considering the proposed works and the likely impacts. There is a localised increase in excess of 20mm that is observed adjacent to the north-western corner of Kokoda Park during the 0.5% and 0.2% AEP. Similarly, increases in excess of 20mm are observed in Charles Hacket Drive and in the carpark south of Kokoda Park during the PMF. It is important to note that events such as the 0.5%, 0.2% AEP and PMF are extremely rare events with the PMF often having a nominal 10⁻⁷ (1 in 10 million) chance of occurring. Generally, the greatest concern during an events of this nature is reviewing how the residual risk to life can be managed. Risk to life is typically analysed through a review of the flood hazard conditions. The study concluded that these increases are not expected to create a significant adverse impact in this area. As such, the risk to life is expected to remain unchanged when compared to existing conditions. The study also undertook an analysis of the Climate Change Sensitivity of the proposed works and noted that the proposed development is not expected to be adversely affected due to potential increases in rainfall intensities created by Climate Change.

The study also undertook an assessment of the proposals compliance with the requirements of Penrith City Council’s LEP, DCP, the ST Marys Catchment Flood Plain Risk Management Study and Plan and identified that the proposed works were compliant with all flood related matters.

4.6 Signage

Entry signage is to be located at key entry points to Central Park and is to be inviting and in keeping with the theming and identity of the space. Wayfinding signage should be clear, concise and intuitive, guiding people seamlessly through the spaces. Language should be simple and universal symbols should be shown.



Interpretive signage is to be dispersed through the site to tell stories and convey significant historical information. Interpretive signage should be engaging, informative and educational. Statutory signage should be clear, authoritative and compliant with Council signage manuals. Effective signage should be simple, of a considered scale and use contrasting materiality to ensure it is noticeable within the streetscape.



Figure 35: Signage & Wayfinding Plan (Moir)

4.7 Art Strategy

Moir have prepared an Art Strategy Plan, which is provided in Appendix 2: Landscape Concept Design Report by Moir Studio. The strategy is guided by the following principles:

Sense of Community

Involvement of a variety of artists from the local area to encourage a sense of community, including opportunities for First Nations and emerging artists.

Connection to Country

Acknowledge and respect Indigenous cultural design principles and concepts of designing with Country.

Sense of Place

Engage with the local history, identity and stories to authentically respond to place.

Local Engagement

Collaborate with the community to deliver site-specific public artwork that is unique, engaging, relevant, memorable and robust.

Value for Money

Advise on best practice methodology for the selection, commissioning, delivery and care of artworks that provides value for money.



Local Cohesion

Make use of materiality and forms that are robust, easy to maintain and reflect the wider St Marys area.

4.7.1 First Nations Suggestions

- Educate on the environmental importance of Wianamatta Creek e.g. story-telling through interactive elements or artwork.
- Recognise the important of animals to Darug people such as the eel and its connection to Wianamatta Creek to the Hawkesbury River. Can be undertaken through:
 - Pewter animals on sandstone blocks for children to identify
 - Perforated metal fencing incorporating fish and eel
 - Incorporate the shape of the eel or snake in elements
- Include stories of place through interpretive artwork.
- Ensure a variety of artists from Darug Country are utilised throughout the design and implementation phases.
- Darug artwork incorporated into furniture and fixtures e.g. drinking fountains and play equipment.
- Engagement of specific artists or knowledge holders throughout the process.
- The designs used are to be unique to Darug land and Darug clans.
- Include stories of place including stories of Doc Cunningham.
- Disperse Darug language/words throughout the park.



Figure 36: Art Overlay Plan (Moir)



5 Statutory & Planning Framework

The proposed landscaping, building works, and proposed events require an assessment under Part 5 (Environmental Assessment) of the EP&A Act, and as such, this REF has been prepared.

This Section provides an overview of the key local and state planning controls applicable to the site and referenced in this REF.

Activities being undertaken by Council that do not require consent and which are not exempt fall under Part 5 of the EP&A Act. Under Part 5 the public authority undertaking the activity has a duty to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity (Section 5.5 of EP&A Act). "Environment" is broadly defined in the EP&A Act to include all aspects of the surroundings of humans whether affecting them as individuals or in social groupings.

The public authority undertaking the activity or on whose behalf the activity is being carried out is often both the "proponent" and the "determining authority" under Part 5. The proponent means the person proposing to carry out the activity. The determining authority means a Minister or public authority and, in relation to any activity, means the Minister or public authority by or on whose behalf the activity is or is to be carried out or any Minister or public authority whose approval is required in order to enable the activity to be carried out. The determining authority has responsibility for undertaking the EIA for the activity and determining whether it is likely to have a significant impact on the environment. In most cases, Council is both a proponent and a determining authority when undertaking Part 5 activities.

Where an assessment under Part 5 determines the impact is likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats then an environmental impact statement (EIS) may need to be obtained under section 5.7 of the EP&A Act.

Clause 171 of the EP&A Regulation details what factors must be taken into account when evaluating the impact of an activity on the environment.

Under Transport and Infrastructure SEPP 2021, the works could be classified as development without consent subject to being limited to the works identified in the relevant section below.

5.1 Commonwealth Environmental Protection and Biodiversity Conservation Act (EPBC) 1999

Under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), a referral is required to the Australian Government for proposed actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land.

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). Any actions that will or are likely to have a significant impact on the MNES require referral and approval from the Australian Government Environment Minister. Significant impacts are defined by the Commonwealth for MNES.



Further testing and investigation will be required to confirm that there are no matters of national environmental significance and the environment of Commonwealth land that warrants referral to the Australian Department of Sustainability, Environment, Water, Population and Communities under the EPBC Act. This will need to consider any threatened, endangered or critically endangered species on the site.

The assessment of the proposal's impact, on matters of national environmental significance and the environment of Commonwealth land, found that there is unlikely to be a significant impact on relevant matters of national environmental significance or on Commonwealth land. A Protected Matters Report has previously been generated for the site, which identifies that there are no World Heritage Properties, National Heritage Places, Wetlands or Marine Parks/Areas within 1km of the site.

Further, it is not development carried out by a Commonwealth agency, nor is the proposed development a matter considered to be of national environmental significance and there is unlikely to be any significant impact on any critical habitats or threatened species. Council has confirmed that there are no critical or threatened species on site to be impacted by the proposed works. Accordingly, the proposal has not been referred to the Australian Department of Sustainability, Environment, Water, Population and Communities under the EPBC Act. Refer to the table below for an impact assessment against the relevant considerations.

Table 3 – Matters of National Environmental Significance Consideration

Factor	Impact Assessment
Will the activity have, or likely to have, a significant impact on a declared World Heritage Property?	No
Will the activity have, or likely to have, a significant impact on a National Heritage place?	No
Will the activity have, or likely to have, a significant impact on a declared Ramsar wetland?	No
Will the activity have, or likely to have, a significant impact on Commonwealth listed threatened species or endangered community?	No
Will the activity have, or likely to have, a significant impact on listed migratory species?	No
Will the activity involve any nuclear actions?	No
Will the activity have, or likely to have, a significant impact on Commonwealth marine areas?	No
Will the activity have any significant impact on Commonwealth land?	No



Table 3 – Matters of National Environmental Significance Consideration

Factor	Impact Assessment
Would the activity affect a water resource, with respect to a coal seam gas development or large coal mining development?	No

5.2 Biodiversity Conservation Act 2016 (BC Act)

The BC Act seeks to conserve biological diversity at bioregional and State scales; to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations; to assess the extinction risk of species and ecological communities and identify key threatening processes through an independent and rigorous scientific process; and to establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity.

Section 7.3 of the Act requires proponents of activities subject to Part 5 of the EP&A Act to determine whether they will have a significant impact on threatened species. The test for significant impact is described in section 7.3 of the Act. A significant impact also occurs if the activity is carried out in an area of outstanding biodiversity value.

If a significant impact is likely to occur, the proponent of the activity must prepare a Species Impact Statement (SIS) in accordance with section 7.20 or a Biodiversity Development Assessment Report (BDAR).

The proposed activity will not displace any flora or fauna, create a barrier to their movement, or introduce noxious weeds, vermin or feral species. Additionally, no native vegetation will be impacted by the proposed activity. No specific mitigation measures are required.

5.3 Environmental Planning and Assessment Act 1979 (NSW)

This REF considers the requirements of Section 5.5 of the EP&A Act, as well as Section 171 of the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation).

To meet the objectives of the EP&A Act relating to the protection and enhancement of the environment, a determining authority shall examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity (refer to sub-section 1 of Section 5.5). Any other provisions of the Act or the provisions of any other Act or of any instrument made under the EP&A Act or any other Act should also be taken into consideration.

This REF addresses the provisions of Section 5.5 of the EP&A Act. The table below demonstrates the effect of the proposed activity on the matters listed for consideration in Sub-section 3 of Section 5.5.



Table 4 – Matters for consideration under Sub-Section 3 Section 5.5 of the EP&A Act

Matter	Impact of Activity
Sub-section 3: Without limiting subsection 1, a determining authority shall consider the effect of any activity on any wilderness area (within the meaning of the Wilderness Act 1987) in the locality in which the activity is intended to be carried on.	No effect, as the site is not located within or in the vicinity of a wilderness area as defined under the Wilderness Act 1987.

For the purposes of Section 5.7 of the EP&A Act, the Activity has been assessed as not likely to have a significant impact on the environment. As such an Environmental Impact Statement is not required to be prepared.

Part 6 of the Act requires Council to also consider the requirements of building and subdivision certification for the proposed activity, noting that the proposal includes the construction of new buildings, which would constitute 'building work' under the act. To this effect, a Compliance Statement addressing the requirements of the BCA 2022 has been provided at

5.4 State Environmental Planning Policies (SEPPs)

The following SEPPs apply to the site and are relevant to the assessment of the activity as outlined below.

5.4.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Vegetation in Non-Rural Areas

Chapter 2 Biodiversity and Conservation SEPP establishes controls for the clearing of native vegetation in NSW on land zoned for urban and environmental purposes that is not linked to a development application.

The proposed activity will necessitate the removal of several trees. All relevant permits will be sought prior to the carrying out of these works. In addition, an Arboricultural Impact Assessment has been prepared to ensure that the proposed activity is consistent with AS4970-2009: Protection of Trees on Development Sites and all other relevant legislative requirements. The assessment identifies the tree protection zones for each tree, and where possible, has provided alternative methods to tree removal, such as pruning. Refer to Appendix 20: Arborist Report by Tree Report for further information.

Water Catchments

The site is located within the Hawkesbury-Nepean Catchment and therefore, Chapter 6 relating to water catchments relates to the proposed development. As such the proposal has given regard to the controls in Section 6.2 of the Biodiversity and Conservation SEPP, relating to water quality and quantity, aquatic ecology, flooding, recreation and public access, and total catchment management.



5.4.2 State Environmental Planning Policy (Resilience and Hazards) 2021

The Resilience and Hazards SEPP aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The SEPP specifies when consent is required for remediation of contaminated land.

A Preliminary Site Investigation was undertaken by Douglas Partners for the St Marys Town Centre to provide a preliminary assessment on the risk of contamination being present on site as well as their types and general locations to inform a potential master planning design for the precinct. This was primarily undertaken as a desktop review of available information. Based on the information reviewed by Douglas Partners a Hazard Risk assessment was undertaken identifying the areas of high risk. The subject site is identified within the area of High Risk and Medium Risk (see figure below).

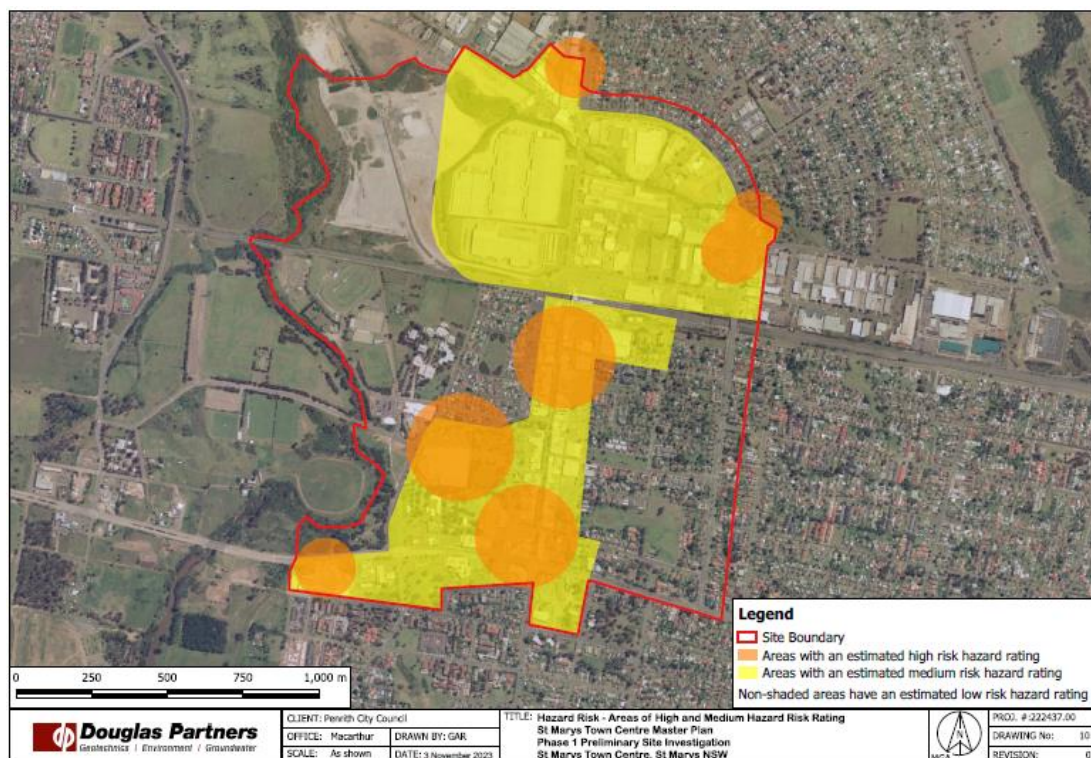


Figure 37: Extract from PSI (Douglas Partners)

Douglas Partners have prepared the following reports to assess the extent of the site's contamination and remediation:

- Appendix 5: Asbestos Assessment Report by Douglas Partners
- Appendix 6: Detailed Site (Contamination) Investigation Report by Douglas Partners
- Appendix 7: Remediation Action Plan by Douglas Partners

The above reports confirm that in overall terms, that the site is suitable for the proposed use and can be made suitable for redevelopment subject to recommendations provided that development occur in accordance with the provided Remediation Action Plan. Appropriate mitigation measures have been identified accordingly.



5.4.3 State Environmental Planning Policy (Transport and Infrastructure) 2021

The Transport and Infrastructure SEPP aims to facilitate the delivery of infrastructure across the State. The following Divisions are applicable to the proposed works.

Division 1 – Consultation

There are no identified authorities with whom would be required to be consulted under this part given the nature of the proposed works and that proposal is led by Council. Internal stakeholders at Council have been consulted extensively and raise no objections to the proposed works.

Division 12

Division 12 of the Transport and Infrastructure SEPP contains provisions relating to development for the purpose of parks and other public reserves. This includes the construction of the following without development consent on behalf of a public authority on land owned or controlled by the public authority.

- (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).*

Division 17 Roads and Traffic

Division 17 of the Transport and Infrastructure SEPP contains provisions relating to development for the purpose of roads and traffic related infrastructure. Sections 2.109(1) are of relevance to the proposal.

Under Section 2.109(1), development for the purposes of a road or road infrastructure facility may be carried out by a public authority without consent on any land, provided that the works are not generally on land reserved under the National Parks and Wildlife Act 1974.



Accordingly, as the work will be undertaken on behalf of Penrith City Council, as the subject land is not reserved under the National parks and Wildlife Act 1974, the proposed road works can be carried out as 'Development permitted without consent'.

Additionally, s7.74 of the SEPP provides the following can be undertaken as exempt development in prescribed circumstances:

(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 100m², 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.

However exempt development must it is undertaken on behalf of a public authority on land owned or controlled by a public authority. It must also ensure that:

- 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.*

Section 2.20 provides that:

(2) To be exempt development, the development—



- a) *must meet the relevant deemed-to-satisfy provisions of the Building Code of Australia, or if there are no such relevant provisions, must be structurally adequate, and*
- b) *must not, if it relates to an existing building—*
 - i. *cause the building to contravene the Building Code of Australia, or*
 - ii. *compromise the fire safety of the building or affect access to any fire exit, and*
- c) *must be carried out in accordance with all relevant requirements of the Blue Book, and*
- d) *must not be designated development, and*

Note— Designated development is defined in section 4.10 of the Act as development that is declared to be designated development by an environmental planning instrument or the regulations.

- e) *if it is likely to affect a State or local heritage item or a heritage conservation area, must involve no more than minimal impact on the heritage significance of the item or area, and*
- f) *must not involve the demolition of a building or work that is, or is part of, a State or local heritage item, and*
- g) *if it involves the demolition of a building, must be carried out in accordance with Australian Standard AS 2601—2001, The demolition of structures, and*
- h) *must be installed in accordance with the manufacturer's specifications, if applicable, and*
- i) *must not involve the removal or pruning of a tree or other vegetation that requires a permit or development consent for removal or pruning, unless that removal or pruning is undertaken in accordance with a permit or development consent, and*

Note— A permit for the removal or pruning of a tree or other vegetation may be granted under a local environmental plan. A development consent for the removal of native vegetation may be granted under the Native Vegetation Act 2003.

- j) *must not involve the removal of asbestos, unless that removal is undertaken in accordance with Working with Asbestos: Guide 2008 (ISBN 0 7310 5159 9) published by the WorkCover Authority.*

Given the above, and the extent of the proposed works, the works are classified as either development without consent or exempt development, subject to the identified mitigation measures.

Division 20 Stormwater management systems

Division 20 of the Transport and Infrastructure SEPP deals with stormwater management systems, which are defined to include works for the collection, detention, distribution or discharge of stormwater, and stormwater quality control devices.

Under Section 2.137 of the Transport and Infrastructure SEPP, development for the purposes of stormwater management systems can be carried out by or on behalf of a public authority without consent on any land. Accordingly, as Penrith City Council is the



proponent, the proposed upgrades to the stormwater system are able to be carried out as 'Development permitted without Consent'.

Summary

As a result of the above, development consent under Part 4 (Development Assessment and Consent) of the EP&A Act is not required. Instead, the proposal is required to be assessed as an 'activity' in accordance with Part 5 of the EP&A Act. This provides that the determining authority for an activity must take into account to the fullest extent possible all matters affecting or likely to affect the environment before undertaking the activity itself or granting an approval enabling the activity to proceed.

For this proposal, Penrith City Council is both the proponent and the determining authority under Part 5 of the EP&A Act. This REF will assist Penrith City Council in meeting the above obligations prior to proceeding with the proposal.

5.4.4 State Environmental Planning Policy (Industry and Employment) 2021

The proposed development is likely to require temporary signage which will need to be in accordance with the requirements identified within this SEPP.

5.4.5 State Environmental Planning Policy (Sustainable Buildings) 2022

As the proposed development seeks consent for development other than the purposes of residential accommodation that involves the erection of a new building (pavilion, amenities, and storage building) that have a total estimated development cost of more than \$5million or more, the Sustainable Buildings SEPP applies to the proposal.

However, given that the proposal is for the development of park and associated facilities, the proposal is considered to give sufficient considerations to the matters outlined in cl3.2(1) of the Sustainable Buildings SEPP as:

- The proposed development has been designed with careful consideration of the climate of the site and general climatic conditions;
- Includes the selection of plants that reduce water demand,
- Implements an appropriate lighting system to reduce electricity demand, and
- The mitigation measures include appropriate implementation requirements for waste management during demolition and construction

5.4.6 State Environment Planning Policy (Exempt and Complying Development Codes) 2007

The proposed works cannot be carried out under Exempt and Complying Codes SEPP as Exempt or Complying Development due to the scope of the proposed works.

5.5 Penrith Local Environmental Plan 2010

The Penrith Local Environmental Plan 2010 (LEP) regulates development in the Penrith LGA, including the site. The REF will need to consider the LEP as outlined in the **Table** below.



Table 5 – Penrith Local Environmental Plan 2010

Clause	Compliance
Clause 2.3 Land Use Zone	The site is zoned as MU1, which allows Recreation areas; and Recreation facilities (outdoor). Therefore the intended land uses are permissible within the zone.
Clause 4.3 Height of buildings	The maximum height of buildings for the site is 24m. The proposed structures do not exceed this height.
Clause 4.4 Floor space ratio	The FSR for the site is 2.5:1. The proposal does not exceed this limit.
Clause 5.10 Heritage	The site is not identified as an item of local heritage significance.
Clause 5.21 Flood Planning	The REF is supported by a Flood Impact and Risk Assessment undertaken by Northrop that provides an assessment and mitigation measures to address key rain events in and around the buildings and within the park. The study identifies that the works fully comply with the requirements of the LEP and all other relevant considerations.
Clause 5.23 Public bushland	Majority of vegetation on site is unlikely to be classified as public bushland as the proposal seeks consent for redevelopment of existing developed areas.

5.6 Strategic Context

5.6.1 Greater Sydney Region Plan

The Greater Sydney Region Plan outlines the strategic vision for Sydney to 2056, conceptualising the metropolitan region as the Eastern Harbour City, Central River City and the Western Parkland City. St Marys is located in the Western City District Plan, with St Marys forming a crucial connection to the Western Sydney Airport. St Marys is also part of the Greater Penrith to Eastern Creek Growth Area which is addressed below. This growth area connects the Penrith CBD and St Marys through to the M7 Motorway/Eastern Creek with new mass transit lines has been identified. This provides the opportunity to integrate land use and transport planning at a suitable scale. Growth in appropriate locations can contribute to a connected, vibrant Western Parkland City with more homes,

The proposal is consistent with the strategic direction for St Marys and the Broader Penrith. The Greater Sydney Regional Plan sets 10 directions for delivering and monitoring the plan, supported by 40 objectives.



5.6.2 Western City District Plan

This plan designates St Marys as a strategic centre, proposing to strengthen its role in the Western Parkland City as a gateway to the Western Sydney Airport and Aerotropolis. It lists the following actions:

- Review and maximise opportunities from its location at the intersection of the north-south and east-west corridors
- Support the role of St Marys as a centre by enabling a mix of land uses to encourage a diverse and active night time economy
- Facilitate the attraction of a range of uses that contribute to an active and vibrant place
- Improve transport connectivity and walkability within and to St Marys
- Support greater housing diversity and densities
- Activate primary and secondary streets and deliver contemporary urban public spaces
- Support and demonstrate innovation

Whilst the aims of the District Plan are broad in nature and not necessarily directly relevant to the proposed works, the proposal will foster the growth of and success of St Marys.

5.6.3 Greater Penrith to Eastern Creek Investigation Area Strategic Framework

The Greater Penrith to Eastern Creek Investigation Area Strategic Framework (GPEC Strategic Framework) has been prepared to implement the Region Plan and District Plan. It identifies areas where there is capacity for new housing and urban renewal and supports growth that aligns with infrastructure investment associated with significant State and Commonwealth investment in the Western Sydney International (Nancy-Bird Walton) Airport and the new Bradfield City Centre.

It outlines a clear vision for GPEC, together with a series of priorities and actions to guide future precinct planning and development. The GPEC Strategic Framework identifies 6 key precincts for growth, which includes the St Marys town centre where the site is located. The GPEC Strategic Framework identifies 6 Planning Priorities to achieve the vision for growth in GPEC, they include:

- Connect with and care for Country
- Focused and responsive growth
- Diverse and accessible employment
- Infrastructure delivery
- Public open space, biodiversity and landscape
- Resilience.

Given that the proposal is for a new park, which will support the broader renewal of St Marys as envisioned by the broader Strategic Planning considerations, the proposal gives appropriate consideration to the requirements of this GPEC Framework.



5.6.4 Penrith City Council's Cooling the City Strategy

The urbanisation of our cities, along with predicted changes to our climate and an ageing population mean that urban heat is becoming an increasingly significant issue for cities right across the world. The Penrith City Council's Cooling the City Strategy ('Cooling the City Strategy') has been adopted to understand urban heat within the Penrith LGA and to develop a broad range of actions that will work together towards cooling the City. The Cooling the City Strategy outlines the following categories with associated actions to assist with managing urban heat. They include:

- Green Infrastructure;
- Water Sensitive Urban Design (WSUD);
- Increased Albedo / Reflectivity;
- Policy & Planning; and
- Community Engagement

The Cooling the City Strategy has been considered within the design of the development. Through the provision of significant new soft landscaped areas and a considered approach to balancing hard and soft surfaces and including significant tree canopy, the proposal appropriate responds to urban heat island effect and will work towards cooling the City.

5.6.5 Local Strategic Planning Statement

The Penrith Local Strategic Planning Statement (LSPS) sets out a 20-year vision for land use in Penrith City and proposes actions to manage future growth and change. The LSPS has identified various opportunities for the St Marys Town Centre emerging due to its significant role as an interchange between the Sydney Metro Western Sydney Airport line and the Western Rail line between Penrith city centre and Sydney CBD. It directed the preparation of this Structure Plan for St Marys Town Centre in 2020 to guide the centre's future growth; and to review and update development controls in the Town Centre. The delivery of Central Park will be key to the ongoing success and renewal of St Marys.

5.6.6 East-West Corridor Interim Centres Strategy

Council's interim strategy for centres in the East-West Corridor provided a place vision and 10 priorities for St Marys Town Centre:

- Enhance the high street function of Queen Street
- Investigate further community facility requirements as part of the Neighbourhood Facilities Strategy, including the relationship of the library and community facilities to a central town centre location. Ensure the location is safely and comfortably accessible for pedestrians and cyclists
- Enhance Coachmans Park to strengthen its role as a community place at the centre of St Marys and build an inviting connection between Queen Street, Lang and Kokoda Parks and the shopping centre
- Ensure future development within the mixed-use zone provides commercial and retail uses on the ground and first floors



- Deliver a major green connection that facilitates active transport between Queen Street and South Creek's open space
- Increase pedestrian permeability within the town centre through the delivery of through-site links
- Limit traffic volume and speed on Queen Street
- Improve connections, particularly active transport connections, from surrounding suburbs (including North St Marys, Colyton, and Oxley Park) to ensure these communities benefit from the town centre's services and facilities
- Enhance active transport connections to and from St Marys Senior High School to the town centre and transport interchange
- Enhance the entry to the town centre from the Great Western Highway

The St Marys Structure Plan has built upon the priorities established in the interim strategy.

5.6.7 St Marys Structure Plan

The St Marys Town Centre Structure Plan forms part of Council's Places of Penrith Strategic Framework and is a key component of the planning pathway for St Marys Town Centre. It adopts a place-based and design-led approach to guide the growth of St Marys Town Centre over the next 20 years. This plan has been prepared over two stages - the first stage provides a thorough analysis of St Marys' current social, economic and environmental conditions and establishes a set of issues and opportunities informed by place research and engagement. The findings of this stage can be found in the St Marys Town Centre Structure Plan - Understanding St Marys - Background Evidence Report. The second stage responds to the outcomes of place research and engagement and proposes a place vision for the future of St Marys Town Centre. It also defines a set of 10 place outcomes and 26 directions to guide towards achieving the vision. This has been included in the St Marys Town Centre Structure Plan - Shaping the Future of St Marys Report.

The St Marys Structure Plan was adopted by Council in 2022 and informed the draft St Marys Master Plan exhibited in late 2024. Below is an extract from the St Marys Structure Plan specific for Town Centre Core, which identifies the proposed amendments to the road network and the deliver of the broader Central Park.



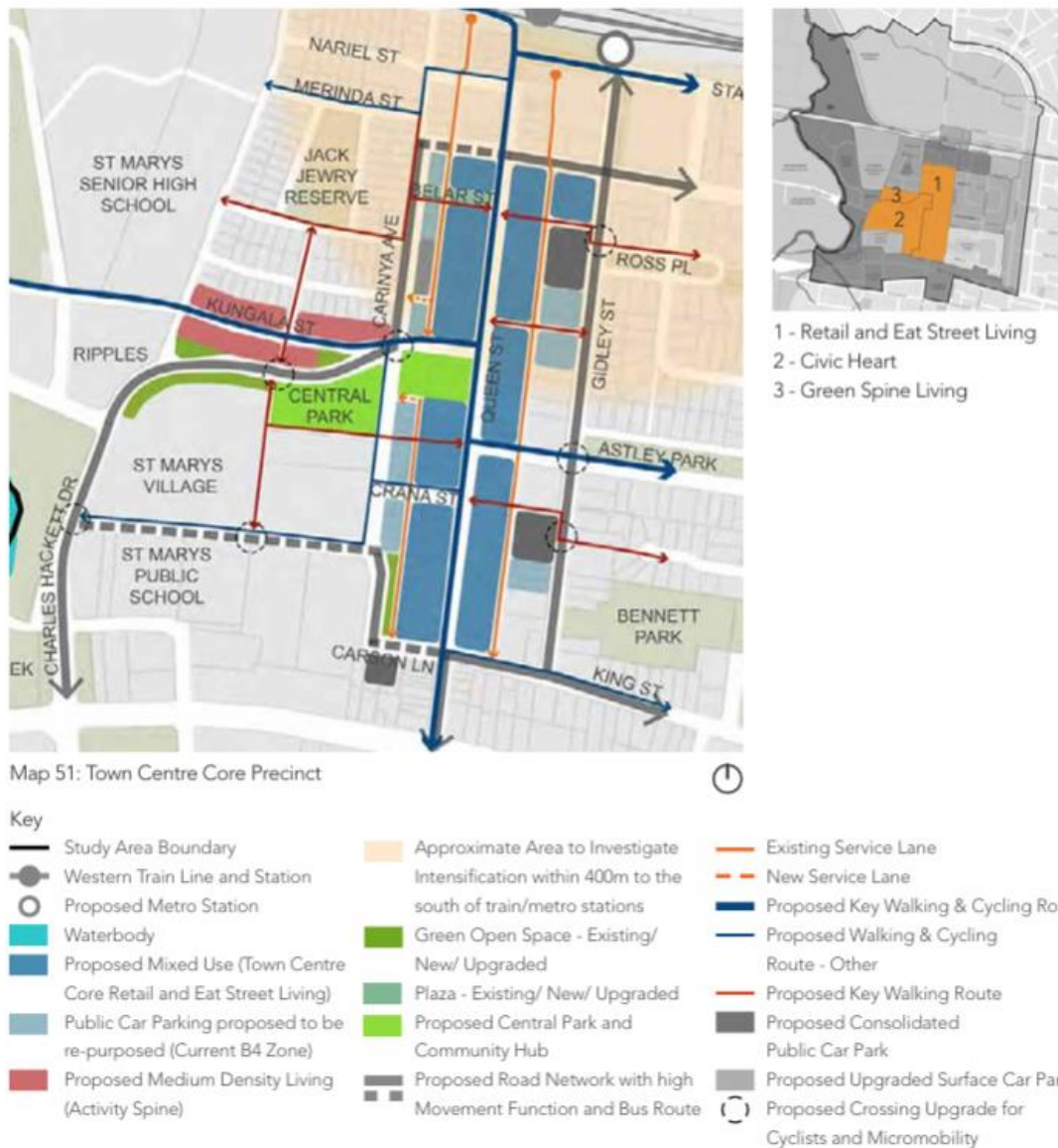


Figure 38: Extract from St Marys Structure Plan (Penrith City Council)

As detailed in the need for the proposal section of this Review of Environmental Factors the proposed works align and support the broader long term planning for the precinct.

5.6.8 St Marys Master Plan

The Master Plan provides a comprehensive and coherent planning, urban design and implementation framework to ensure that St Marys Town Centre realises its potential as a thriving destination in the Western Parkland City.

Well planned urban renewal will assist in reinforcing St Marys' existing qualities. Its streets will be pedestrian friendly, lively places in the day and night, contributing to a sense of safety, attractiveness and inclusiveness. Higher density living and jobs growth will be well located around the future Metro Station and transport interchange.

The Master Plan aims to deliver:

- A defined urban structure that enables growth and is responsive to established development patterns, adjoining transitions and sensitive interfaces



- Land uses that support housing choice, job creation and a liveable town centre
- A place-sensitive, people-oriented movement network that is permeable and prioritises sustainable transport options
- A high quality and functional public domain and open space network that activates the town centre and delivers improved amenity
- A sustainable approach to growth that is supported by infrastructure

The Master Plan includes:

- Detailed strategies and design principles that respond to the vision, established place outcomes and strategic directions for the Town Centre
- Proposed planning controls including land use zones, floor space ratios, building heights and setbacks that are critical to delivering the vision
- An achievable and affordable infrastructure list that delivers the outcomes required to support the planned growth and make St Marys an attractive investment opportunity
- Identified pathways for implementation, including potential funding mechanisms
- Actions to convert the Master Plan into meaningful change

The Master Plan was exhibited in late 2024 and endorsed by Council in March 2025. The Master Plan includes a Precinct Plan of the Civic Heart Precinct that identifies the future road network, including the closure of West Lane and the delivery of Central Park, as identified in the figure below.





Map 25: Town Centre Core - Civic Heart Precinct

- | | | |
|--|---|--|
| <p>1 'St Marys Central Park'</p> <ul style="list-style-type: none"> New and upgraded park combining Coachmans Park and Kokoda Park into a continuous open space area, featuring a large central lawn, outdoor performance stage, play spaces, water features and natural shade <p>2 New Library and Community Hub</p> <ul style="list-style-type: none"> Co-located and integrated community spaces and services incorporating a new library, function room, meeting rooms, creative/working spaces, play areas and cafe | <p>3 New shared zone</p> <ul style="list-style-type: none"> New shared zone with high place function, providing one-way vehicle movements and a pedestrian friendly interface to Central Park <p>4 Extended pedestrian through-site link</p> <ul style="list-style-type: none"> Pedestrian through-site link to Carinya Avenue to be delivered as part of new development proposals supporting movement of people from adjacent residential precincts into the Town Centre Core | <p>5 New active transport connections</p> <ul style="list-style-type: none"> a. New walking routes/shared paths to be delivered as part of future redevelopments to improve access to the St Marys Public School and support the movement of people between the Green Spine Living Precinct, Historic Living Precinct and the Civic Heart Precinct b. New shared paths within existing streets <p>6 Opportunities</p> <ul style="list-style-type: none"> Opportunity to provide a diversity of uses within the Civic Heart precinct with accessible walking and cycling connections |
|--|---|--|

Figure 39: Civic Heart Precinct Plan (draft St Marys Town Centre Master Plan by Penrith City Council, 2024)

As detailed above, the delivery of the future Central Park is clearly aligned with the broader strategic objectives and future planning of Council.

5.7 Other Legislation

5.7.1 Rural Fires Act 1997

The proposed works will not trigger the requirement to obtain a Bushfire Safety Authority under s100B of the Rural Fires Act 1997 as the site is not identified as bushfire prone and works do not involve the subdivision of land or a special fire protection purpose.

5.7.2 Heritage Act 1977

The site does not include any identified heritage items and therefore does not trigger a need for separate approvals under the Heritage Act 1977.

5.7.3 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 relates to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects.



Although the site is not part of a national parks, historic sites, it is not known whether Aboriginal objects or other such sites or objects as legislated for by the National Parks and Wildlife Act may be present. The identified mitigation measures will ensure appropriate responses will be undertaken should any objects or items be found that are subject to the National Parks and Wildlife Act.

5.7.4 Roads Act 1993

The subject site and prepared concept plans include part of West Lane and Carinya Avenue. The proposed works include the permanent closure of the public road. Requiring the undertaking of due process under Part 4 Closing of public roads, Division 3 Closing of council public roads by councils.

Pursuant to s38A, Council may only propose the closure of council public roads for which it is roads authority if:

- a) the road is not reasonably required as a road for public use (whether for present or future needs), and
- b) the road is not required to provide continuity for an existing road network, and
- c) if the road provides a means of vehicular access to particular land, another public road provides lawful and reasonably practicable vehicular access to that land.

Any such closure will need to follow the process outlines in s38B - 38F of the Roads Act 1993. At a Local Traffic Committee Meeting on 2 December 2024, the closure of the West Lane was approved, and has been approved by Transport for NSW. The proposed works will be undertaken in two stages, with Stage 1 include signage, line-marking, installation of bollards, and minor civil works to facilitate the closure. Stage 2 involves the implementation of St Marys Central Park, which includes integrating the road into the public domain and implementing kerbs, gutters, and associated works, including the through road.

A Traffic Management Plan for the closure of the road has been prepared and is attached at Appendix 9: Traffic Management Plan by SCT Consulting.

5.7.5 Water Management Act 2000

The Water Management Act 2000 establishes a framework for the protection of 'waterfront land', being land within 40 metres of a river, lake, estuary or coastal waters. The proposed works are not located on 'waterfront land'.

Further, no excavation works, or groundwater extraction is proposed. As such, a Controlled Activity Approval (CAA) or aquifer interference approval is not required. Accordingly, no approval is required from the relevant Environment Department – Water prior to carrying out the activity.

5.7.6 Contaminated Land Management Act 1997

The Contaminated Land Management Act 1997 sets out a framework for the investigation and reporting of potentially significant contamination.

A Preliminary Site Investigation was undertaken by Douglas Partners for the St Marys Town Centre to provide a preliminary assessment on the risk of contamination being present on site as well as their types and general locations to inform a potential master planning design



for the precinct. This was primarily undertaken as a desktop review of available information.

Based on the information reviewed by Douglas Partners a Hazard Risk assessment was undertaken identifying the areas of high risk. As previously discussed, the subject site is identified within the area of High Risk and Medium Risk.

A Remediation Action Plan has been prepared and is provided at Appendix 7: Remediation Action Plan by Douglas Partners. The RAP identifies that it is considered that the site can be made suitable for the proposed recreational open space development subject to implementation of the RAP.

On completion of remediation works, a long-term EMP prepared in accordance with NSW EPA guidelines will be required to outline management procedures for future works to maintain the integrity of the cap. The obligations within the EMP must be legally enforceable.

5.7.7 Waste Avoidance and Resource Recovery Act 2001

The Waste Avoidance and Resource Recovery Act 2001 (WARR Act) sets out the framework for reducing environmental waste in relation to resource consumption and management, resource recovery and disposal.

Waste generated from uses will need to be managed in accordance with the objectives of the WARR Act, and a sustainability and waste management strategy will need to be prepared by each event proponent prepared as outlined in Mitigation Measure 33 and pursuant to the WARR Act – including avoiding and reducing the generation of waste, reuse of materials and recycling where appropriate.

5.7.8 Fisheries Management Act 1994

No approvals are required under the Fisheries Management Act 1994.

5.7.9 Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act 1997 outlines that a person is not to cause or permit water pollution. This requires that all work and activities are to undertaken in such a manner which does not allow any substance to enter a drainage system, creek, river or any other body of water that has the potential to create a biological, physical or chemical change in that water. This includes (but is not limited to) that the activity should not result in the water becoming detrimental to the health, safety, welfare or property of persons, impacting animals and aquatic life, make the water unsuitable for use in irrigation, or interferes with any recreational use of the waterway.

Water pollution is defined in the Protection of the Environment Operations 1997 as:

- a) placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or
- b) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make,



the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or

- c) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, and, without affecting the generality of the foregoing, includes –
- d) placing any matter (whether solid, liquid or gaseous) in a position where—
 - a. it falls, descends, is washed, is blown or percolates, or
 - b. it is likely to fall, descend, be washed, be blown or percolate, into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or
- e) placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.

Water is defined in the Protection of the Environment Operations Act 1997 as:

- a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or
- b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.

Appropriate mitigation measures will need to be implemented to ensure that the requirements of the Protection of the Environment Operations 1997 are met. The proposed works are not identified as a schedule activity under the Act and therefore no additional licenses are required.



6 Community & Stakeholder Consultation

Consultation has been undertaken with key stakeholders throughout the development of the proposed activities and preparation of this REF.

6.1 Community Engagement and Consultation

Council undertook further community engagement on the central park project during the development of the St Marys Town Centre Place Plan (2024), to better understand what the community would like to see in their new central park. These insights were used to inform the development of the 50% design concept for the project.

To help inform the final design for the central park project, and ensure it meets the needs and expectations of the community and stakeholders, we undertook community consultation on the design concept for four weeks from Friday 1 November until Saturday 30 November 2024. Community consultation was undertaken in conjunction with the draft St Marys Town Centre Master Plan. This report focuses on the results and feedback for the central park project.

A Your Say Penrith web page was set up to share project details and provide opportunities for feedback including an online survey and submission form. It also promoted other ways to provide feedback via email, phone calls and in-person.

Letters were sent to 2,430 businesses and key stakeholders, signage was installed in Coachmans Park, and a video played on the park's screen for the duration of the consultation period. Posters and flyers were distributed to local businesses and Council facilities.

Flyers translated into Tagalog, Arabic, Samoan and Hindi were distributed through networks including Nepean Multicultural Access, Penrith Multicultural Interagency and Council's Multicultural Working Party.

Council's external e-newsletters, corporate newspaper page, websites and social media channels were utilised to share our message with the broader community. A media release was distributed to increase visibility of the consultation.

Presentations were made to 159 staff and the Access Committee, information was provided to internal departments for feedback, and the message was amplified via the Staff Bulletin. Door knocks were made to 80 local businesses, meetings were held with the St Marys Town Centre Corporation and St Marys RSL sub-branch, and three in-person sessions were held at various locations which were attended by a total of 85 people.

Council received 89 survey responses and three submissions in total. The Community Engagement Report for the project is provided at Appendix X. Council received feedback from 17 respondents, through the survey and submission form, about ways they think the design could be improved. Additional shade was the most common request. There were also a small number of requests for additional seating, a dog off-leash area, more exciting play equipment, safety improvements and a larger park. Two respondents were concerned with the loss of parking spaces in the Town Centre.

The St Mary Town Centre Corporation (SMTCC) proposed the following design revisions:



- retention of a small stage area in the section of the park near Queen Street to enhance visibility and activation for Queen Street businesses. Inclusion of electrical outlets and speakers for audio.
- LED screen to remain visible from Queen Street.

6.2 Ongoing community consultation

There is no requirement for any ongoing or future consultation. Notwithstanding, the Penrith City Council should notify nearby businesses and residents prior to the commencement of any works.

Further, once works commence, the community should be provided with a contact name and number that they can contact should any complaints wish to be registered.

Under Section 171(4) of the Environmental Planning and Assessment Regulation 2021, as the estimated cost of development is greater than \$5 million, the REF will be published on Penrith City Council's website. Under Section 171(5) the REF will need to be published either before the activity commences or where not practicable, no later than 1 month after the activity commences.



7 Environmental Impact Assessment

The following Section outlines the potential impacts of the event categories and works on the environment, and how these potential impacts will be managed.

7.1 Environmental Planning and Assessment Regulations 2021

The table below provides a summary checklist of matters to be considered under Section 171 of the EP&A Regulations.

Table 6 – Summary Checklist of Matters to be Considered

Matter	Comment / Impact
(a) the environmental impact on the community	Minor environmental impacts may occur during the works period. Notwithstanding, any impacts would be minimised through the implementation of the safeguards described in Section 8. The park is currently closed to public access to contamination risks and the project will facilitate remediation, allowing access by the public in future. Positive Impact
(b) the transformation of the locality,	The proposed works will result in significant benefit through the delivery of a new park and associated facilities at Central Park. This will benefit the local and wider community and will provide a substantial improvement to the quality, useability and accessibility of the Park. Positive Impact
(c) the environmental impact on the ecosystems of the locality,	The proposed works at Central Park will not have an unreasonable impact on any ecosystems in the locality. Nil Impact
(e) 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,	The works at Central Park will not impact any significant items or affect matters containing special value for future or present generations. Nil Impact



Table 6 – Summary Checklist of Matters to be Considered

Matter	Comment / Impact
(f) the impact on the habitat of protected animals, within the meaning of the Biodiversity Conservation Act 2016,	Council has confirmed that there are no protected species or habitats within the precinct. The development will not have a significant impact on the habitat of any protected fauna. Nil Impact
(g) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air,	Council has confirmed that the development will not endanger any species of animal, plant or other living thing. Nil Impact
(h) long-term effects on the environment,	There will be no long-term effects on the environment. Nil Impact
(i) degradation of the quality of the environment,	There will be no permanent degradation to the quality of the environment. Construction impacts will be temporary. Nil Impact
(j) risk to the safety of the environment,	There will be no change to the safety of the environment. Nil Impact
(k) reduction in the range of beneficial uses of the environment,	There will be no reduction of beneficial uses of the environment. Nil Impact
(l) pollution of the environment,	Mitigation measures are proposed to manage noise pollution to the environment. Nil / Temporary Impact
(m) environmental problems associated with the disposal of waste,	No environmental problems are anticipated with the disposal of waste from the proposed activity. Appropriate measures will be undertaken to manage and dispose of waste in accordance with legislative requirements, a waste and sustainability management plan and WH&S documents. Nil Impact
(n) increased demands on natural or other resources that are, or are likely to become, in short supply,	The activity will have no significant impacts in terms of demand for scarce resources. Nil Impact



Table 6 – Summary Checklist of Matters to be Considered

Matter	Comment / Impact
(o) the cumulative environmental effect with other existing or likely future activities,	The proposed works will not contribute to a cumulative environmental effect with existing or likely future activities. It is considered that any current or future application can be staged to ensure the activity is undertaken in an efficient manner. Positive Impact
(p) the impact on coastal processes and coastal hazards, including those under projected climate change conditions,	The proposed works will have no impact on coastal processes and coastal hazards, including those under projected climate change conditions. Nil Impact
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1,	The proposal supports the objectives and outcomes of the supporting strategic plans relevant to the site. Positive Impact
(r) other relevant environmental factors.	As identified in the sections below, there are no other environmental factors that will result in any unacceptable impact to the environment. Any potential environmental impacts can be managed through mitigation measures as outlined in Section 7 of this REF. Nil Impact

7.2 Heritage Impacts

7.2.1 Indigenous

As part of the development of the draft St Marys Master Plan, a First Nations Heritage and Cultural Values Study was undertaken by Artefact. This Study did not identify any known indigenous heritage items or potential for items within or in close proximity to the subject site. Council has also undertaken a search on the AHIMS and identified that there are no known aboriginal heritage sites within the vicinity of the proposed works. The subject site is also in an existing developed area with limited remnant natural features such as landscape features are rock shelters, sand dunes, waterways, waterholes, and wetlands. Additionally, the site is not:

- within 200m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200m below or above a cliff face, or



- within 20m of or in a cave, rock shelter, or a cave mouth, and
- is on land that is not disturbed land (see definitions),

Therefore the likelihood of the proposed development having an impact on indigenous heritage is low.

7.2.2 European

As part of the development of the draft St Marys Master Plan, a European Heritage Study was undertaken by City Plan Heritage. This Study did not identify any known European heritage items or potential for items within or in close proximity to the subject site. Therefore the likelihood of the proposed development having an impact on European heritage is low.

7.3 Transport Impacts

SCT Consulting have prepared a transport and traffic assessment, which is provided in Appendix 8: Transport and Accessibility Impact Assessment by SCT Consulting. Their assessment concludes that the proposed St Marys Central Park has been designed in accordance with the St Marys Town Centre Structure Plan and the development of Central Park will not create significant impacts on transport and accessibility in the surrounding area. Their assessment is summarised as per below.

7.3.1 Trip generation

Once complete, Central Park will become a large public open space of approximately 1.5 hectares anchoring the centre of St Marys. Notwithstanding, the proposed park does not significantly change the use of the site from the existing arrangements, apart from the repurposing of underutilised land and adjacent road surface.

St Marys Town Centre Structure Plan envisages Central Park as a gathering place that caters to the needs of the local population. While the park may be considered a destination by itself, it is likely that a large proportion of trips to Central Park would be made in the form of linked-trips where one journey comprises trips to more than one destination.

St Marys town centre contains a wide range of uses, from shops and personal services to parks and sporting facilities. The area is supported by several shared surface car parks. It is reasonable to expect that a considerable number of visitors who drive to the town centre would park their cars at one of the surface car parks and complete the rest of their journey by walking.

With the abovementioned appraisals, this assessment maintains that the proposed Central Park will not generate a significant increase in vehicular traffic onto the surrounding roads and streets. Most of the traffic to/from the park will likely be existing traffic already present in the road network. No major concerns over traffic congestion associated with the development of the proposed park are expected.

7.3.2 Vehicular access

The closure of the northern end of West Lane south of Charles Hackett Drive requires vehicles to make detours, while the proposed eastbound link through the existing Kokoda Park car park would ensure that access to West Lane is retained.



The traffic surveys reveal that both Carinya Avenue and West Lane at the sections south of Charles Hackett Drive only carry a small amount of traffic, even during the weekday peak hours and Saturday midday. As such, the proposed changes to the road network are unlikely to cause serious traffic congestion or delay issues for vehicles travelling to/from Carinya Avenue and West Lane and less likely to affect the wider road network.

Loading bays will be provided on the new link for heavy vehicles servicing the properties at the northern end of West Lane as the space is insufficient to accommodate the manoeuvring of these larger vehicles. However, the road segment will be converted to allow two-way traffic and movements of light vehicles to service the properties at the northern end.

7.3.3 Walking and cycling

Walking and cycling access to Central Park remains the same as the existing arrangement where it is allowed from all sides, especially along the site frontages at Queen Street and Charles Hackett Drive.

The landscape plan indicates that the public domain at the southwest corner of the Queen Street | Charles Hackett Drive intersection (the existing Coachmans Park site) will remain a prominent feature of the town centre. The wide paths will be able to accommodate the potentially busier pedestrian traffic. Additionally, the delivery of Central Park is not anticipated to worsen the footpath LoS currently achieved on the adjacent roads and streets.

The eastern and western sides of Central Park are linked by the proposed pedestrian crossing over Carinya Avenue. The crossing is shown to have a generous width of about 12m. The size and location of the crossing provide visual prioritisation of pedestrian movements over vehicular traffic in the vicinity of the park.

The closure of part of West Lane intends to create a cohesive and much larger public open space. It will also limit pedestrians' interface with vehicles to only one location on Carinya Avenue, which would meaningfully improve the safety of all road users.

7.3.4 Public transport

Considering the nature of the development, new public transport trips generated by visitors coming to/from Central Park are expected to be low. Nevertheless, future visitors will benefit from different public transport options and the park's location which is about seven minutes (500m) from St Marys Station and within a short walking distance of bus stops on Queen Street and Charles Hackett Drive.

The proposed Central Park will not create a significant increase in public transport service requirements. Most public transport trips to/from the park will likely be existing travel demand already present in the public transport network, while existing and planned public transport services will be able to sufficiently accommodate any increase in public transport trips. No major concerns over public transport capacity or safety associated with the proposed park are expected.

7.3.5 Parking

The new Central Park would result in the removal of up to 40 car parking spaces from the Kokoda Park car park.



The parking occupancy survey carried out at the car park suggests that high parking demand was observed between 11am and 3pm on both the weekday and Saturday. The car park recorded fewer than 30 vacant parking spaces for four hours from 11am to 3pm on the weekday, while there were always at least 31 vacant parking spaces on Saturday. During other times of the day, the car park was fairly underutilised with at least 40 to 50 parking spaces being unused.

Considering the availability of surface car parks in the town centre, the development of Central Park and the removal of car parking spaces are unlikely to adversely impact the parking situation in the area.

- On Saturdays, the parking demand is expected to be catered for adequately within the Kokoda Park car park, even with 30 fewer parking spaces
- On weekdays, the Kokoda Park car park may not be able to accommodate all of its existing and future parking demands. However, vehicles have options to divert to and park at other surface car parks available throughout the town centre.

7.3.6 Events

During events, specific traffic and accessibility management plans will be required. Nevertheless, visitors should be provided with adequate information on different travel options to visit Central Park, meanwhile, closure of adjacent streets may be considered during large events.

7.4 Noise and Vibration

Existing - The existing noise environment is typical of a public open space facility within an established urban area adjacent to low density residential uses and mixed use town centre uses. Existing background noise levels mainly comprise traffic noise, with minimal noise expected to be generated by the adjoining residential uses.

During construction: Machinery and vehicles associated with construction have the potential to impact on nearby noise sensitive receivers.

During operation: future events hosted in the park have the potential to impact on nearby noise sensitive receivers.

Mitigation measures have been identified to address the above.

7.5 Building Code and Fire Compliance

Existing – All existing site structures are to be demolished under the proposed activity.

During Construction: A BCA Compliance Statement has been prepared for the relevant structures and is provided at Appendix 24: BCA Report.

It is deemed from the assessments carried out that the proposed development is capable of achieving compliance with the relevant requirements of the National Construction Code 2022, Volume 1, Building Code of Australia ("BCA") via DtS compliance or performance solution.

Although demonstrating compliance with the BCA at DA assessment stage is not a prescribed head of consideration, Council has an obligation to consider whether the



proposal, as lodged, is indicatively capable of complying with the BCA - without significant modification to those plans for which approval is sought.

In this regard, we confirm compliance capability and suggest that detailed and specific BCA compliance matters shall be addressed to the satisfaction of the appointed Certifying Authority prior to the issue of the Construction Certificate.

Appropriate mitigation measures have been identified for implementation.

7.6 Stormwater and Flooding

Existing: The site generally falls to the west towards the existing flood storage area. Runoff from the site falls towards the existing pit and pipe infrastructure. It appears that there are no stormwater quality management controls currently onsite.

Potential - An increase in impervious area resulting in increased site runoff, may impact the existing stormwater infrastructure and local flood behaviour. An increase in developed area may increase pollutants entering the stormwater network. Proposed grades may cause trapped low points.

Mitigation measures have been incorporated into the design of the proposal to offset any potential flooding or stormwater impacts.

7.7 Contamination, Hazardous Materials and Dangerous Goods

Existing: Douglas Partners prepared a DSI (Appendix 6: Detailed Site (Contamination) Investigation Report by Douglas Partners) comprised a review of environmental and site history information, a review of the previous investigation reports mentioned above, and intrusive investigation including soil sampling and detailed asbestos assessment from a total of 26 test pits (TP101 to TP126) and two large diameter boreholes (BH101 and BH1012).

The following subsurface conditions were encountered at the sampling locations:

- Fill: pale brown / dark brown sand / dark grey silty sand within inclusions variable across the test location including igneous, sandstone and shale gravel, and rootlets encountered at borehole BH101, BH102 and TP108 to a depth of 0.2 m bgl; underlain by
- Fill: pale brown / brown / dark brown / reddish brown / orange-brown silty clay / clay with inclusions variable across the test locations including sandstone, shale gravel, rootlets, encountered at all locations to depths of between 0.2 m and 2.5 m bgl. Building rubble such as bricks, glass, terracotta, tile, plastic, steel rods, and concrete were encountered variably across 20 out of 28 test locations; underlain by
- Silty CLAY: reddish brown / orange-brown / mottle grey, medium to high plasticity encountered in all test locations with the exception of test pit TP125 where the test pit terminated at 2.5 m in fill. Natural silty clay was generally encountered from depths of between 0.8 m and 1.9 m to termination depths in all test locations with the exception of test locations TP107, TP110, TP112 to TP114, TP116, TP120 and TP121 where natural silty clay was encountered from depths of between 0.2 m bgl and 0.5 m bgl to termination depths.

ACM fragments were observed in 15 out of 28 test locations during the soil sampling process. With the exception of the above, no other visual or olfactory evidence (e.g.



staining, odours, free phase product) was observed during the investigation to suggest the presence of contamination within the soils or groundwater at the site.

The PID screening recorded values of less than 1 ppm suggesting very low concentrations of VOC in the screened samples.

No free groundwater was observed during excavation of test pits or drilling of boreholes. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

The concentrations of BTEX, phenols, OCP, OPP and PCB in all analysed samples were below the practical quantitation limit (PQL). The concentrations of metals, TRH, PAH and PFAS were detected above PQL, but below the adopted SAC or statistical analysis in all analysed samples.

Fibrous asbestos (FA) was detected by laboratory analysis in the following 500 mL samples:

- Fibrous chrysotile asbestos in sample TP102/0-0.2 m (0.0019 g) at a concentration less than the SAC of 0.001% (w/w);
- Fibrous chrysotile asbestos in sample TP117/0-0.2 m at a concentration of 0.001% (w/w) which was at the adopted SAC (0.001% (w/w)); and
- Fibrous chrysotile and crocidolite in sample TP117/0.3-0.5 m at a concentration of 0.0013% (w/w) which exceeded the adopted SAC.

Bonded asbestos was identified in the following bulk samples while conducting the 10 L asbestos field sieving at concentrations that exceeded the SAC of 0.02% (w/w):

- Bonded chrysotile and amosite asbestos in samples TP105/1-1.2 m at a calculated concentration of 0.09% (w/w);
- Bonded chrysotile asbestos in sample TP111/0.2-0.4 at a calculated concentration of 0.022% (w/w);
- Bonded chrysotile and amosite asbestos in sample TP115/0.1-0.3 at a calculated concentration of 0.06% (w/w);
- Bonded chrysotile asbestos in sample TP117/0-0.2 at a calculated concentration of 0.06% (w/w);
- Bonded asbestos in sample TP118/0.1-0.3 at a calculated concentration of 0.05% (w/w);
- Bonded asbestos in sample TP119/0.2-0.4 at a calculated concentration of 0.03% (w/w);
- Bonded asbestos in sample TP123/0.5-0.7 at a calculated concentration of 0.05% (w/w);
- Bonded asbestos in sample TP123/1.0-1.2 at calculated concentration of 0.11% (w/w); and
- Bonded asbestos in sample TP125/1.0-1.2 at a calculated concentration of 0.03% (w/w).

Bonded asbestos was identified in the following bulk samples while conducting the 10 L asbestos field sieving test at concentrations below the SAC of 0.02 % (w/w):



- Bonded chrysotile and amosite asbestos in sample TP105/0-0.2 m at a calculated concentration of less than 0.01% (w/w);
- Bonded asbestos in sample TP120/0-0.2 at a calculated concentration of less than 0.01% (w/w)
- Bonded asbestos in sample TP121/0.2-0.4 at a calculated concentration of 0.02% (w/w);
- Bonded asbestos in sample TP124/0.5-0.7 at a calculated concentration of 0.016% (w/w); and
- Bonded asbestos in sample TP125/0.5-0.7 at a calculated concentration of 0.019% (w/w).

It was noted that ACM fragments were not apparent in test pits TP101, TP108, TP114, and TP126 while conducting field sieving or in the 500 mL samples collected. However asbestos fragments were observed during backfilling of these test pits. As no 10 L sieving was conducted, the average weight of the 10 L bulk samples was adopted. The calculated asbestos concentration at those locations were above the adopted SAC.

The locations where asbestos was detected are shown in the attached DSI. Based on the observations at the time of sampling and the reported analytical results, the following preliminary waste classifications were provided for fill materials at the site:

- Fill soils within Kokoda Park area - Special Waste Asbestos - GSW (non-putrescible); and
- Fill soils in the northeast corner of the site – GSW (non-putrescible). Notwithstanding, given the widespread presence of asbestos over the remainder of the site, the preliminary waste classification should be confirmed following removal of the asphalt pavement in the area.

Natural soils within the site were provisionally pre-classified as VENM. This classification must be confirmed upon removal of the fill overburden and through additional assessment by an Environmental Consultant (EC) during excavation, should the project require the removal of natural soils.

The DSI considered that the site can be made suitable for the proposed recreational development subject to implementation of the following recommendations:

- Undertake a hazardous building material survey of the current building on the site to assess the presence of hazardous building materials prior to demolition of the building unless there is an existing record to prove no hazardous building materials are present;
- A remediation action plan (RAP) should be prepared in accordance with NSW EPA (2020) to address:
 - The preferred remediation strategy;
 - Protocols for the validation of site remediation;
 - Protocols for waste classification of any materials requiring off-site disposal, and protocols for material importation, including check-sampling, where appropriate;



- Unexpected Finds Protocol outlining the procedures that would be undertaken in the event unexpected contamination is encountered during excavation works; and
- For remediation involving the management of contamination on-site, an EMP must be prepared and administered in a way that is consistent with NSW EPA requirements.

The Remediation Action Plan is provided at Appendix 7: Remediation Action Plan by Douglas Partners. The RAP identifies that the site can be made suitable for the proposed recreational open space development subject to implementation of this RAP.

It is noted that the proposed remediation strategy will not remove all contaminated fill from site and therefore a legally enforceable long term environmental management plan (LTEMP) will need to be prepared to outline management procedures for future works to maintain the integrity of the cap (constructed works). The LTEMP should consider the requirements of NSW EPA (2020) and NSW EPA Practice note *Preparing environmental management plans for contaminated land* (NSW EPA, 2022b), and include the following:

- Extent of the site to which the LTEMP applies;
- The contaminants of concern;
- The risks associated with the contaminants;
- The nature of the capping;
- Procedures for works within the capping;
- Procedures for works below the capping;
- Maintenance requirements;
- Responsibilities and implementation;
- How the LTEMP will be made legally enforceable; and
- Frequencies for review of the LTEMP.

On completion of remediation works, a LTEMP prepared in accordance with NSW EPA guidelines will be required to outline management procedures for future works to maintain the integrity of the cap. The obligations within the EMP must be legally enforceable.

7.8 Air Quality

Existing - The air quality at Central Park is typical of an established urban environment. The main sources of air pollution are air borne pollutants from vehicle exhausts, as well as dust and debris during periods of high winds.

Potential – There is the potential for some adverse air quality impacts as a consequence of the proposed works such as air borne dust during demolition and construction.

Due to the nature and minimal extent of the proposed works, there will be minimal ongoing impacts on local or regional air quality. Dust minimisation measures will be implemented during individual events, including:

- Site being closed for regular cleaning before, during and after individual event operations;
- Vacuums will be attached to power tools as necessary; and



- All waste will be contained within bins.

Construction impacts will be temporary and the likely cumulative impact is considered to be negligible.

7.9 Bushfire

The site is not mapped as being bushfire prone. As such there will be minimal impacts from the proposed works on bushfire. No mitigation measures are required or any further approval from the NSW Rural Fire Service. No specific mitigation measures are required.

7.10 Flora and Fauna

The proposed activity will not displace any flora or fauna, create a barrier to their movement, or introduce noxious weeds, vermin or feral species. Additionally, no native vegetation will be impacted by the proposed activity. No specific mitigation measures are required. Council has confirmed that the proposed works will not have an impact on endangered or threatened species.

7.10.1 Tree Removal

The proposal will result in the removal of 21 trees and retention of 67 trees. An appropriately qualified arborist has reviewed the trees and determined that the identified trees are appropriate for removal as detailed in Appendix 20: Arborist Report by Tree Report. Below is a summary of the analysis by the Arborist on the trees.

Major (>10%) TPZ and/or SRZ Encroachment

The proposal will retain twenty-seven individual Subject Trees (id. 3, 4, 9, 10, 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 51, 53, 68, 85, 87, 88 & 89) that are located within / nearby the site. These trees are identified as being retained. The arborist has noted that works required to facilitate the Project will result in a major encroachment (>10%) of the TPZ, however the works are considered low impact, are unlikely to have a significant impact on the Subject Trees' ability to store carbohydrates, use stored carbohydrates in times of stress and is unlikely to have a significant impact on the health, condition and/or stability of the Subject Trees long term.

The arborist has also identified that there is the potential to possibly retain twenty-eight Subject Trees (id. 1, 5, 6, 12, 17, 27, 31, 32, 54, 55, 56, 58, 59, 60, 61, 62, 63, 72, 73, 74, 75, 76, 77, 78, 79, 80, 83 & 84) that are located adjacent to the Project alignment. The proposed works required to facilitate the Project will result in a major encroachment (>10%) of the TPZ.

The arborist has identified that the works required to facilitate the Project comprise primarily of the removal and re-instatement of existing contaminated soil substrate and when undertaken in accordance with the matters outlined in the Arborist report is unlikely to have a significant impact on the Subject Trees' ability to store carbohydrates, use stored carbohydrates in times of stress and is unlikely to have a significant impact on the health, condition and/or stability of the Subject Trees long term.

The proposed trees to be removed are a total of thirteen individual Subject Trees (id. 2, 7, 8, 13, 14, 15, 16, 47, 69, 70, 71, 81 & 82) and of these:

- Three individual Subject Trees (id. 8, 81 & 82) are of high retention value.



- Five individual Subject Trees (id. 7, 13, 14, 47, 69 & 88) are of medium retention value.
- Six individual Subject Trees (id. 23, 29, 32, 52, 53, 54, 56, 57, 58, 151, 158, 160, 174, 177, 178, 180, 181, 182, 183, 185, 186, 187, 189, 190, 191, 192, 193, 194, 196, 197, 199, 200 & 201) are of low retention value.

The proposed works will result in excavations that are a major encroachment (>10%) of the TPZ and/or within the SRZ of the Subject Trees. These works are likely to have a significant impact on the Subject Trees' ability to store carbohydrates, use stored carbohydrates in times of stress and are likely to have a significant impact on the health, condition and stability of the Subject Trees.

Minor (<10%) TPZ Encroachment

The proposal will allow for retention of three individual Subject Trees (id. 20, 52 & 85) that are located adjacent to the Project and have been identified by the assessment for retention. Construction works to facilitate the Project will result in a major encroachment <10% of the TPZ but are located outside of the SRZ.

Minor encroachments are considered acceptable under the Australian Standard, AS 4970-2009, Protection of Trees on Development Sites and are unlikely to have a significant impact on the Subject Tree's ability to store carbohydrates, use stored carbohydrates in times of stress and are unlikely to have a significant impact on the health, condition and/or stability of the Subject Trees long term.

The proposal will also allow for the retention of possibly four Subject Trees (id. 28, 29, 30 & 57).

The works required to facilitate the Project comprise primarily of the removal and re-instatement of existing contaminated soil substrate and when undertaken in accordance with Section 5 & 6 of this report is unlikely to have a significant impact on the Subject Trees' ability to store carbohydrates, use stored carbohydrates in times of stress and is unlikely to have a significant impact on the health, condition and/or stability of the Subject Trees long term.

No TPZ Encroachment

Trees with no TPZ encroachment include the following.

Four Subject Trees (id. 18, 64, 65 & 66) are located adjacent to the Project alignment.

The works required to facilitate the Project comprise primarily of the removal and re-instatement of existing contaminated soil substrate and when undertaken in accordance with Section 5 & 6 of this report is unlikely to have a significant impact on the Subject Trees' ability to store carbohydrates, use stored carbohydrates in times of stress and is unlikely to have a significant impact on the health, condition and/or stability of the Subject Trees long term.

Trees identified for removal in this category include eight individual Subject Trees (id. 19, 20, 21, 22, 23, 24, 25 & 26), of low retention value, have been identified by the assessment for removal.

These trees are required to be removed due to flood requirements.



7.10.2 Proposed Planting

The plant palette draws on the local knowledge gained from the Walk on Country and subsequent consultation with local First Nations community members.

The design seeks to incorporate endemic plant species that are local to the area and indigenous planting that was used for seasonal knowledge, to identify the best times to hunt and fish. The use of wattle trees acknowledges the connection to the Darug land totems and reflects traditional knowledge e.g. flowering wattle signalled the eel migration in local river systems. The park also includes plant species that are suitable for weaving i.e. *Lomandra* and *Juncus* species.

Native plants used for bush tucker are spread throughout the site for harvest and as an education tool to provide insight into the importance of the natural environment to First Nations people and the knowledge held.

Some key endemic species are pictured, with colourful attractive flower displays and edibility.

Native vegetation of this region consists of predominantly Cumberland Plains Shale Woodlands. The design incorporates species from this community type to ensure hardy planting, reinstate and protect existing native vegetation, maintain the local character and provide habitat within an urban setting.

The majority of existing large native trees within Coachmans Park and Kokoda Park are to be retained to maintain the existing canopy. A cluster of paperbark trees are located alongside water play elements to reflect the environment of natural water systems and as a sensory play element.

A large feature fig tree is to be located in the centre of the plaza which provides shade and signifies an important meeting place and statement feature of the plaza.

The planting selection seeks to create colour combinations that create an identity for each zone. Three main planting types have been selected which include a variety of endemic bush tucker species.





Figure 40: Tree removal landscape plan (Moir)



Figure 41: Planting landscape plan (Moir)

7.10.3 Threatened, endangered or critically endangered species

An Urban Ecology Action Plan (UEAP) was prepared by EcoLogical Australia to support the recently exhibited St Marys Town Centre Master Plan. Place Outcome 5 under the St Marys



Structure Plan focuses on biodiversity, providing a vision for the St Marys Town Centre to be a 'cool and green centre with nature and recreation at its forefront'. In support of this, Direction 17 sets out to increase tree canopy cover and improve biodiversity. Council has set targets and commissioned an LGA-wide Canopy Report (Good Canopy Company 2023) to support the former. The Urban Ecology Action Plan has been prepared to support the biodiversity aspect of Direction 17 – providing clear actions to deliver better ecological outcomes and make St Marys Town Centre a cooler, greener place for the benefit of all.

The UEAP provides evidence of existing ecological values, connectivity and threats. Built on this knowledge, the Plan identifies fine-scale habitat linkages and recommends strategic and spatial actions for Council to implement. The UEAP recommends actions under four primary goals, being to:

- Protect existing ecological assets, function and connectivity;
- Enhance ecological function, connectivity and ecosystem services in a local context;
- Enhance ecological connectivity and function in a regional context; and
- Promote opportunities to connect people to nature.

In this section, a 'threatened species' in this report refers to a flora or fauna species listed as vulnerable, endangered or critically endangered under the NSW Biodiversity Conservation Act 2016, Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

Flora

The State Vegetation Type Map (Department of Planning and Environment, 2022) provides predicted vegetation communities and distributions prior to vegetation clearing, and for present day vegetation extents. Native vegetation communities are referred to as Plant Community Types, or PCTs. The likely pre-clearing vegetation on the site is identified in the figure below and was likely to be Cumberland Shale Plains Woodland.

The UAEP notes that the majority of the study area does not contain native vegetation that can be classified as a PCT. This is because the study area is dominated by buildings and development, road infrastructure, or planted vegetation that may not conform to a native PCT. As a result of land clearing and development, vegetation communities are fragmented. However, small patches of PCT 3320 are still likely to be present throughout. The two dominant vegetation communities remaining within the study area, PCT 3320 and PCT 4025 and are shown in the figure below.





Pre-Clearing Vegetation (DPE 2022)

- St Marys Town Centre
- Cadastre

SVTM Pre-clearing (DPE, 2022)

- PCT3320: Cumberland Shale Plains Woodland
- PCT3448: Castlereagh Ironbark Forest
- PCT4023: Coastal Valleys Swamp Oak Riparian Forest
- PCT4025: Cumberland Red Gum Riverflat Forest



Datum Projection:
GDA 1984 MGA Zone 58
Project: 235104749-05
Date: 6/24/2023

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Figure 42: Pre-Clearing Vegetation with approximate location of Central Park shown in red (EcoLogical with edits by TPS)





State Vegetation Type Map (DPE 2022)

- St Marys Town Centre
- Cadastre
- SVTM (DPE, 2022)**
- PCT3320: Cumberland Shale Plains Woodland
- PCT4025: Cumberland Red Gum Riverflat Forest
- Not Native Vegetation

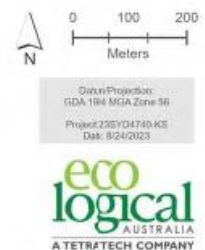


Figure 43: State Vegetation Type Map- with approximate location of Central Park shown in red (EcoLogical with edits by TPS)

As identified above, part of the site is identified as potentially containing Cumberland Shale Plains Woodland. Predicted to have occurred extensively across the study area prior to vegetation clearing (199 ha) PCT 3320 is a coastal valley grassy woodland that occurs in the Sydney Basin bioregion. Dominant canopy species are often *Eucalyptus tereticornis* and



Eucalyptus moluccana. Midstorey often includes *Bursaria spinosa* and the grass *Microlaena stipoides* is almost always present. This community is considered the most widespread PCT on the Cumberland Plain, however it is also listed as a threatened ecological community due to extensive clearing. Depending on the community structure and factors including patch size or native understorey, PCT 3320 can be associated with the following critically endangered ecological communities:

- Cumberland Plain Woodland in the Sydney Basin Bioregion – listed as Critically Endangered under the Biodiversity Conservation Act 2016
- Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest – listed as Critically Endangered under the Environment Protection and Biodiversity Conservation Act 1999

Three species of threatened flora have previously been recorded within the study area itself. *Grevillea juniperina* subsp. *juniperina* (Juniper-leaved Grevillea), has 108 records throughout the study area (Figure 14). The highest density of records is in the northwest of the site, around the industrial zoned land and within the adjacent Little Creek riparian corridor. The Juniper-leaved Grevillea is known to occur around areas of disturbance, with a tendency to increase in seedling recruitment or colonisation following physical soil disturbance (OEH 2019). This ecological trait is consistent with the high density of BioNet records observed in the disturbed and developed industrial area. These are identified in the figure below.

Two other threatened flora have been recorded within the study area – *Dillwynia tenuifolia* and *Pultanaea parviflora*. The *Pultanaea parviflora* record was collected in 1964. Its location has since been cleared and is under construction, therefore it is assumed not to exist here anymore.

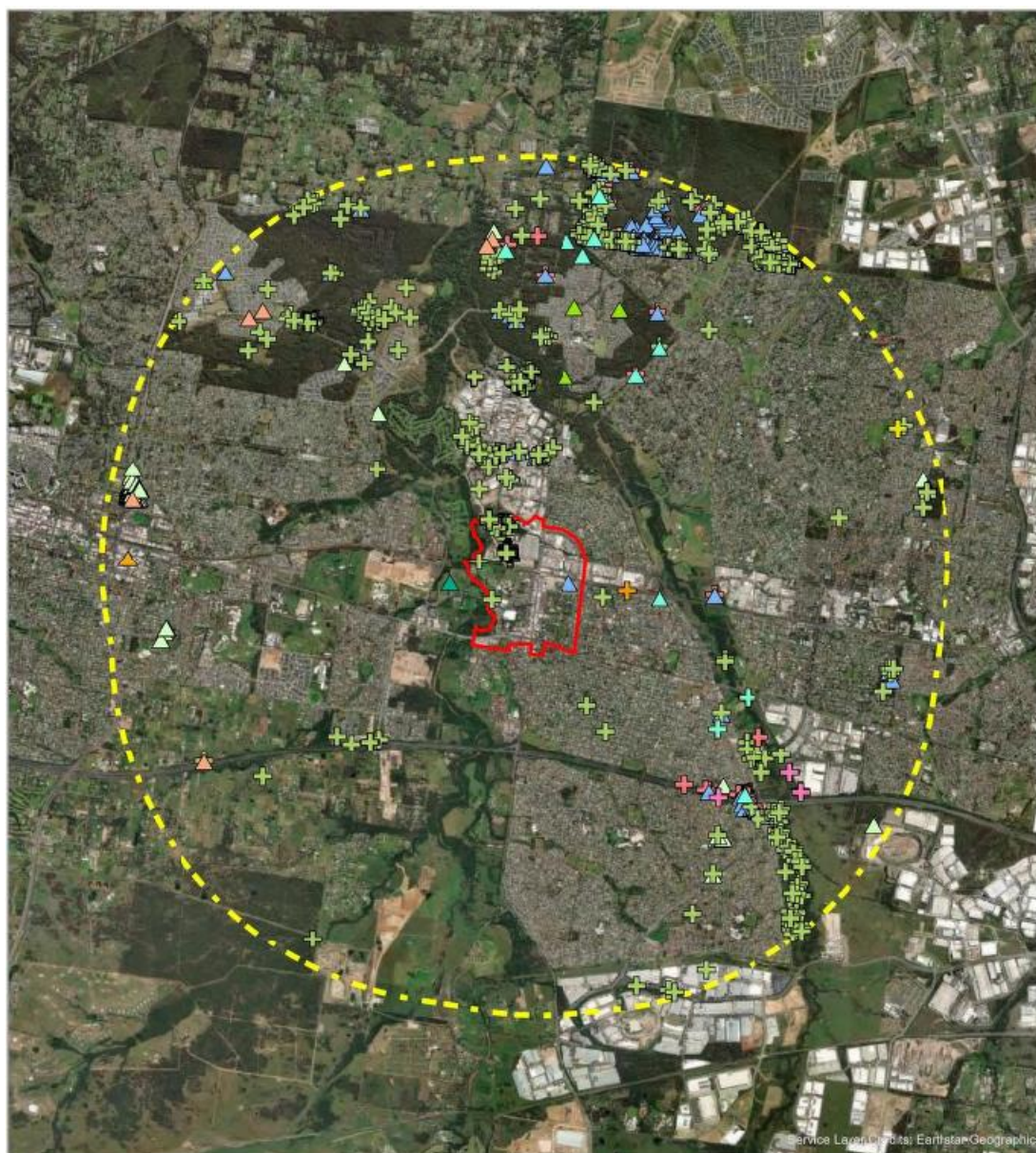
Dillwynia tenuifolia is a pea-flower shrub that has been recorded in the riparian corridor of Wianamatta-South Creek. Endemic to Western Sydney, its seed germination occurs largely in response to fire, and its distribution is largely through transitional areas and can occur in Cumberland Shale Plains Woodland.

Threatened flora BioNet records within 5 km of the study area are identified in the figure below. The most commonly occurring threatened flora are:

- *Grevillea juniperina* subsp. *juniperina* (Juniper-leaved Grevillea) – 3,466 records
- *Marsdenia viridiflora* subsp. *viridiflora* (Population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith LGAs) – 1,172 records
- *Pultanaea parviflora* – 707 records
- *Dillwynia tenuifolia* – 565 records
- *Pimelea spicata* (Spiked Rice-flower) – 457 records

Although some threatened species regenerate following disturbance and can survive urban environments, the concentration within this buffer of threatened species records in riparian areas and in more vegetated areas suggests that threatened flora are more likely to occur in remnant vegetation patches.





Threatened Flora Species BioNet Records (DPE, 2023)

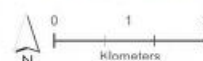
St Marys Town Centre

5 km Buffer

Threatened Flora BioNet Records (DPE, 2023)

- Acacia pubescens
- Allocasuarina glareicola
- Dillwynia tenuifolia
- Grevillea juniperina subsp. juniperina
- Grevillea parviflora subsp. parviflora

- Hibbertia p.uberula
- Macadamia integrifolia
- Marsdenia viridiflora subsp. viridiflora
- Micromyrtus minutiflora
- Persoonia nutans
- Pimelea spicata
- Pultenaea parviflora
- Senna acclnris
- Syzygium paniculatum



Datum: Projection:
GDA 1994 MGA Zone 56
Project: 23SYDA1740-KS
Date: 9/24/2023

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Figure 44: Threatened Flora Species BioNet Records 5km radius - with St Marys study area shows in red (EcoLogical with edits by TPS)



Fauna

The UEAP also considers potential Fauna Species likely to be present on the site. This section utilizes BioNet Records. BioNet is a database of recorded flora and fauna species observations, managed by the NSW Department of Planning and Environment. BioNet is not a definitive inventory of all species, but the record data does provide an indication of what species might be found within and surrounding the study area.

One threatened fauna species has been recorded in the study area under BioNet - the Grey-headed Flying-fox. This megabat species is listed as vulnerable under both NSW and Commonwealth biodiversity legislation, and roosts in flying-fox camps. Grey-headed Flying-fox can travel more than 20 km from their camp in feeding forays each night.

Nearby, nearly 5 km to the southeast, a Grey-headed Flying-fox camp of up to 499 individuals is located at Mount Druitt Park (DCCEEW 2023). The Black Flying-fox (non-threatened) also roosts in this camp in similar numbers. Further to the west, in Emu Plains, several former flying-fox camps were present along the curvatures of the Nepean River. Flying-foxes were not recorded during surveys at Emu Plains from 2019, where they previously occurred in the tens of thousands (DCCEEW 2023). The camp was severely impacted by floods, destroying much of the understorey of their habitat.

However, in November 2022, a small camp was rediscovered during a survey undertaken by DPE. Approximately 700-1000 individuals were recorded at this camp, known as 'Emu Plains'. This occurrence is the first time since 2011 that Grey-Headed Flying-fox had been recorded at this camp. The Emu Heights camp is located approximately 11 km northwest of the study area.

Records of species from BioNet within the ST Mary's Study area are identified below.





Threatened Species BioNet Records (DPE, 2023)

□ St Marys Town Centre

Threatened Flora BioNet Records (DPE, 2023)

✚ *Dillwynia tenuifolia*

● *Grevillea juniperina* subsp. *juniperina*

▲ *Pultenaea parviflora*

Threatened Fauna BioNet Records (DPE, 2023)

★ Grey-headed Flying-fox

0 100 200
Meters

Datum/Projection:
GDA 1984 MGA Zone 58
Project: 23SV034740 KCS
Date: 8/24/2023

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Figure 45: Threatened Species BioNet Records Vegetation Type Map- with approximate location of Central Park shown in red (EcoLogical with edits by TPS)

In addition to threatened species, the Environment Protection and Biodiversity Conservation Act 1999 lists migratory bird species. The Protected Matters Search Tool (PMST) is a tool managed by the Australian Government so that the public can search for matters protected under the Environment Protection and Biodiversity Conservation Act



1999. The search tool generates a list of protected matters within a defined area and optional buffer, including threatened and migratory species.

The list is either the result of known occurrences (where BioNet records may exist), or species that may occur in or relate to, a nominated search area. Species modelling may be used to derive potential habitat areas. A threatened or migratory species for the purposes of the PMST is a species listed as such under the Environment Protection and Biodiversity Conservation Act 1999.

Some migratory species are also listed as threatened. Fifteen migratory birds were identified through the Protected Matters Search Tool (PMST) (DCCEEW 2023b) as either having known, likely or potential species or habitat occurrence within the study area. Of these, three are also listed as threatened species:

- White-throated Needletail (Vulnerable)
- Curlew Sandpiper (Critically Endangered)
- Eastern Curlew (Critically Endangered).

The following highly mobile fauna species have been recorded in the highest abundance within the 5 km buffer of the study area:

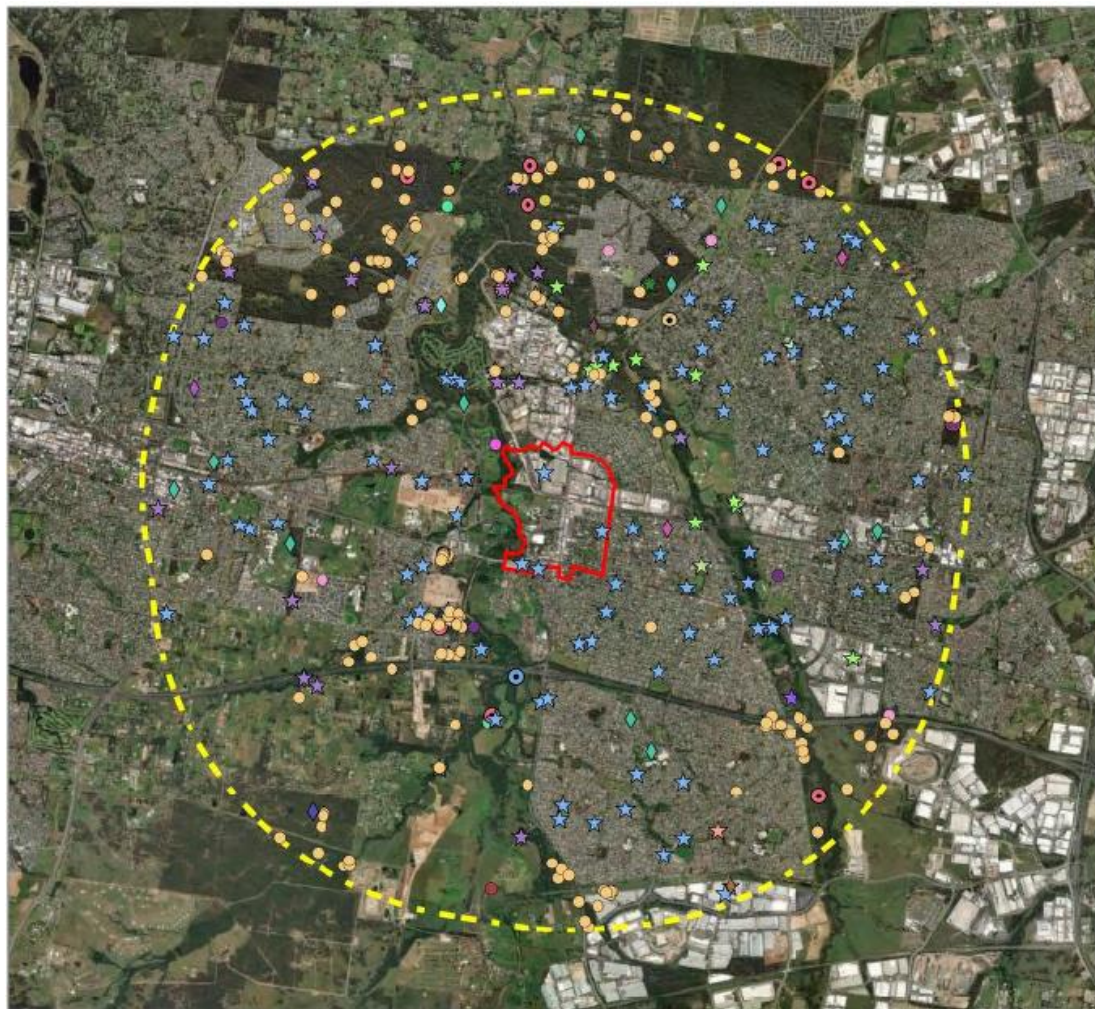
- Grey-headed Flying-fox (263 records)
- Large Bent-winged Bat (48 records)
- Varied Sittella (29 records)
- Eastern Coastal Free-tailed Bat (28 records)
- Swift Parrot (25 records)
- Speckled Warbler (18 records)
- Dusky Woodswallow (16 records)
- Powerful Owl (16 records)

These species are largely dependent on canopy cover and habitat features such as hollow-bearing trees for their survival. Microbats (such as the Large Bent-winged Bat or Eastern Coastal Free-tailed Bat) will utilise hollows in trees 5-10 cm in diameter, while larger birds (parrots and owls) require hollows greater than 20 cm in size for breeding habitat.

The most dominant threatened species extensively recorded in the study area is the Cumberland Plain Land Snail (482 records). This species is ground-dwelling, less mobile and requires habitat features such as leaf-litter or logs. The snail primarily occurs in Cumberland Plain Woodland and is a drought-resistant species.

Threatened terrestrial fauna records within 5 km of the study area are presented in the figure below.





Threatened Fauna Species BioNet Records (DPE, 2023)

St Marys Town Centre

5 km Buffer

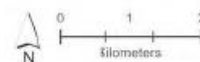
Threatened Fauna BioNet Records (DPE, 2023)

- Australian Painted Snipe
- Black Bittern
- Black-chinned Honeyeater (eastern subspecies)
- Black-necked Stork
- Brown Treecreeper (eastern subspecies)
- Cumberland Plain Land Snail
- Dusky Woodswallow
- Eastern Coastal Free-tailed Bat
- ★ Eastern False Pipistrelle
- ★ Fork-tailed Swift
- ★ Greater Broad-nosed Bat
- ★ Green and Golden Bell Frog
- ★ Grey-headed Flying-fox

- ★ Koala
- ★ Large Bent-winged Bat
- ★ Latham's Snipe
- ◆ Little Bent-winged Bat
- ◆ Little Eagle
- ◆ Little Lorikeet
- ◆ Regent Honeyeater
- ◆ Southern Myotis
- ◆ Speckled Warbler
- ◆ Spotted-tailed Quoll
- ◆ Swift Parrot
- Varied Sittella
- White-throated Needle-tail
- Yellow-bellied Glider
- Yellow-bellied Shearwater-bat

NSW Department of Planning, Industry and
Environments Atlas of NSW Wildlife (BioNet) which
hold data from a number of custodians.
Data obtained 11/04/2023

Sensitive species not displayed due to sensitive
species data policy:
Square-tailed Kite
Glossy Black-Cockatoo
Barking Owl
Powerful Owl
Sooty Owl



Coordinate system:
GDA 1984 MGA Zone 56
Project: 205104740-KS
Date: 5/24/2023

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Figure 46: Threatened Fauna Species BioNet Records 5km radius - with St Marys study area shows in red (EcoLogical with edits by TPS)



Ecological Links and Values.

The UEAP reviewed the broader St Marys Study area and undertook extensive mapping to consider and recommend key actions to improve biodiversity outcomes in the precinct. The UAEP identifies three conservation approaches as follows:

- **Preserve and Protect** - This approach has been recommended in areas of high biodiversity value, with remnant vegetation and around sensitive features such as creek lines of Wianamatta-South Creek and the densely vegetated riparian zone of Little Creek.
- **Retreat and restore** - This recommendation applies to areas of existing green and open space, with some level of ecological value, including existing open space and areas in proximity to high biodiversity. They represent opportunities to infill with additional mid- and understorey vegetation, increase canopy or provide additional stepping-stone habitat.
- **Regenerate and enhance** - This approach has been recommended in areas that are largely built residential, commercial and industrial. Little to no biodiversity values are present in their current form, hence they represent an opportunity for regeneration (where some open space may be available, or during design of redevelopments) or enhancement of existing structures (through plantings or green infrastructure). An example of regeneration in these areas could be through the consolidation of carparking, and recreation of green space in the decommissioned parking area. Enhancement could constitute green walling new and existing built structures.

The subject site is identified as Retreat and Restore, as identified below.



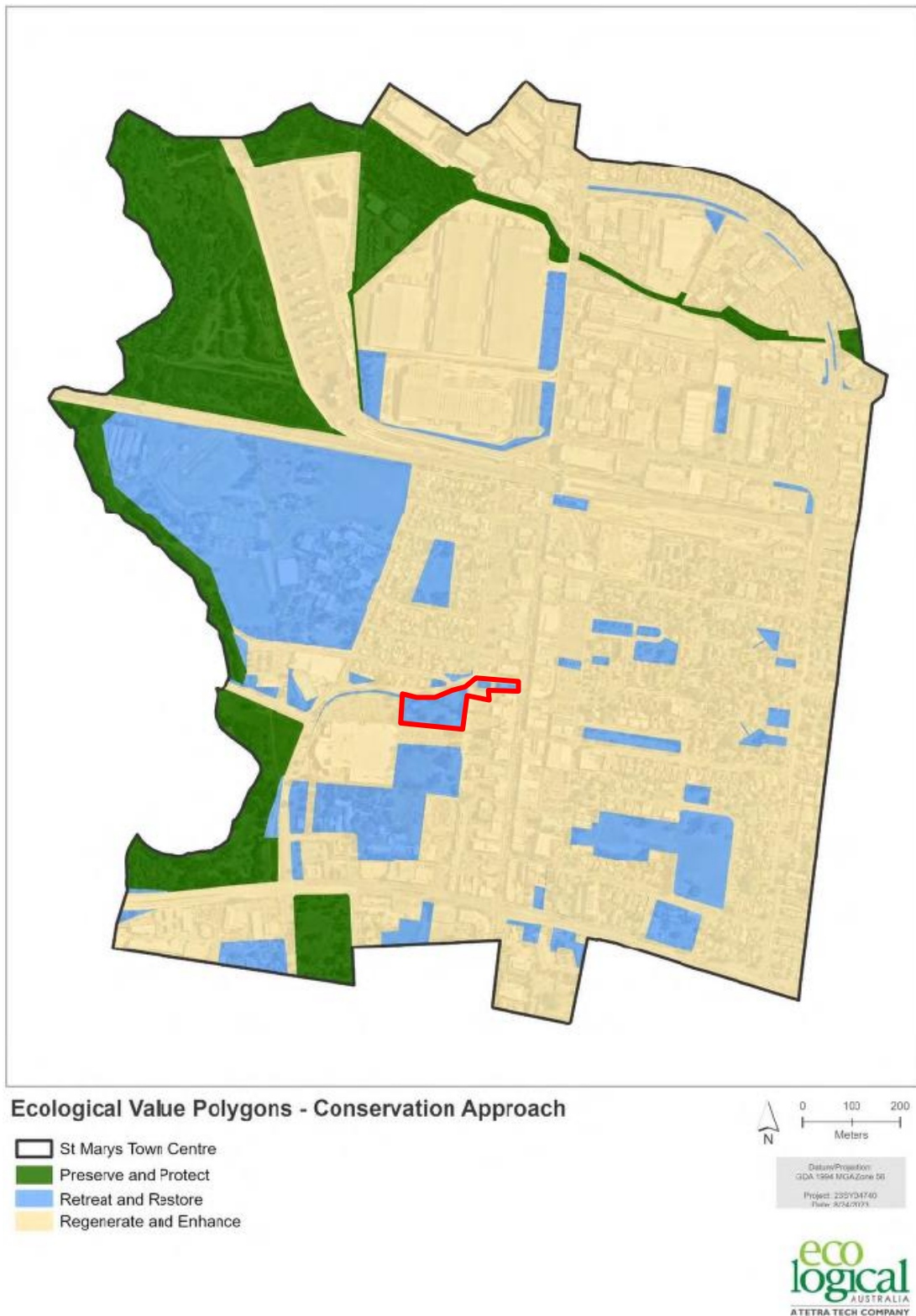


Figure 47: Ecological Conservation Approach - with approximate location of Central Park shown in red (EcoLogical with edits by TPS)

As a result, the UAEP recognises that the potential for the establishment of a conceptual ecological link which would be supported by the proposed works at Central Park. This is shown at approximately item 5 below.





Figure 48: Proposed Urban Ecology Links (EcoLogical)

A key action in the UEAP is to Protect existing ecological assets, function and connectivity (Goal 1). Key considerations of this goal include:

- **Vegetation clearing and fragmentation** - Extensive clearing of vegetation has occurred for past and ongoing development of essential infrastructure, housing, and industrial uses in the region.



- **Minimising light pollution** - Reducing, or altogether avoiding, the effect of lighting on fauna is imperative in areas adjacent to dense bushland but is also important for the entire St Marys Town Centre. As additions to tree canopy and other vegetation are made through the implementation of the UAEP, fauna are more likely to utilise the area for habitat but may be deterred by lighting . It is recommended that all lighting is compliant with best practice guidelines - *National Light Pollution Guidelines for Wildlife (DCCEEW 2023)* and *AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting*.
- **Weed management** - Weeds occur throughout the study area, including extensively throughout the Wianamatta-South Creek and Little Creek corridors. The recommended action is to develop and implement a progressive weed management strategy, whereby weeds are removed in an environmentally sensitive manner. This not only means reducing chemical use, but also leaving weeds in place where they are providing some level of shelter for fauna and cannot easily or quickly be replaced. Maintenance of ecological function should be considered in broad scale weed removal programs particularly along ecological corridors. Progressive containment, removal, replacement and exclusion should be considered as part of the UEAP.

Goal 1 is supported through the below figure which identifies that parts of the existing tree canopy and validated PCTs should be protected.



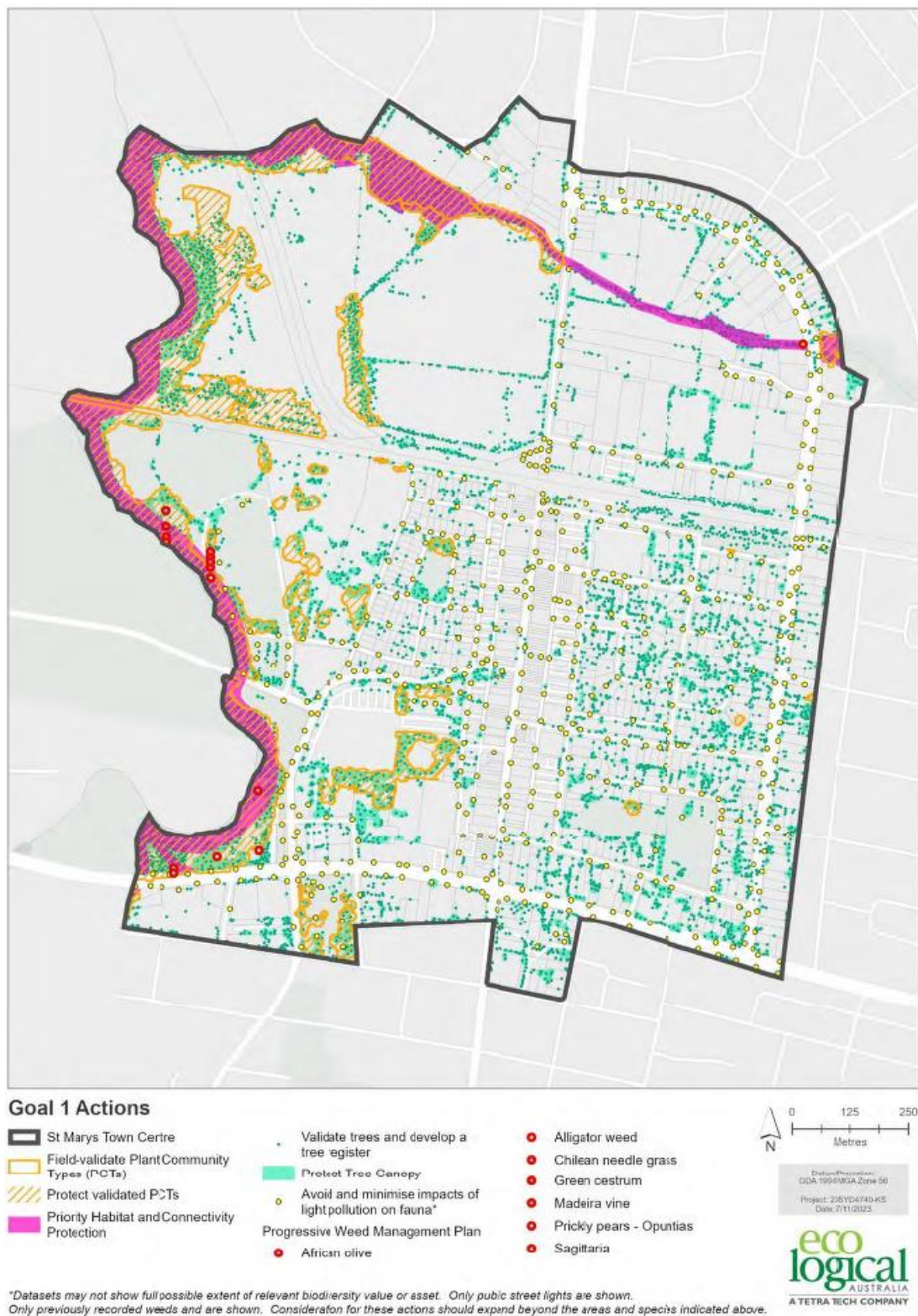


Figure 49: UEAP Goal 1 Actions (EcoLogical)

Key actions relevant for consideration under this Goal include:

- Validate and protect native vegetation and plant community types.
- Validate and protect existing street trees, high value trees, patches of PCTs and public park canopy.



- Avoid and minimise impacts of light pollution on fauna.
- Establish noise shielding measures (including natural shielding through vegetation) between high noise output assets and riparian corridor habitat
- Develop and implement a progressive weed management plan.

Goal 2 - Enhance ecological function, connectivity and ecosystem services in a local context identifies the following key elements which must be considered:

- **Climate resilient planting** - The effects of urban heat island and climate change, among other natural and human-accelerated threats, have the potential to influence the viability of flora and fauna. Impacts of climate change are already known from high profile Australian examples such as mass coral bleaching primarily because of increased temperature (Hughes et al. 2017). Climate change has the potential to impact flora and fauna as they attempt to adapt to new conditions. Increased prevalence of pests and disease, and changes in geographic range of species are also expected to occur with climate change. In the Western Sydney context, where urban heat is high and expected to increase, planning for climate resilient landscapes should be considered a priority. Not only is this an ecological imperative, but a socio-economic one too.
- **Restoration of habitats** - Restoration refers to a goal to restore something to a previous condition, in this context restoring habitats to be more aligned with their pre-clearing condition and extent so that populations and ecosystem function is improved.
- **Urban enhancement** - Enhancement of urban ecology corridors, or green links, in this context has been identified as fine-scale enhancements in opportunistic spaces that have existing vegetation or permeable surface suitable for planting. Such spaces include road verges, nature strips, traffic islands, planned green links under the Structure Plan, and public parks.
- **Blue and green transformation** - The UEAP identifies that habitat and surface transformations could occur in Coachmans Park, such as converting to a permeable surface plaza. Coachmans Park is identified in the Structure Plan as part of the future Central Park. Considering the existing hard surfaces, and the intention to retain this space as a public plaza for events and activations, a transformation into permeable surface is possible subject to further investigation.



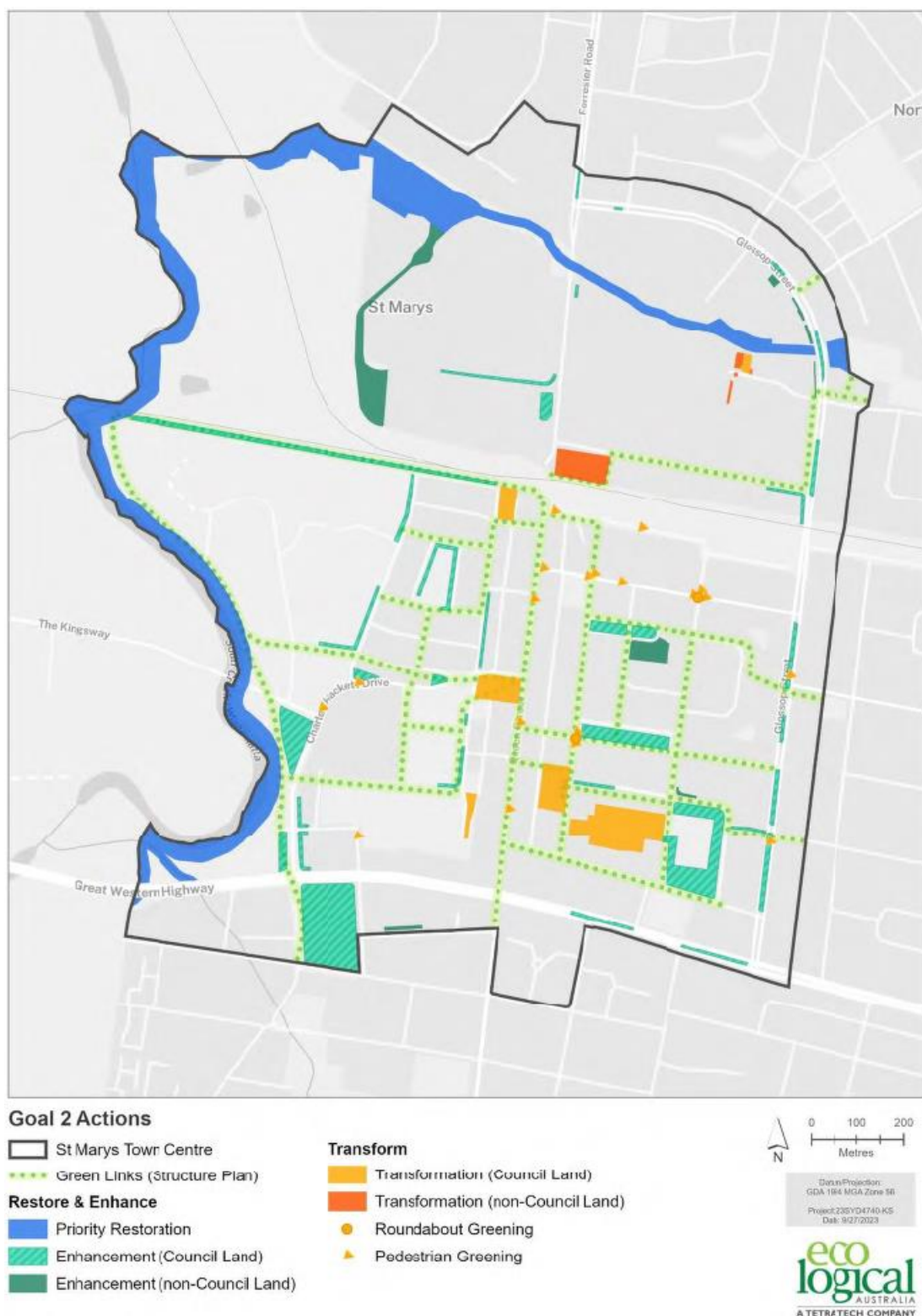


Figure 50: UEAP Goal 2 Actions (EcoLogical)

Key actions relevant for consideration under this Goal include:

- Deliver tree canopy targets with consideration of climate resilience and other relevant plans or studies.



- Increase canopy cover on road verges and pathways to reduce heat along walking and cycling routes as 'green links'.
- Install nest boxes (artificial hollows) and other artificial habitat suitable for a range of fauna species (from very small microbats to very large birds).
- Rehabilitate contaminated land to be suitable for revegetation. Develop site-specific landscaping in consultation with the contamination assessment findings to ensure landscape longevity in constrained sites.
- Transform car parking spaces into permeable surface area.

7.11 Waste Management and Minimisation

Potential – The remediation and construction activities associated with the works will generate a variety of waste material including, but not necessarily limited to demolition waste, waste soil and vegetation, packaging, surplus materials and general litter. Waste soil generated during remediation works will need to be classified and disposed of at a licensed facility, in accordance with the Remediation Action Plan.

The site is currently contaminated and will need to be remediated as per the provided RAP. All potential contaminants will need to be handled, stored and removed in accordance with the relevant safe practice standards.

All waste will need to be collected, sorted and stored on site in appropriate skips / containers etc and if not to be reused on site, collected and disposed of at a licenced recycling or waste facility.

7.12 Visual Amenity and Impact

Existing - The existing visual amenity is typical of an urban environment comprising a large area of public open space bounded by trafficable streets and surrounded by a predominantly low density residential neighbourhood and local centre.

Potential - The likely short terms visual impacts associated with the works include the presence of temporary safety fencing, plant and equipment, stockpiles etc at the site. However, this visual impact is likely to be minimal and will only exist for the duration of the works. The long term changes to this visual environment will primarily be the improved appearance of the Park as a consequence of the upgraded facilities. This is not considered to be a negative visual impact.

The removal of trees across the site will have an initial significant visual impact. However, the remediation of the site is a priority having regard to the public health risk and effectively treatment of significant contamination throughout the site, which cannot be effectively undertaken without the removal of the majority of the trees across the site. Notwithstanding, substantial new plantings will create a new landscape character that will improve visual amenity as the trees mature and the canopy develops.

Temporary perimeter fencing will be used to ensure members of the public cannot access the Park during remediation and construction works. This should incorporate shade cloth (or similar) with details of the proposed works to minimise visual impacts during remediation and construction works. Other than this requirement and that all parts of the construction site are kept in a clean and tidy manner, no additional safeguards are proposed with respect to visual amenity.



Appropriate mitigation measures have been identified for implementation.

7.13 Impacts on the Community

The proposed events and activations may sometimes have localised temporary impacts on the local community arising from potential noise amenity impacts and short-term traffic and parking impacts, when the venue is open to the public for larger or high-impact events and other activations. Local business are likely to be impacted by the occasional temporary parking removal.

7.14 Social and Economic Impacts

Potential - In the short term, there will be temporary negative social impacts associated with a restriction on public access to the Park and its facilities during the works period. Nevertheless, there are likely to be long term positive social and economic impacts associated with the proposed works such as the improved appearance, function and useability of the facilities at the Park for user groups and the wider community.

7.15 Cumulative Environmental Impacts

The environmental impacts from the proposed development are considered to be acceptable and minimal subject to the implementation of appropriate mitigation measures as outlined in **Section 7** of this REF.

7.16 Public Interest

The proposal is considered to have positive impacts overall as the new Central Park will transform the area into the civic green heart of St Marys. It will serve as a gathering space and focal point of the community, linked to other hubs by key green activity spines.



8 Mitigation Measures

The mitigation measures detailed at Appendix 21: Mitigation Measures will be implemented for the activity required for the delivery of St Marys Central Park.



9 Conclusion

With consideration of the mitigation measures specified in this REF, the proposed activity has been assessed as:

- Not likely to have a significant impact on the environment. As such an Environmental Impact Statement is not required to be prepared under Part 5.1 of the EP&A Act;
- Not likely to significantly affect threatened species, populations, ecological communities or their habitats. As such, a Species Impact Statement or Biodiversity Development Assessment Report is not required;
- Not likely to significantly impact on Matters of National Environmental Significance (MNES) on Commonwealth land. As such, there is no need to make a referral to the Australian Government Department of Sustainability, Environment, Water, Population and Communities; and
- Likely to deliver improved environmental, heritage, and community outcomes through the upgrade of existing parks and the increase in amenity for the local area.



10 Appendices

Appendix 1: Landscape GA Plan by Moir Studio

Appendix 2: Landscape Concept Design Report by Moir Studio

Appendix 3: Architectural Drawings by Besley & Spresser

Appendix 4: Architectural Concept Design Report by Besley & Spresser

Appendix 5: Asbestos Assessment Report by Douglas Partners

Appendix 6: Detailed Site (Contamination) Investigation Report by Douglas Partners

Appendix 7: Remediation Action Plan by Douglas Partners

Appendix 8: Transport and Accessibility Impact Assessment by SCT Consulting

Appendix 9: Traffic Management Plan by SCT Consulting

Appendix 10: Flood Impact and Risk Assessment Report by Northrop

Appendix 11: Engineering Mitigation Measures Report by Northrop

Appendix 12: Civil Drawings (50%) by Northrop

Appendix 13: Structural Drawings (50%) by Northrop

Appendix 14: Mechanical Drawings (50%) by Northrop

Appendix 15: Hydraulic Drawings (50%) by Northrop

Appendix 16: Acoustic Report by Northrop

Appendix 17: Lighting Concept Design Report (50%) by EPA

Appendix 18: Electrical Drawings by EPA (Draft 80%)

Appendix 19: ASP3 drawings by Power Solutions



Appendix 20: Arborist Report by Tree Report

Appendix 21: Mitigation Measures by The Planning Studio

Appendix 22: Walk on Country Report by Murawin

Appendix 23: Safety in Design Report

Appendix 24: BCA Report by Report AI

Appendix 25 Water Feature Design Intent by Moir Studio

Appendix 26 Play Structure Design Intent by Moir Studio

Appendix 27: Demolition Plan by Moir Studio

