



Statement of Environmental Effects

Construction of Caddens Southern Sports Fields

Lot 754, Caddens Road, Caddens

June 2017

Legacy Property



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1 Introduction

1.1 Overview

Stimson and Baker Planning has been engaged by Legacy Property to prepare a Statement of Environmental Effects in relation to the proposed construction of the Caddens Southern Sports Fields. The site is located at and known as Lot 754, Caddens Road, Caddens.

As part of the development of their land, Legacy propose to deliver the sporting facilities under a Voluntary Planning Agreement (VPA) with Penrith City Council, and as it is indicated in Council's Development Control Plan. The subject site is owned by Penrith City Council, and the proposal includes the construction of a large multipurpose oval, playing courts, amenities building, and car parking. Further details are provided within this report.

The site is zoned is zoned *RE1 Public Recreation* and *SP2 Infrastructure – Stormwater Management* under *Penrith Local Environmental Plan 2010* with the proposal being permissible with consent.

The proposal is defined as *development* in Section 4 of the *Environmental Planning and Assessment Act 1979* (EPA Act). Section 76A of the EPA Act stipulates that the development must not be carried out on the subject site until consent has been obtained.

The application triggers the Integrated Development provisions of the EPA Act and General Terms of Approval will be required from the NSW Office of Water.

This report describes the proposed development and subject site in detail and undertakes an assessment of the proposal against the relevant aims, objectives and development provisions of Council's LEP and DCP, and Section 79C(1) of the EPA Act.

1.2 Report Structure

This Statement of Environmental Effects is structured as follows:

- Section 1: Introduction – provides an overview of the proposal, planning history for the site and background to the application.
- Section 2: The Site and Surrounds – provides an analysis of the subject site, development within the locality and a consideration of the local and regional context.
- Section 3: Development Proposal – provides a detailed description of the proposed development and its characteristics.
- Section 4: Statutory Context – provides for consideration of the proposal against the specific planning instruments and policies that are applicable.
- Section 5: Section 79C Assessment – provides an assessment against section 79C of the EPA Act.
- Section 6: Conclusion and Recommendation – summarises the report and presents a recommendation.

1.3 History of the Application

As part of the strategic planning process for the Caddens Release Area, Penrith City Council has prepared Chapter E1 of PDCP 2014 detailing the manner in which development in the release area is to occur. The Control Plan ensures the timely provision of critical infrastructure such as roads, drainage, pedestrian footpaths, cycleways and community facilities, informing all stakeholders, including public authorities and developers.

Chapter E1 of PDCP 2014 refers to the Caddens Release Area Structure Plan, which establishes the urban structure and form for the planning and future development of the area. The Structure Plan specifies that Caddens Release Area is ultimately to accommodate a minimum of 1,247 dwellings.

Legacy Property is in the process of developing the south-eastern portion of the Caddens Release Area, known as Caddens Hill. This precinct is to accommodate approximately 540 residential lots in conjunction with supporting infrastructure. To date six stages have been approved and are under construction, forming the western portion of the development precinct, fronting O'Connell Lane.

Development within the overall Caddens Release Area has now progressed to a point where it is necessary to consider the provision of additional active open space and ancillary facilities. Chapter E1 of PDCP 2014 identifies the provision of a sports and recreation precinct within the subject site, forming the south-eastern portion of the Caddens Hill precinct, being developed by Legacy Property. The design and scope of this proposal has progressed in discussions with Council as part of the VPA negotiations.

1.4 Supporting Documentation

The proposal is accompanied by the following documentation:

Documentation	Prepared By
Landscape DA Report	Place Design Group
Engineering Plans	J Wyndham Prince
Amenities Pavilion Plan	Fleetwood Urban Pty Ltd
Traffic and Parking Impact Assessment	Stanbury Traffic Planning
Salinity Report	Geotechnique
Site Audit Statement/Report	Golder Associates

1.5 Legislation, Environmental Planning Instruments and Policies to be considered

- *State Environmental Planning Policy No 55 – Remediation of Land*
- *Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River*
- *Penrith Local Environmental Plan 2010*
- *Penrith Development Control Plan 2014*

1.6 Consent Authority

The value of this proposal is \$4.7 million and as such, Penrith City Council will be the consent authority for this application.

2 The Site and Surrounds

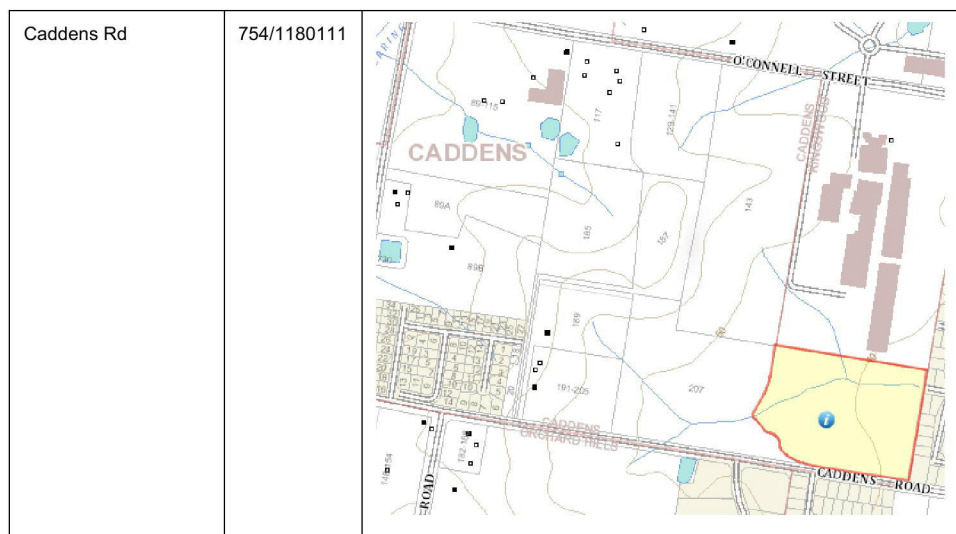
2.1 The Subject Site and Surrounds

The subject site is located on the northern side of Caddens Road, just north of its intersection with Heaton Avenue. It is irregular in shape and has an area of some 51,022sqm. The site is legally described as Lot 754 DP 1180111.



Figure 1 Subject site

Development to the east and south is characterised by detached dwelling-houses. Areas to the west of the site are currently being developed as residential land by Legacy Property while the land to the north is occupied by the NSW State Archives.



Topography

The site has a general downwards slope to the north eastern corner. The 'blue line' on the cadastre confirms this is the general direction for overland water flow.

Vehicular Access

There is direct vehicular access to the site from Caddens Road.

Utilities and Services

There are existing reticulated sewer, water and electricity services to or near the site.

Vegetation

No significant examples of vegetation are found on the site, the majority of which is cleared.

2.2 Existing Development

The site is currently vacant.

3 Development Proposal

3.1 Objectives of the Proposal

Council's DCP relating to the Caddens area has as a key objective, to provide for the public open space and recreational needs of residents. The DCP specifies that the 5.1 hectare site is to provide a local community focus and be designed generally in accordance with the Active Open Space Concept indicated below

Figure E1.14 – Active open space concept

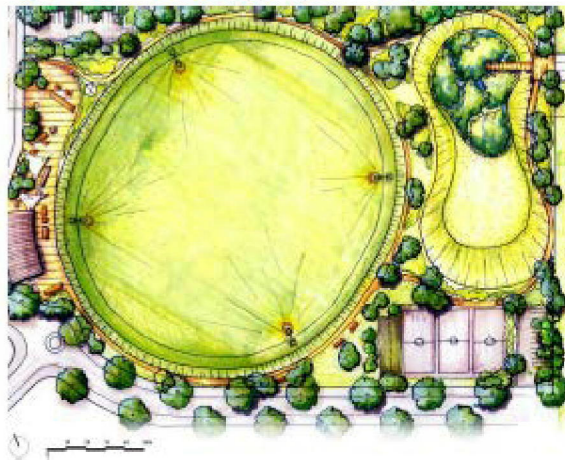


Figure 2 Active open space concept as depicted in the DCP

3.2 Details of the Proposal

The proposed development includes the following detailed elements:

- Oval suitable for rugby, soccer and cricket, including light poles.
- Terraced lawn amphitheatre.
- Change room and amenities pavilion building, incorporating male and female change rooms, accessible toilets, kiosk and general storage.
- Playground with soft rubber surface.
- Half-court basketball court.
- Car parking for 56 vehicles.
- Cricket practice nets.
- Bicycle parking for 20 bikes.
- Associated landscaping and pathway network.
- Landscaped stormwater channel and detention basin.
- Periphery fitness loop shared pedestrian / cycle pathway connecting with a formalised fitness area accommodating various fitness stations.

Associated park furniture is also proposed and is detailed in the accompanying plans. Specific species for planting are also provided in the accompanying plans.

Once constructed, the ongoing management and maintenance of the facility will rest with Penrith City Council.



Figure 3 Proposed development plans

Traffic and Parking Provision

A Traffic and Parking Impact Assessment accompanies the application and this details the justification of the car parking proposed, access provided, and potential demand on the facility in the context of other comparable facilities in the Penrith LGA.

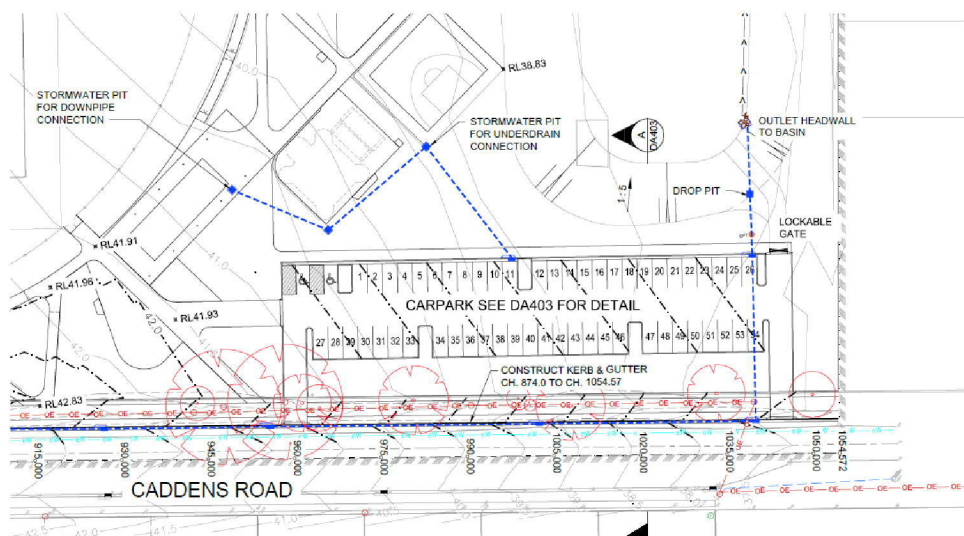


Figure 4 Carparking and stormwater detail

Stormwater Drainage

The stormwater detention associated with this proposal was approved under DA16/1166. Stormwater lines draining proposed hardstand areas are detailed in this application.

Utilities

The site will be appropriately serviced to accommodate the proposed use. Some utility upgrades are likely to be required and will be confirmed with the relevant service authority.

Civil Works

The accompanying engineering plans drawn by J Wyndham Prince detail the extent of civil works required for the development.

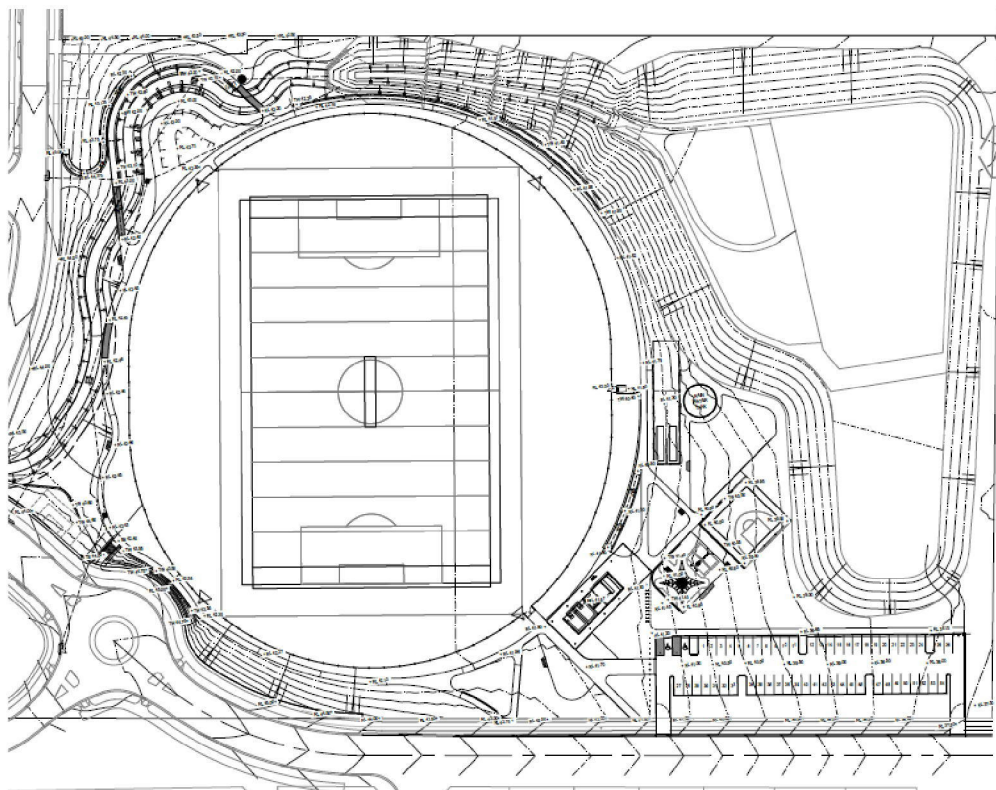


Figure 5 Proposed grading plan

Contamination

Contamination was addressed under DA16/1166 as part of the bulk earthworks consideration. However, the Site Audit Statement appended to this report confirms the land is suitable for use as open space.

The playground area is located in close proximity to the car park and amenities building, providing ease of access to toilet and change room facilities. Shade will be provided via three (3) large trees and several smaller species. A single rubbish bin and two (2) bench seats will also be provided allowing parents and guardians to sit and supervise their children. Low height walls and generous planting buffers will aid in enclosing the playground and providing a safer environment.

The selected playground equipment will provide opportunities for swinging, climbing, balancing, swinging and rocking. This combination of equipment will provide a stimulating and engaging play space for the children who use it.



Figure 6 Playground detail



Figure 7 Carpark and playground cross section

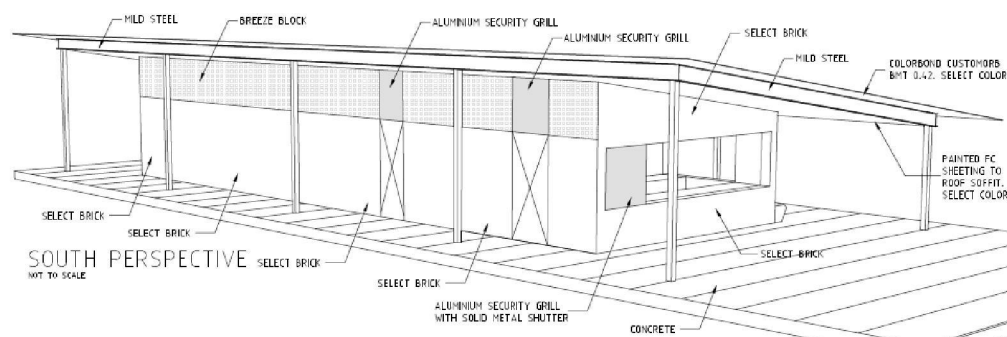


Figure 8 Amenities block perspective

4 Statutory Context

The following section provides an assessment of the proposed development against the relevant planning instruments and policies.

4.1 State Environmental Planning Policy No 55 – Remediation of Land

Under Clause 7(1)(A) the consent authority must not consent to a development application unless consideration has been given to whether the land is contaminated. Although there has not been any site investigations directly testing contamination, the previous and current use of the site and surrounding area for residential development would make it unlikely that the site is contaminated.

4.2 Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River

The aim of SREP 20 is to protect the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.

Appropriate conditions of consent would normally be applied to any approval to ensure the health of the river system is not compromised by way of sediment or erosion from the works or use.

4.3 Penrith Local Environmental Plan 2010

The LEP is the primary environmental planning instrument relating to the proposed development. The objectives of the LEP are as follows:

- (a) *to provide the mechanism and planning framework for the management, orderly and economic development, and conservation of land in Penrith,*
- (b) *to promote development that is consistent with the Council's vision for Penrith, namely, one of a sustainable and prosperous region with harmony of urban and rural qualities and with a strong commitment to healthy and safe communities and environmental protection and enhancement,*
- (c) *to accommodate and support Penrith's future population growth by providing a diversity of housing types, in areas well located with regard to services, facilities and transport, that meet the current and emerging needs of Penrith's communities and safeguard residential amenity,*
- (d) *to foster viable employment, transport, education, agricultural production and future investment opportunities and recreational activities that are suitable for the needs and skills of residents, the workforce and visitors, allowing Penrith to fulfil its role as a regional city in the Sydney Metropolitan Region,*
- (e) *to reinforce Penrith's urban growth limits by allowing rural living opportunities where they will promote the intrinsic rural values and functions of Penrith's rural lands and the social well-being of its rural communities,*

- (f) *to protect and enhance the environmental values and heritage of Penrith, including places of historical, aesthetic, architectural, natural, cultural, visual and Aboriginal significance,*
- (g) *to minimise the risk to the community in areas subject to environmental hazards, particularly flooding and bushfire, by managing development in sensitive areas,*
- (h) *to ensure that development incorporates the principles of sustainable development through the delivery of balanced social, economic and environmental outcomes, and that development is designed in a way that assists in reducing and adapting to the likely impacts of climate change.*

It is submitted that the proposed development is not inconsistent with these objectives.

The majority of the subject site is zoned *RE1 Public Recreation*. The objectives of the RE1 zone are:

- *To enable land to be used for public open space or recreational purposes.*
- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To ensure that development is secondary and complementary to the use of land as public open space, and enhances public use, and access to, the open space.*
- *To provide land for the development of services and facilities by public authorities for the benefit of the community.*

The proposed development is consistent with the objectives in that:

- Recreational and open space is provided for as a result of this application.
- The proposed recreational spaces are complementary to the residential development of the land.
- The wider Penrith community will benefit from the installation of the proposed recreational facilities.

Development on this part of the site is defined as *recreation facility (outdoor)* as follows:

recreation facility (outdoor) means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

The remainder of the site is zoned *SP2 – Infrastructure: Stormwater Management*. The objectives of that zone are:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*

Development proposed on that part of the site is permissible and consistent with those objectives.

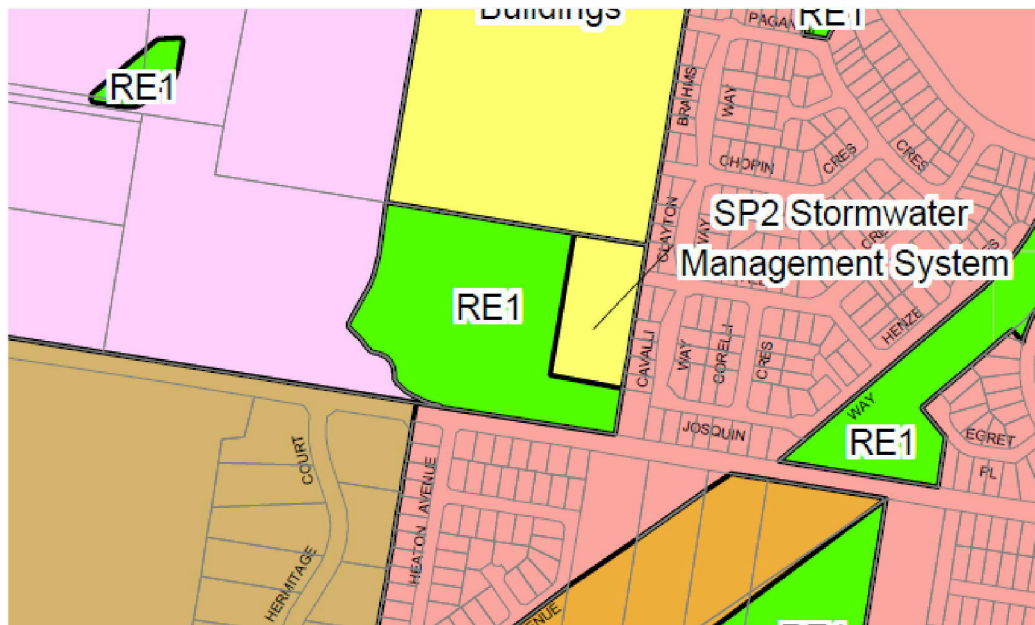


Figure 9 Land zoning

The following relevant clauses have also been considered in respect of this development proposal.

Part 4 Principal Development Standards:				
Standard	Permitted	Proposed	Comment	
4.1 Minimum subdivision lot size:	N/A	N/A	-	
4.2 Rural Subdivision:	N/A	N/A	-	
4.3 Height of Buildings:	N/A on RE1 5m on SP2	N/A N/A	All structures are of a scale and size that are consistent with other outdoor recreation facilities and areas in the Penrith LGA.	
4.4 Floor Space Ratio	N/A	N/A	-	

Part 5 Miscellaneous Provisions	
Provision	Comment
5.1 Relevant acquisition authority	N/A
5.2 Classification and reclassification of public land	N/A
5.3 Development near zone boundaries	N/A
5.4 Controls relating to miscellaneous permissible uses	N/A
5.5 Development within the coastal zone	N/A
5.6 Architectural roof features	N/A
5.7 Development below mean high water mark	N/A
5.8 Conversion of fire alarms	N/A
5.9 Preservation of trees and vegetation	N/A

5.10	Heritage conservation	N/A
5.11	Bush fire hazard reduction	N/A
5.12	Infrastructure development and use of existing buildings of the Crown	N/A
5.13	Eco-tourist facilities	N/A
Part 6 Urban release areas		
Provision		Comment
6.1	Arrangements for designated State public infrastructure	N/A
6.2	Public utility infrastructure	The proposed development provides a vital piece of recreational infrastructure for this new release area.
6.3	Development control plan	The proposed development is generally consistent with the provisions of the Penrith DCP.
6.4	Relationship between Part and remainder of Plan	Noted
6.5–6.19	(Repealed)	N/A
Part 7 Additional Local Provisions		
Provision		Comment
7.1	Earthworks	Proposed earthworks for the stormwater infrastructure were detailed in DA16/1166 and cover the subject land. Further grading details are provided in the accompanying plans.
7.2	Flood planning	N/A
7.3	Development on natural resources sensitive land	N/A
7.4	Sustainable Development	N/A
7.5	Protection of scenic character and landscape values	N/A
7.6	Salinity	Appropriate consideration of this matter has been undertaken in the appended Salinity Report.
7.7	Servicing	N/A
7.8	Active street frontages	N/A
7.9	Development of land in flight path of proposed Second Sydney Airport	N/A
7.10	Dual occupancies and secondary dwellings in certain rural and environmental zones	N/A
7.11	Penrith Health and Education Precinct	N/A
7.12	Maximum gross floor area of commercial premises	N/A
7.13	Exhibition homes limited to 2 years	N/A
7.14	Cherrywood Village	N/A
7.15	Claremont Meadows	N/A
7.16	Glenmore Park Stage 2	N/A
7.17	Dwelling houses on certain land in Castlereagh, Cranebrook, Llandilo, Londonderry, Kemps Creek and Mulgoa	N/A
7.18	Mulgoa Valley	N/A
7.19	Villages of Mulgoa and Wallacia	N/A

7.20	Orchard Hills	N/A
7.21	Twin Creeks	N/A
7.22	Waterside Corporate	N/A
7.23	Location of sex services premises and restricted premises	N/A

There are no other clauses relevant to the proposal.

4.4 Penrith Development Control Plan 2014

Development Control Plans contain finer grain planning controls in respect of specific development types. The following *relevant* Parts of Penrith DCP 2014 specifically relates to development at Caddens and are considered in detail below.

Part E1: Caddens	
Control	Comment
1.2.1 Urban Structure <ol style="list-style-type: none"> 1) The principal land use at Caddens will be residential. The residential areas will be located on either side of a linear riparian corridor and around open space areas on hilltops and ridges. 2) The location of the Precinct Centre, riparian corridor and active open space will provide focal points for the new community. 3) The Precinct Centre will form the hub of the WELL Precinct and serve the residential community, the university and TAFE community, and future employment areas. 4) Active and passive open spaces will be distributed throughout Caddens and integrate with the natural features of the Werrington Creek riparian corridor. 5) The area will be legible and highly accessible and incorporate a bus route, cycle routes and walking tracks. 6) Higher density forms of housing will be located in close proximity to the Precinct Centre and other areas of higher amenity. 7) Caddens Road is to function as a rural road segmented by strategic closures. 8) Development facing and accessing Caddens Road will contain larger, wider lots that provide a transition between the new urban area and the rural landscape to the south. 9) Views to and vistas from the hilltops will be protected by way of lower rise development and revegetated open space. 	<p>The proposed location and configuration of the active pen space area is identified within the DCP. The proposal is consistent with the location and general configuration depicted in the DCP.</p>
1.3.1 Street Network and Design	<p>The proposal does not alter the already approved street layout.</p>

1.3.2 Street Furniture and Public Art

Controls

- 1) Public art may be freestanding art objects or works integrated into building facades, other built edges, water courses and landscaping adjoining public spaces.
- 2) Street furniture is to enhance pedestrian comfort, convenience and amenity and to form an integral element of the streetscape.
- 3) The provision of street furniture in public spaces must include, as appropriate:
 - a) Seats.
 - b) Litter bins.
 - c) Drinking fountains.
 - d) Lighting.
 - e) Information signs.
 - f) Bicycle racks.
 - g) Planter boxes.
 - h) Other items suitable to the function of each public space.
- 4) Street furniture throughout precincts should be consistent in design and style.
- 5) Street furniture is to be located so as not to impede mobility, in accordance with A51428:1-4.
- 6) Location and detailing of all proposed street furniture and public art is to be indicated on the Landscape Plans submitted with Development Applications.

Appropriate street furniture and installations are proposed throughout the proposed precinct. Details are within the Landscape Master Plan Report.

1.3.3 Pedestrian and Cycle network

The approved pedestrian and cycle network is not altered as a result of this application.

1.3.5 Open Space, Environmental Conservation and Landscape Network

A. Objectives

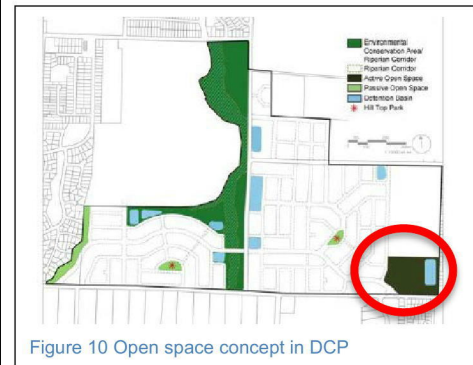
- To provide for the public open space and recreational needs of residents.
- To ensure quality design and embellishment of all public open space.
- To ensure that the development of elevated, visually sensitive land contributes positively to, and enhances, the landscape character of Caddens.
- To protect significant views and viewscape.
- To enhance the character of environmental conservation areas through revegetation.
- To reinforce the rural character of Caddens Road through appropriate landscaping and fencing.
- To ensure that landscaping utilises robust and low maintenance materials and species, that landscaped areas are accessible by all, and that design meets Crime Prevention Through Environmental Design (CPTED) principles.

B. Controls

- The open space network, consisting of active and passive open space, together with the riparian corridor and other areas of conservation value are to be provided generally in accordance with Figure E1.10.
- The design and embellishment of public open space must satisfy the principles of high quality, robust, low maintenance design and address the vision for Caddens.
- The provision of open space and facilities including embellishment is to be consistent with the WELL Precinct Section 94 Contributions Plan.
- Passive open space should generally be bordered on all sides by streets and houses should be oriented towards the open space for passive surveillance.
- The detailed design of public open space areas is to incorporate the following elements, where appropriate, in accordance with the Open Space Strategy and the WELL Precinct Section 94 Contributions Plan:
 - a)-d)
 - ...
 - ...
 - ...
 - ...
- The 5.1 hectare combined area of active open space (3.9 hectares) and detention basin (1.2 hectares) is to provide a local community focus and be designed generally in accordance with the Caddens Public Domain Strategy and Figure E1.14. It is to incorporate the following elements consistent with the Open Space Strategy and the WELL Precinct Section 94 Contributions Plan:
 - connections to the shared pedestrian and cycle path;
 - an amenities block;
 - a children's playground;
 - seating areas;
 - a large level area suitable for future playing field(s) with flood lights;
 - potential courts such as hard courts/tennis courts, bocce courts, netball courts and large chess board;
 - canopy trees and structures to provide shade and amenity;
 - planting of robust endemic native species; and
 - car parking.

A Comprehensive response to this part of the DCP is provided within the Landscape Master Plan Report.

The design incorporates the broader objectives sought and generally complies with the controls identified.



The controls are satisfied in that:

- The principles of high quality, low maintenance design have been incorporated into the proposal in consultation with Council.
- The design and level of finish is consistent with the Section 94 Contributions Plan.
- The design provides a community focus as well as the built elements identified in subclause 10).

It is submitted that the proposed generally satisfies the controls within the Penrith DCP and can be supported by Council.

5 Section 79C Assessment

An assessment of the proposal has been undertaken in accordance with the statutory requirements of the EPA Act. The following assessment against Section 79C of the EPA Act has been undertaken.

5.1 Section 79C(1)(a)(i) – Any Environmental Planning Instruments

The relevant environmental planning instruments have been considered earlier in this report.

The proposal is permissible with consent and is considered satisfactory when assessed against the relevant requirements.

5.2 Section 79C(1)(a)(ii) – Any Draft Environmental Planning Instrument

There are no known draft Environmental Planning Instruments applicable to the subject site.

5.3 Section 79C(1)(a)(iii) – Any Development Control Plan

Compliance against the relevant DCP's has been considered earlier in this report.

5.4 Section 79C(1)(a)(iiia) – Any Planning Agreement or Draft Planning Agreement entered into under Section 93f

There are no known planning agreements that apply to the site or development. However, it is noted that a Voluntary Planning Agreement is currently being finalised with Council in respect of the wider estate.

5.5 Section 79C(1)(a)(iv) – The Regulations

There are no sections of the regulations that are relevant to the proposal at this stage.

5.6 Section 79C(1)(b) – The Likely Impacts of the Development

The following impacts have been considered in the preparation of this development proposal.

5.6.1 Flora and Fauna

There are no negative impacts expected in this regard. The proposal includes a landscaping strategy that incorporates many endemic native species, understory and canopy.

5.6.2 Bushfire Prone Land

The site is marginally identified as being bushfire prone land on the relevant Council map.



Figure 11 Bushfire prone land affectation

No structures of any significance are proposed in the area of affectation. As such it is considered unnecessary to provide a bushfire impact assessment report.

5.6.3 Stormwater and Flooding

The stormwater infrastructure identified in the plans was approved as part of DA 16/1166. The accompanying stormwater plan is consistent with that approval. Also accompanying this application is confirmation from J Wyndham Prince that the engineering plans submitted are in accordance with their supporting reports and design for stages 2 to 4 of the overall Caddens development. The required MUSIC modelling is also attached.

5.6.4 Erosion and Sediment Control

It is expected that Council would impose appropriate conditions of consent to ensure that erosion and sediment control measures were installed on the site prior to construction commencing.

5.6.5 Traffic Generation and Parking

A traffic impact assessment has been undertaken and is appended to this report. That assessment has considered the proposal in the context of the expected level of development in the Estate, the proposed/established road network, and the usage of comparable facilities within the Penrith LGA, and concludes:

The location and form of the proposed sports and recreation precinct is reasonably consistent with the Structure Plan formulated for the Caddens Release Area contained within PDCP 2014;

The proposed site access arrangements are compliant with the relevant AS2890.1:2004 specifications with respect to driveway design and provision of sight distance;

The proposed off-street passenger vehicle parking area has been designed to accord with the relevant requirements of AS2890.1:2004 and is therefore envisaged to provide motorists with safe and efficient internal manoeuvring arrangements;

The subject development has been projected to generate a peak operational parking demand of 50 vehicles;

The proposed off-street parking provision of 57 spaces is therefore projected to satisfactorily accommodate the peak operational parking demand as required;

The adjoining public road network has however been assessed to be capable of accommodating between 20 and 40 parking passenger vehicles in a parallel arrangement immediate adjacent to the subject site, depending on the evolution of the planned road network alterations;

It is accordingly envisaged that the immediately adjoining public road network is further capable of accommodating the additional peak operational parking demands over and above that estimated within this assessment, without unreasonable impacts on adjoining road safety and efficiency or residential amenity;

The adjoining public road network currently accommodates moderate traffic demands with spare capacity;

The adjoining road network is planned to undergo significant alteration /upgrade to accommodate the full Caddens Release Area redevelopment;

The subject development has been projected to generate up to 100 vehicle movements to and from the subject site, in any given hourly period, representing less than one ingress and one egress vehicle movement per minute;

The abovementioned extent of traffic generation is not projected to occur simultaneously with the operational commuter peaks of the surrounding road network;

The planned adjoining public road network has been previously assessed by others to be capable of accommodating the future peak traffic demands, including the traffic projected to be generated by the proposed sports and recreational precinct.

It is considered there is no parking or traffic related issues that should prevent approval of the subject application. This action is therefore recommended.

It is considered, in light of the conclusions of the traffic and parking assessment, that Council can support the application on those grounds.

5.6.6 Noise Impacts

Whilst there will be some noise associated with the construction of the development, longer term there is not expected to be any noise impacts above and beyond what might normally be associated with an outdoor recreational facility and sporting grounds. No unacceptable impacts are expected.

5.6.7 Heritage Issues

There are no heritage issues associated with the proposal or the subject site.

5.6.8 Services

The site is appropriately serviced to allow for the proposed development.

5.6.9 Social and Economic

It is submitted that the proposed development would create positive social impacts within the locality through the provision of much needed recreational assets.

There are no economic impacts considered relevant to the proposal.

5.6.10 Crime Prevention Through Environmental Design (CPTED)

As required by the Penrith DCP, the consideration of CPTED issues has been prepared having regard to various published CPTED literature and academic works, and specifically includes the *“Crime Prevention and Assessment of Development Application Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979”* published by the former Department of Urban Affairs and Planning.

The advice is structured in accordance with Part B of the above guidelines – *Principles for Minimising Crime Risk*. In this regard, the advice considers the responsiveness of the proposed design to each of the adopted four principles for CPTED (surveillance; access control; territorial reinforcement and space management).

CPTED principles have been adopted by the NSW Police Force, based on recognition that the design of spaces plays a pivotal role in facilitating the safety and security of its users. The NSW Police Force has identified key principles of CPTED being:

- Establish opportunities for **good surveillance**, both casually and technically.
- Provide legible barriers for **access control** for spatial definition.
- Create a sense of ownership over spaces that are also clearly demarcated between public and private ownership for **territorial reinforcement**.
- Establish spaces that are utilised appropriately through **proper space management**, relating to litter and graffiti removal, and ensuring lighting fixtures are working.

When implemented, these measures are likely to reduce opportunities for crime by using design and place management principles.

Surveillance

The proposed development will provide numerous opportunities for passive surveillance. The following casual surveillance opportunities have been provided through the design of the project:

- Opportunities for visual observance through minimal structures being proposed to allow normal space users to see and be seen by others.
- Entries are located in highly visible locations.
- Clear visual pathways within the precinct.
- Areas of entrapment are limited due to multiple exit points from around the precinct.
- Good general lighting is proposed.

Access Control

Access control to the development will be managed by Council as per its usual regime for public facilities.

Territorial Reinforcement

Clear separation exists between various areas within the precinct and between it and the street network. Appropriate signage, landscaping, site furnishings and paving will provide good environmental cues about the transition or movement between those spaces.

Space Management

For most modern developments, space management is increasingly carried out in a professional manner, often by third party specialist building management businesses. Therefore, the effectiveness of management systems such as light globe replacement, removing graffiti, and fixing broken site furnishings will influence the perceived level of care of the project. In this case, Penrith Council will ensure that processes are established to respond to and fix services and structures and under whose responsibilities these services are assigned.

Site cleanliness is also a factor that influences the perceived and actual level of care of an area.

Cleanliness of the project will again be managed by Penrith Council once construction is complete.

5.7 Section 79C(1)(c) – The Suitability of the Site

The proposal is generally consistent with the planning controls that apply in this zone. Moreover, the objectives of the zone have been satisfied, ensuring that the proposed sporting precinct would not result in any unacceptable impact on any adjoining landowners or buildings.

For the reasons outlined in this report the site is considered suitable for this development proposal.

5.8 Section 79C(1)(d) – Any Submission Made

Council will undertake a notification process in accordance with its controls and policies. We welcome the opportunity to provide additional information in response to those.

5.9 Section 79C(1)(e) – The Public Interest

Given the type of development, its general compliance with the planning controls, how the objectives are satisfied and the suitability of the site it is considered that the public interest would not be jeopardised as a result of this development.

6 Conclusion and Recommendation

The proposed development has been assessed against the requirements of the Penrith Council LEP and DCP and is considered to represent a form of development that is acceptable and consistent with those provisions.

The proposed sporting precinct would not result in any unacceptable impact on the locality, yet it will significantly contribute to the infrastructure and assets of the community in this emerging area.

The site is considered quite suitable for a use of this nature and is consistent with nearby and adjoining development.

An assessment against section 79C of the EPA Act has not resulted in any significant issues arising.

Accordingly, it is recommended that the proposed development of this sporting and recreational precinct be approved.



Appendix A

Traffic Parking and Impact Assessment



STANBURY
TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

PARKING & TRAFFIC IMPACT ASSESSMENT

**PROPOSED SPORTS & RECREATION PRECINCT
LOT 754 DP 1180111 CADDENS ROAD, CADDENS**

**PREPARED FOR LEGACY PROPERTY PTY. LTD.
OUR REF: 17-002**



JUNE 2017

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1. INTRODUCTION

1.1 Scope of Assessment

Stanbury Traffic Planning has been commissioned by Legacy Property Pty. Ltd. to prepare a Parking & Traffic Impact Assessment to accompany a Development Application for a proposed sports and recreation precinct to be provided as part of the Caddens Hills residential precinct located to the north of Caddens Road, Caddens.

This aim of this assessment is to investigate and report upon the potential parking and traffic consequences of the proposal and to recommend appropriate ameliorative measures where required. This report provides the following scope of assessment:

- Section 1 provides a summary of the site location, details, existing and surrounding land-uses;
- Section 2 describes the proposed development and operational characteristics;
- Section 3 assess the adequacy of the proposed site access and internal circulation arrangements with reference to relevant Council, Roads & Maritime Services and Australian Standard specifications;
- Section 4 assesses the adequacy of the proposed parking provision with respect to established Council requirements, parking provision of similar facilities and the likely operational characteristics of the site use;
- Section 5 assesses the existing and planned traffic and transport conditions surrounding and servicing the site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure; and
- Section 6 estimates the projected traffic generating ability of the proposed development and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner.

The report has been prepared pursuant to State Environmental Planning Policy (Infrastructure) 2007.

1.2 Reference Documents

Reference is made to the following documents throughout this report:

- The Roads & Maritime Services' *Guide to Traffic Generating Developments*;

- Chapter C10 and E1 of Penrith City Council's *Penrith Development Control Plan 2014* (PDCP 2014) relating to *Transport, Access & Parking* and *Caddens*, respectively;
- Masson Wilson Twiney's *Caddens Release Area – Transport Management & Accessibility Plan* (2008);
- Australian Standard for *Parking Facilities Part 1: Off-Street Car Parking* (AS2890.1:2004); and
- Australian Standard for *Parking Facilities Part 6: Off-Street Parking for People with Disabilities* (AS2890.6:2009).

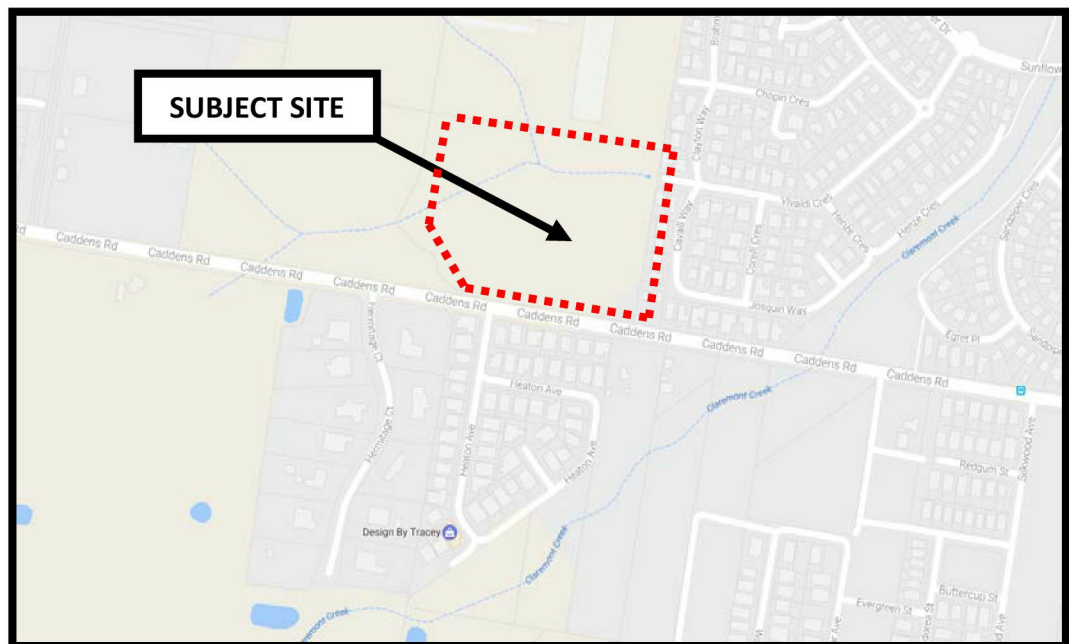
Development plans have been prepared by J. Wyndam Prince.

1.3 Site Details

1.3.1 Site Location

The subject site is located on the northern side of Caddens Road, approximately opposite Heaton Avenue, Caddens. The site location is illustrated below and overlaid within a local and aerial context by **Figure 1** and **Figure 2**, respectively.

FIGURE 1
SITE LOCATION WITHIN A LOCAL CONTEXT



Source: Google Maps (accessed 09/02/17)

FIGURE 2
SITE LOCATION WITHIN AN AERIAL CONTEXT



Source: Six Maps (accessed 09/02/17)

1.3.2 Site Description

The subject site provides a real property description of Lot 754 DP 1180111 Caddens Road, Caddens. The site forms an irregularly shaped parcel of land, providing a single frontage of approximately 180m to Caddens Road. The site extends to the north away from Caddens Road some 190m to the north away from Caddens Road, resulting in a total lot area in the order of 5.1 hectares.

1.3.3 Existing Site Use

The subject site is currently undeveloped and vacant.

1.3.3 Surrounding Uses

The site is surrounded by the following:

- Detached residential dwellings are located to the south fronting Caddens Road, Heaton Avenue and Hermitage Circuit;
- Detached residential dwellings are located to the east fronting Cavalli Way and Clayton Way;
- A large State Records facility is located to the north; and

- Vacant land is located to the west which is planned to accommodate Stage 2 of the Caddens Hill residential precinct, comprising some 69 residential lots local road infrastructure.

2. PROPOSED DEVELOPMENT

2.1 Strategic Background

As part of the strategic planning process for the Caddens Release Area, Penrith City Council has prepared Chapter E1 of PDCP 2014 detailing the manner in which development in the release area is to occur. The Control Plan ensures the timely provision of critical infrastructure such as roads, drainage, pedestrian footpaths, cycleways and community facilities, informing all stakeholders, including public authorities and developers.

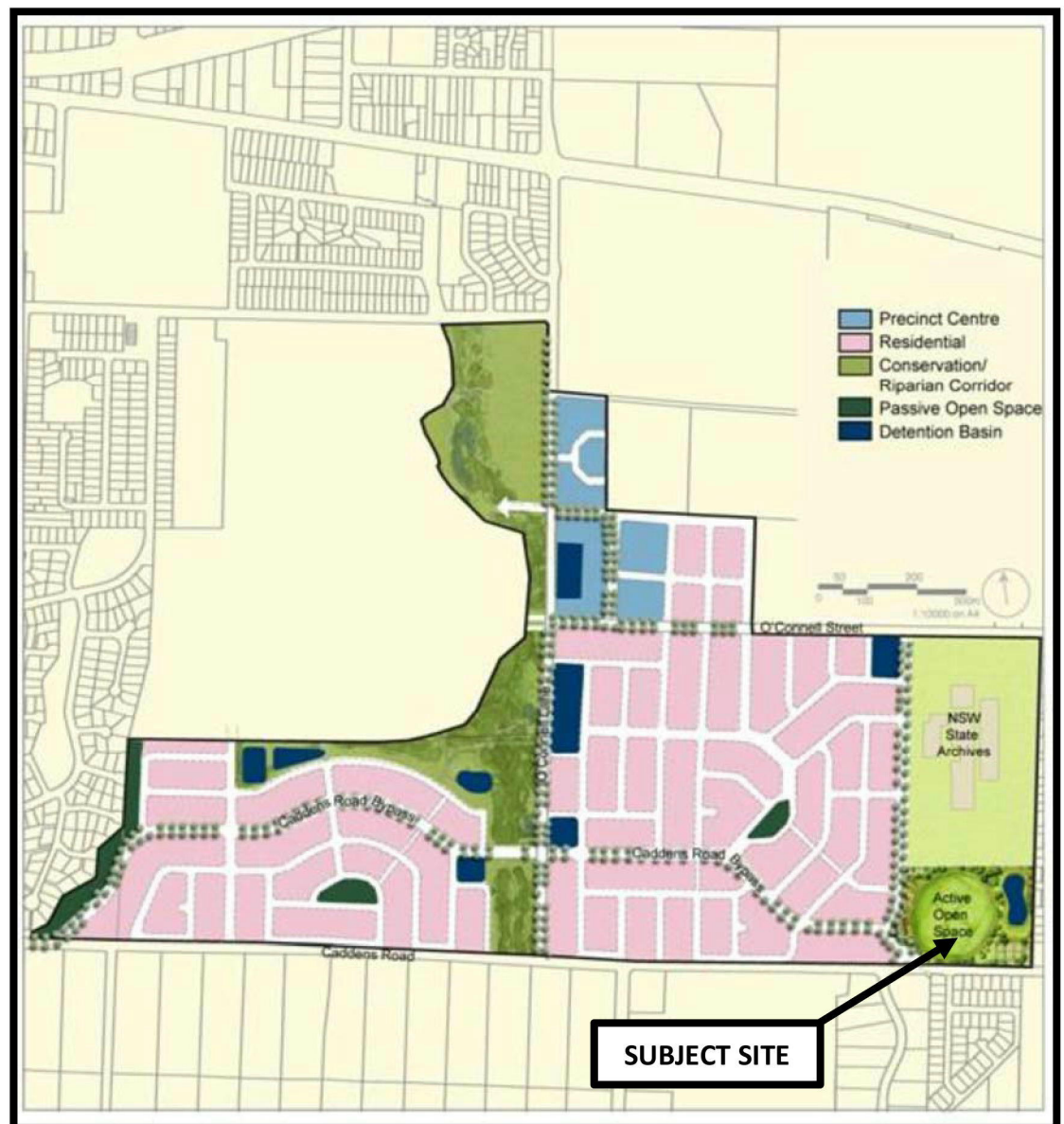
Chapter E1 of PDCP 2014 refers to the Caddens Release Area Structure Plan, which establishes the urban structure and form for the planning and future development of the area. The Structure Plan specifies that Caddens Release Area is ultimately to accommodate a minimum of 1,247 dwellings.

Legacy Property is in the process of developing the south-eastern portion of the Caddens Release Area, known as Caddens Hill. This precinct is to accommodate approximately 540 residential lots in conjunction with supporting infrastructure. Stage 1 of the Caddens Hill precinct, comprising 99 residential lots, has been approved and is currently under construction, forming the western portion of the development precinct, fronting O'Connell Lane.

Development within the overall Caddens Release Area has now progressed to a point where it is necessary to consider the provision of additional active open space and ancillary facilities. Chapter E1 of PDCP 2014 identifies the provision of a sports and recreation precinct within the subject site, forming the south-eastern portion of the Caddens Hill precinct, being developed by Legacy Property.

Figure 3 overleaf illustrates the location of the subject site in the context of the main elements of the Caddens Release Area Structure Plan, being an extract of Chapter E1 of PDCP 2014.

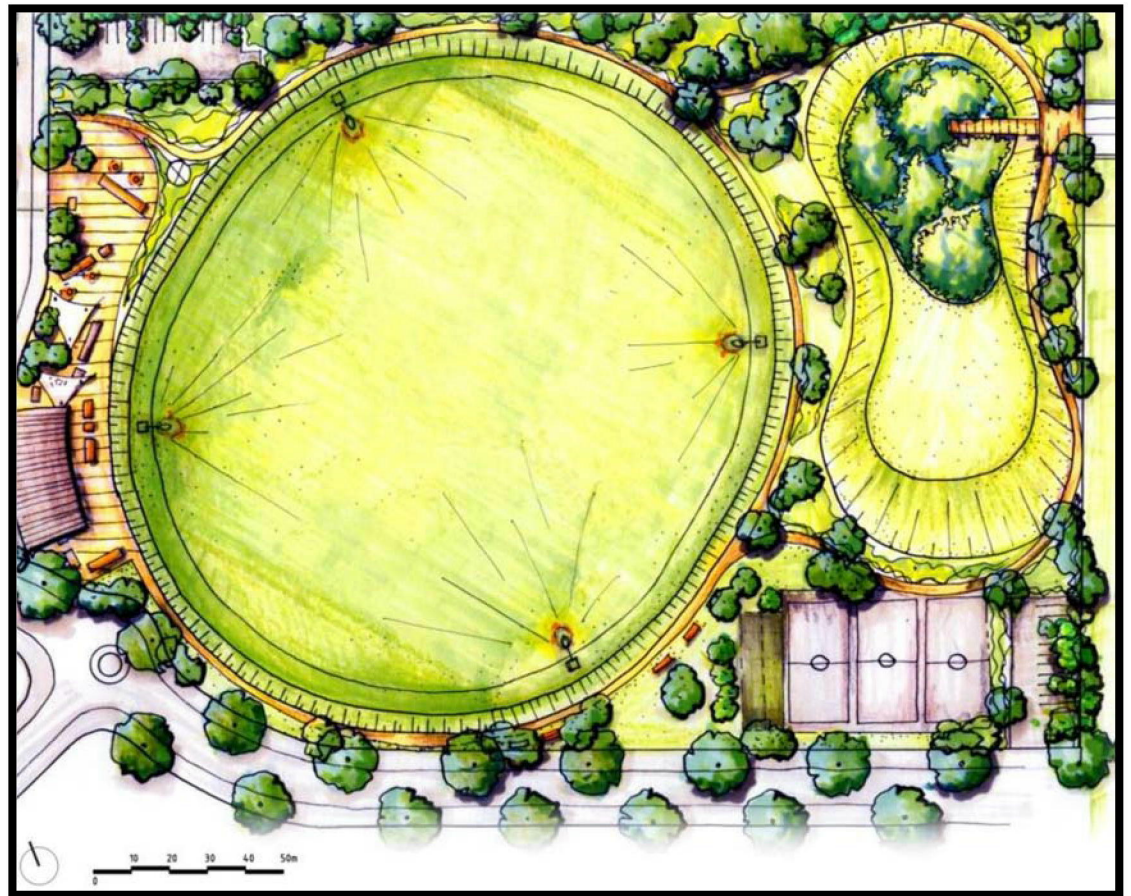
FIGURE 3
CADDENS RELEASE AREA STRUCTURE PLAN



Source: PDCP 2014 – Chapter E1

Chapter E1 of PDCP 2014 specifies that the 5.1 hectare site is to provide a local community focus and be designed generally in accordance with the Active Open Space Concept, provided overleaf as **Figure 4**.

FIGURE 4
ACTIVE OPEN SPACE CONCEPT FOR THE SUBJECT SITE



Source: PDCP 2014 – Chapter E1

PDCP 2014 specifies that the active open space within the subject site is to accommodate the following:

- Connections to the shared pedestrian and cycle path running along the northern verge of Caddens Road;
- An amenities block;
- A children's playground;
- A seating area;
- A large level area suitable for future playing fields with flood lights;
- Potential courts such as hard courts / tennis courts, bocce courts, netball courts and large chessboard;
- Canopy trees and structures to provide shade and amenity;
- Planting of robust endemic native species; and

- Car parking.

2.2 Built Form

The development application involves the provision of a sports and recreation precinct to be provided within the subject site. The precinct is proposed to accommodate the following, generally in accordance with that specified within Chapter E1 of PDCP 2014:

- A full size sports oval with lighting within the western portion of the site capable of accommodating various sporting fixtures including cricket and various football codes;
- A large detention basin within the north-eastern portion of the site;
- An informal half basketball practice court within the central eastern portion of the site;
- Two cricket practice nets to the north of the half basketball practice court;
- A children's playground adjacent to the to the south-west of the half basketball practice court;
- A viewing grandstand including amenities and change rooms adjacent and to the south-west of the children's playground;
- A periphery fitness loop shared pedestrian / cycle pathway connecting with a formalised fitness area accommodating various fitness stations;
- A formalised passenger vehicle parking area accommodating 57 parking spaces within the south-eastern corner of the site; and
- Formalised bicycle parking racks, capable of accommodating up to 20 bicycles, adjoining the passenger vehicle parking area.

Vehicular connectivity between the formalised passenger vehicle parking area and Caddens Road is proposed via separated ingress and egress driveways at the western and eastern ends of the parking area respectively. This passenger vehicle parking area is also proposed to provide maintenance access to the detention basin and emergency vehicle access to the oval, with connectivity between the parking area and the basin / oval being governed with removable bollards.

A series of pedestrian / cycle access gates are proposed to provide connectivity between the internal pedestrian and cycle paths and the planned shared path along the northern alignment of Caddens Road / Caddens Road Bypass and the eastern footpath of the local subdivision road to the west of the site, separate to the abovementioned vehicular access driveways.

3. SITE ACCESS & INTERNAL CIRCULATION

3.1 Access

3.1.2 Vehicular Access

Vehicular access between Caddens Road and the passenger vehicle parking area is proposed to be facilitated by separated 4.3m wide ingress and egress driveways, located approximately 70m to the east of Heaton Avenue and adjoining the south-eastern corner of the site, respectively.

In order to assess the suitability of the proposed site access arrangements, reference is made to AS2890.1:2004. This Standard provides driveway design specifications based on the land-use, the functional order of the frontage road and the number of parking spaces the driveways are to serve.

Based on the local (non-arterial) function of Caddens Road, the proposed sporting facility use of the site and the parking provision of less than 100 spaces, Tables 3.1 and 3.2 of AS2890.1:2004 specify, at minimum, the provision of a combined ingress / egress driveway providing a width of between 6 – 9m.

The proposed 4.3m wide separated ingress and egress driveways therefore exceed the minimum design specifications provided by AS2890.1:2004 and are accordingly considered satisfactory in terms of design.

The proposed driveway design arrangements are further assisted by the reasonably consistent vertical and horizontal alignment of Caddens Road in the immediate vicinity of the site resulting in good sight distance between the access driveways and the public road (even incorporating the planned realignment of Caddens Road to form Caddens Road Bypass). Further, sight distance between vehicles entering and exiting the driveways and public road users are assisted by the relatively level nature of the driveways on approach to the property boundary and the fact that there are no limitations to sight distance immediately adjoining the driveways.

Assessment of the potential impacts of the movement of vehicles between the site and Caddens Road with respect to existing and planned public road traffic demands and the influence of other abutting land-use access arrangements is contained within subsequent sections of this report.

3.1.2 Cycle / Pedestrian Access

A series of pedestrian / cycle access gates are proposed to provide connectivity between the internal pedestrian and cycle paths and the planned shared path along the northern alignment of Caddens Road / Caddens Road Bypass and the eastern footpath of the local subdivision road to the west of the site, separate to the abovementioned vehicular access driveways.

The central of the abovementioned access gates have been aligned with the planned western refuge island associated with the roundabout control to govern the adjoining junction of Caddens Road and Caddens Road Bypass.

3.2 Internal Circulation and Manoeuvrability

Passenger vehicles, upon entry to the site from Caddens Road via the ingress driveway, will travel in a forward direction to connect with the internal passenger vehicle parking area. The parking area is proposed to comprise two 90 degree parking rows being serviced by a single central circulation / manoeuvring aisle, running parallel to Caddens Road. The circulation / manoeuvring aisle is proposed to accommodate a one-way eastbound traffic function prior to connecting back with Caddens Road in the south-eastern corner of the site via the egress driveway.

The passenger vehicle parking area and connecting internal roadways have been designed to accord with the relevant requirements of AS2890.1:2004 and AS2890.6:2009, providing the following minimum dimensions:

- Standard parking space width = 2.6m;
- Disabled vehicular parking space width = 2.4m (with adjoining 2.4m wide shared area);
- Standard and disabled vehicular parking space length = 5.4m;
- Vehicular parking aisle width adjoining parking spaces = 5.8m;
- One-way straight roadway width = 4.3m (reducing to 3m associated with the maintenance and emergency access roadways servicing the detention basin and the sports field, respectively);
- Maximum parking module grade = 1 in 20; and
- Maximum grade throughout disabled parking spaces (including shared areas) = 1 in 40.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004 and AS2890.6:2009 specifications.

4 PARKING PROVISION

4.1 Proposed Parking Provision

4.1.1 Off-Street Parking

The sports and recreation precinct is proposed to provide a formalised car parking area containing 57 spaces, including two disabled spaces.

4.1.2 On-Street Parking

The community nature of the subject facility and the fact that it provides an extensive public road frontage is such that it is reasonable for some parking demand generated by the on-site uses to be accommodated within the immediately adjoining public roads. It is however acknowledged that significant portions of the immediately adjoining public roadway are not expected to be available for parking as a result of planned adjoining intersection controls, most notably the roundabout controlled junction of Caddens Road and Caddens Road Bypass (see Section 5 of this report).

Notwithstanding the above, the sports and recreation precinct provides the following immediately adjoining public road frontages which are currently and will continue to be capable of accommodating kerb-side parking following the redevelopment of the surrounding precinct:

- 50m of kerb space is available within Caddens Road between the Heaton Avenue and the proposed ingress driveway; and
- 70m of kerb space is available within Caddens Road between the proposed ingress and egress driveways.

The abovementioned adjoining kerb space is capable of generating in the vicinity of 20 passenger vehicles within a parallel arrangement.

Further to the above, it is noted that a further 20 passenger vehicles are expected to be capable of being accommodated within the planned local access road (Road No. 12) which will adjoin the development site to the west, following the redevelopment of that land (forming Stage 2 of the Legacy Property Caddens Hill precinct).

4.2 Assessment of Parking Requirements

4.2.1 Council Parking Requirements

PDCP 2014 provides locally sensitive parking requirements for a range of land-uses to ensure that new developments provide adequate off-street parking. This Policy however does not provide parking requirements for sports and recreation facilities such as that proposed.

The Active Open Space Concept and open space controls for the 5.1 hectare site contained within Chapter E1 of PDCP 2014 specify that some level of off-street parking is to be provided to support demand generated by the development. Whilst only indicative, the Active Open Space Concept (provided as **Figure 4** of this report) illustrates a suggested parking provision of between 10 and 15 passenger vehicle parking spaces.

A parking provision of 10 – 15 spaces, on face value, appears to be inadequate to accommodate the demand which could be generated by the various sporting and recreation components of the development and would therefore heavily rely on surrounding on-street parking supply.

The following sub-sections of this report provide discussion on the parking demand likely to be generated by the various development components based on other similar sporting and recreation facilities within the Penrith Local Government Area and the expected operational characteristics of the various development components.

4.2.2 Existing Sport and Recreation Facilities Parking Provision

In order to ascertain an indication of the appropriate parking provision for the subject development, this Practice has inspected a number of other similar sports and recreation precincts, located throughout the Penrith Local Government Area, as follows:

- Chameleon Reserve at Chameleon Drive, Erskine Park;
- Mark Leece Sporting Complex at Endeavour Avenue, St Clair;
- Jordan Springs Sports Fields at Cullen Avenue, Jordan Springs;
- Andromeda Playing Fields at Andromeda Drive, Cranebrook; and
- Londonderry Park at Carrington Road, Londonderry.

Table 1 overleaf provides a summary of the sporting and recreational components provided at each of the above facilities and the off-street parking capacities.

TABLE 1 EXISTING SPORTS & RECREATION FACILITIES WITHIN THE PENRITH LOCAL GOVERNMENT AREA SIMILAR TO THAT PROPOSED					
	Chameleon Reserve	Mark Leece Sporting Complex	Jordon Springs	Andromeda Playing Fields	Londonderry Park
Sports Fields	0	3	1	1	1
Formal Sports Courts	2	2	2	1	2
Practice Sports Courts	0	0	1	1	1
Children's Play Area	1	1	1	1	1
Amenities Block	1	1	1	1	1
Shared Exercise Path	1	1	1	0	0
Parking Provision	27	140	80	54	25

It is considered that practice sports courts, children's play areas, amenities blocks and shared exercise paths are largely ancillary in nature to the primary uses of sports fields and sports courts within the above existing and the proposed facilities. On this basis, the approximate average parking provision for the primary sporting field and sports court components of the existing observed facilities within the Penrith Local Government Area is as follows:

- 35 parking spaces per sports field; and
- 15 spaces per sports court.

Notwithstanding the above, for the purposes of this assessment and in order to generate an absolute worst case scenario, it is assumed that the practice half basketball court will generate parking demand in accordance with a full sized formal sports court.

4.2.3 Assessment of Operational Characteristics

In order to estimate the likely parking demand generated by various potential uses of the sports field and the practice sports court, an assessment of the likely operational characteristics of the potential activities is required to be undertaken. This involves an assessment of the number of players per sporting fixture, the number of officials likely to be present, allowance for changeover between fixtures, the number of spectators and the potential for car-pooling.

The proposed sports field is capable of accommodating cricket, rugby league, rugby union, hockey or soccer. The specific nature of the practice basketball court is that it can only accommodate basketball within an informal sporting fixture.

It is this practice's experience that an additional 25% allowance should be applied to the number of people at a sporting activity to take into consideration those people who arrive early for a fixture or remain at the venue following their fixture following the commencement of the next fixture. This changeover allowance is however effectively cancelled out by a 25% car-pooling rate, whereby one in four

players or officials at a sporting event travel with another player or official (or indeed, do not use a private motor vehicle to travel to and from the facility). For the purposes of this assessment it has been assumed that all spectators to sporting fixtures at the subject development will travel with players or officials, thereby not generating demand for parking.

On the basis of the previously presented likely operational characteristics, **Table 2** below has been formulated to summarise the likely parking demand generated by the proposed sports field and sports courts.

TABLE 2 OPERATIONAL ASSESSMENT OF PARKING DEMAND GENERATED BY POTENTIAL SPORTING FIXTURES					
Sports Type	No. of Players	No. of Officials	25% Change Over	25% Car Pooling	Parking Spaces Required
SPORTS FIELD					
Cricket	22	3	+6	-6	25
Rugby League	26	3	+7	-7	29
Rugby Union	30	3	+8	-8	33
Hockey	22	3	+6	-6	25
Soccer	22	3	+6	-6	25
PRACTICE SPORTS COURT					
Basketball	10	2	+3	-3	12

Table 2 indicates that the following maximum parking demands:

- 33 parking spaces per sports field; and
- 12 spaces per practice sports court.

4.2.4 Discussion on Likely Parking Demand

The average observed parking provision of existing similar sporting facilities throughout the Penrith Local Government Area has been reported to be 35 spaces per sports field and 15 spaces per sports court. Further, an assessment of the likely peak parking demand based on operational characteristics has indicated a maximum demand of 33 spaces per sports field and 12 spaces per sports court. The consistency of the results suggests accuracy in their method of determination however, in order to generate an absolute worst case scenario, the higher of the two assessments has been adopted (i.e. 35 spaces per sports field and 15 spaces per sports court).

On the basis of the proposed development involving the provision of one sports field and one informal practice sports court, the proposal is expected to generate a peak parking demand in the order of 50 spaces.

4.2.5 Suitability of Parking Provision

It has been concluded that the proposed sports and recreational facility will generate a maximum parking demand of 50 spaces. The development is proposed to provide 57 spaces. The development parking provision is therefore

projected to be suitably capable of the peak operational parking demands generated by the primarily site components.

Notwithstanding the above, it has previously been assessed that the sports and recreation precinct will immediately adjoin public road frontages which are capable of accommodating between 20 – 40 parked vehicles in a parallel arrangement. The existing and planned low density residential nature of the immediately adjoining land-uses is such that it is expected that demand for on-street parking within the subject vicinity will be low. It is therefore considered that the immediately adjoining public road network will be capable of accommodating a moderate level of parking demand over and above that calculated to be demanded by this assessment if so require, without unreasonable impacts on surrounding on-street parking supply or residential amenity.

5. EXISTING / PLANNED TRAFFIC CONDITIONS

5.1 Surrounding Road Network

5.1.1 Existing Road Network

Caddens Road currently performs a local collector road function under the care and control of Penrith City Council. It provides an east-west connection generally between Claremont Meadows in the east and Kingswood in the west, where it intersects with Gipps Street and Bringelly Road, respectively. It is constructed to a semi-rural standard with sealed pavement and road shoulders as well as some kerb and gutter in sections.

Caddens Road, immediately adjoining the subject site provides one through lane of traffic in each direction, largely separated by double barrier centre lines. A formalised parking lane and kerb and gutter is provided along the southern alignment adjoining and servicing modern urban detached residential dwellings. An unsealed shoulder is provided along the northern alignment immediately adjoining the subject property commensurate with the current undeveloped rural land use.

Traffic flow within Caddens Road is governed by a sign posted speed limit of 60km/h, with speed humps provided at regular intervals ensuring compliance with the posted limit.

Caddens Road forms T-junctions with both Heaton Avenue and Hermitage Circuit in the immediate vicinity of the subject site. Both junctions operate under major / minor priority control, with Caddens Road forming the priority route.

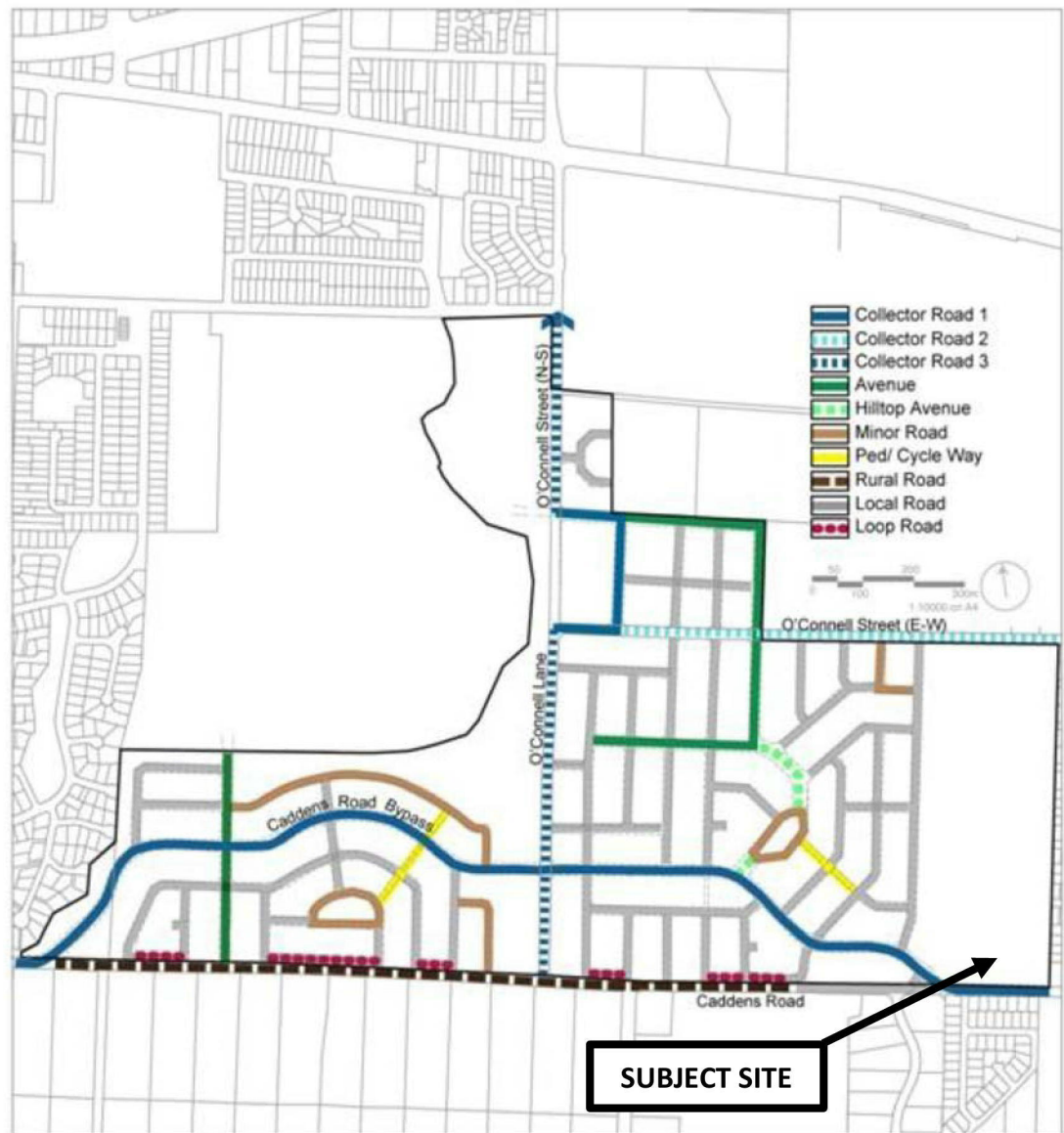
Heaton Avenue performs a minor local access street function servicing modern urban detached residential dwellings. It provides an approximately 7m wide pavement providing one through lane of traffic in each direction in conjunction with parallel parking along both formalised kerb alignments.

Hermitage Circuit performs a similar minor local access street function, however it services larger lot rural type residential dwellings. It provides an 8m wide pavement however it provides unsealed shoulders although rolled kerb and gutter is provided in places, commensurate with the abutting rural style residential properties.

5.1.2 Planned Road Network

The road network within the Caddens Release Area and indeed, within the immediate vicinity is subject to significant change in the next few years in accordance with that prescribed in PDCP 2014. The planned road network layout and hierarchy within the Release Area as defined within PDCP 2014 is illustrated within **Figure 5** overleaf.

FIGURE 5
PLANNED CADDENS RELEASE AREA ROAD NETWORK AND HEIRARCHY



Source: PDCP 2014 – Chapter E1

Figure 5 indicates the following in the immediate vicinity of the site:

- The existing primary east-west Caddens Road collector route is to be replaced with the Caddens Road Bypass collector road which is to provide the primary east-west spinal route through the Caddens Release Area, prior to diverting back to the south to align with the existing Caddens Road in the south-western and south-eastern corners of the Release Area;
- Caddens Road to the west of the site is to provide a series of road closures and provide a reduced traffic function forming loop roads for low order residential access streets providing a north-south alignment;

- The Caddens Road Bypass route is to provide a south-east / north-west alignment to the west of the site, prior to forming a T-junction with Caddens Road immediately adjacent to the south-western corner of the site;
- To the west of the abovementioned junction of Caddens Road Bypass and Caddens Road, Caddens Road Bypass is planned to form a T-junction with a north-south local access road (known as Road No. 12) running along the western boundary of the subject site;
- Caddens Road is to continue to form a T-junction with Hermitage Circuit to the south-west of its planned junction with Caddens Road Bypass; and
- Caddens Road is to continue to form a T-junction with Heaton Avenue to the east of its planned junction with Caddens Road Bypass.

The section of Caddens Road adjoining the subject site and thence extending to the north-west forming Caddens Road Bypass is planned to provide a 12m carriageway within a 22.6m wide road reservation. The collector road is planned to provide one 3.5m wide travel lane in each direction in conjunction with formalised 2.5m wide parking lanes. The southern verge is planned to provide a 1.5m wide footpath whilst the northern verge (adjoining the subject site) is planned to provide a 2.5m wide shared path.

The local road extending to the north from Caddens Road Bypass forming the western site boundary is planned to provide an 8m wide carriageway within a 16m wide road reservation. The carriageway width is planned to facilitate the provision of parallel parking along both kerb alignments, in conjunction with two-way traffic flow.

The junction of Caddens Road Bypass and Caddens Road is planned to be governed by single lane circulating roundabout intersection control, whilst all other intersections within the immediate vicinity of the site are to be governed by major / minor priority control.

5.2 Traffic Volumes and Conditions

5.2.1 Existing Conditions

Staff of Stanbury Traffic Planning have undertaken observations of Caddens Road in the immediate vicinity of the development site during various periods during February 2017. These observations have indicated that Caddens Road accommodates two directional traffic demands of approximately 300 vehicles per hour during weekday commuter peaks.

Such traffic demands provide motorists with a good overall level of service during peak periods, ensuring that motorists can manoeuvre in the traffic stream with very little impedances. Motorists have accordingly been observed to be able to undertake turning movements from abutting properties and lower order intersecting roads with little delay.

5.2.2 Planned Conditions

The *Caddens Release Area – Transport Management and Accessibility Plan* prepared in 2008 by Masson Wilson Twiney projected future traffic conditions within and surrounding the Caddens Release Area incorporating full redevelopment of the Caddens Area (including the subject site) and the surrounding Werrington Enterprise Living and Learning (WELL) Precinct. The Transport Management & Accessibility Plan indicates the following weekday commuter peak hour traffic demands within the immediate vicinity of the site:

- Caddens Road is projected to accommodate a two-way traffic demand of approximately 900 vehicles per hour immediately adjacent to the subject site (to the east of Caddens Road Bypass);
- Caddens Road Bypass is projected to accommodate a two-way traffic demand of approximately 800 vehicles per hour, to the west of the Caddens Road (to the west of the site);
- Caddens Road is projected to accommodate very low traffic demands (less than 20 vehicles) to the west of the subject site and south of the Caddens Bypass Road route; and
- The local access road immediately adjoining the site to the west is projected to accommodate two-directional traffic demands of less than 150 vehicles.

Intersection modelling undertaken by Masson Wilson Twiney and reported upon within the Transport Management and Accessibility Plan projected that the adjoining roundabout controlled junction of Caddens Road and Caddens Road Bypass will operate with a good level of service during weekday commuter peaks, with spare capacity.

Similarly, the priority controlled junction of Caddens Road Bypass and the local access road running along the western boundary of the site was modelled to provide a good level of service with spare capacity.

5.3 Public Transport

5.3.1 Existing Services

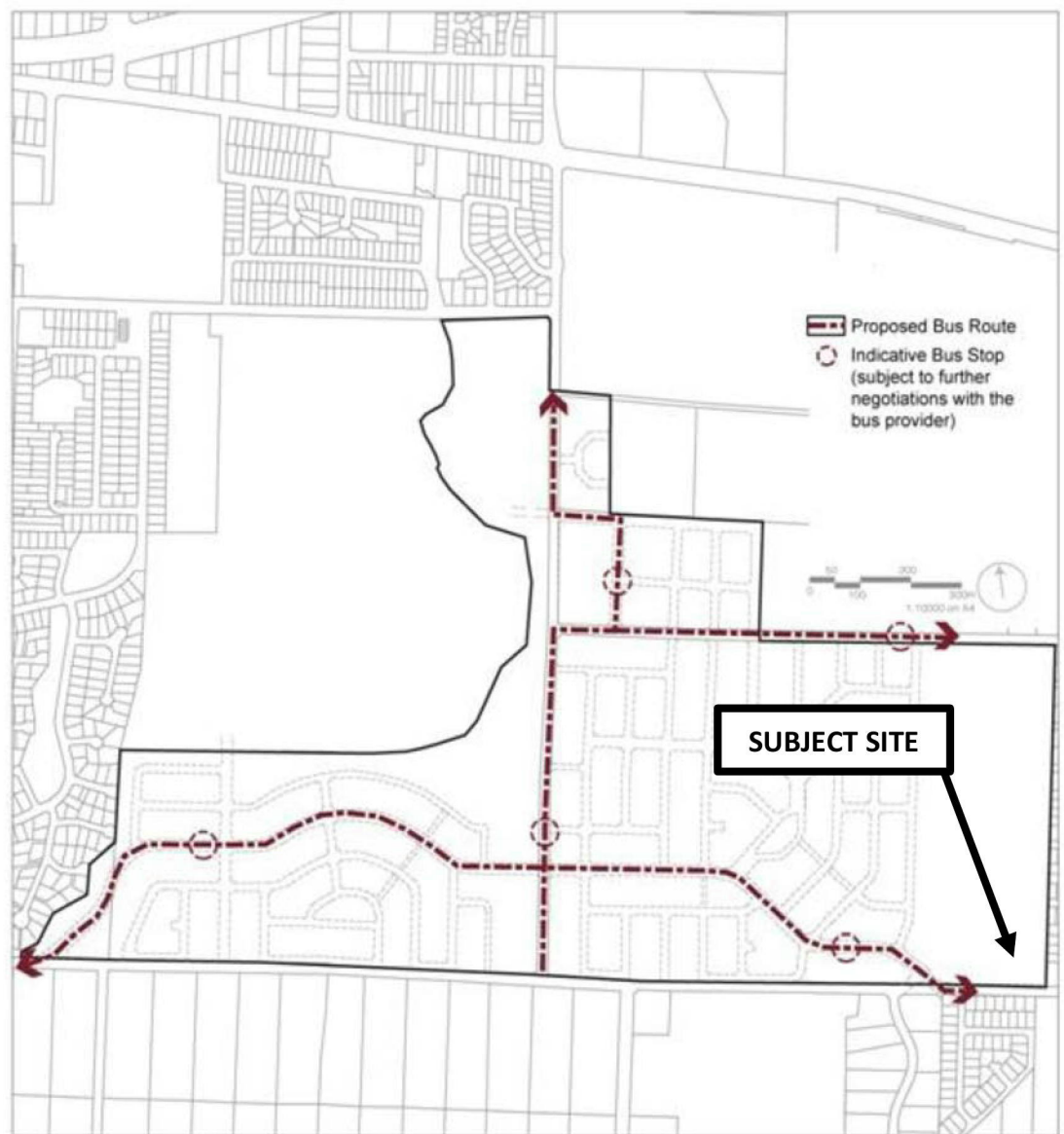
Busways operates Route 778 along Caddens Road, connecting the Caddens precinct with St Marys Railway Station. This route provides a service frequency of approximately 30 minutes during weekday commuter peaks, extending to 60 minutes during other weekday periods and on weekends.

The above bus route provides connectivity to the Sydney metropolitan rail network at St Marys. St Marys Railway Station provides connectivity to services operating along the T1 (North Shore, Northern & Western) Line. The T1 Line provides connectivity to the remainder of the rail network with interchanges at Blacktown (T5 Cumberland Line), Granville (T2 Airport, Inner West & South Line), Clyde (T6 Carlingford Line), Lidcombe (T3 Bankstown Line and T7 Olympic Line) and the City (T4 Eastern Suburbs & Illawarra Line).

5.3.2 Planned Services

Bus servicing of the Caddens Release Area is planned to be embellished following the redevelopment of the precinct. PDCP 2014 provides indicative bus routes and stop locations within the precinct, as illustrated within **Figure 6** below.

FIGURE 6
PLANNED PUBLIC TRANSPORT SERVICING OF THE CADDENS RELEASE AREA



Source: PDCP 2014 – Chapter E1

Figure 6 indicates that Caddens Road / Caddens Road Bypass is planned to accommodate east-west bus services through the precinct, with stops indicatively located to the west of the site within easy walking distance. The bus routes are expected to provide connectivity to the Kingswood precinct to the west and the Werrington precinct to the north in conjunction with the existing service connecting with St Marys to the north-east.

5.4 Pedestrian / Cycle Infrastructure

5.4.1 Existing Infrastructure

Pedestrians are currently provided with a footpath along the southern and eastern verges of Caddens Road and Heaton Avenue respectively, servicing the abutting urban residential dwellings.

There is no existing cycle infrastructure in the immediate vicinity of the site.

5.4.2 Planned Infrastructure

The following additional pedestrian and cycle infrastructure is planned within the immediate vicinity of the subject site:

- A shared path is planned along the northern verge of Caddens Road / Caddens Road Bypass immediately adjacent to the subject site;
- Footpaths are planned along both verges of the local access road running along the western boundary of the site; and
- Pedestrian refuges are planned to be provided within approach splitter islands associated with the roundabout junction control to govern the intersection of Caddens Road and Caddens Road Bypass.

6. PROJECTED TRAFFIC CONDITIONS

6.1 Traffic Generation

The Roads & Maritime Service provides average traffic generation rates for a range of land-uses within the *Guide to Traffic Generating Developments* publication. Traffic generation rates for the proposed sports and recreational precinct are however not provided. The traffic generating capacity of the development is therefore assessed via an investigation into the likely operational characteristics of the primary development components, being the sports field and the practice sports court.

Due to the variety and mix of sports capable of being undertaken within the development, the methodology adopted for the purposes of this report is to calculate the traffic generation based on predicted turnover of car parking spaces. Durations of sporting fixtures depend on the specific sport being played. Match times for sporting events range from 30 minutes to six hours depending on the sport played and the junior or senior age of participants. A conservative approach in determining the average turnover of car parking spaces, and hence a peak hour trip traffic generation, is to assume each parking space turns over on average every hour, thereby creating two vehicle trips (i.e. one in and one out).

Section 4 of this report presents that the development is projected to generate a peak parking demand of 50 vehicles at any one time. Based on an average length of stay of one hour, the sports and recreational precinct is projected to generate 100 peak hour vehicle movements, comprising 50 ingress and 50 egress trips.

6.2 Traffic Impacts

The proposed sports and recreation precinct has been projected to generate a peak of 100 vehicle trips to and from the site in any given hourly period, representing less than one ingress and one egress vehicle movement per minute during the peak operational periods of the facility. Such a level of additional traffic is not envisaged to result in any undesirable impacts on the overall safety and efficiency of the adjoining road network for the following reasons:

- Ingress and egress movements are not projected to impede one another as they will be separated by approximately 70m, given the separated nature of the proposed ingress and egress driveways servicing the development;
- The consistent vertical and horizontal alignment of Caddens Road in the vicinity of the proposed access driveways is anticipated to provide a good level of sight distance between the adjoining road network and the access driveways;
- The proposed sport and recreational facility is anticipated to generate peak operational conditions during weekday evening and weekend periods, not necessarily occurring simultaneously with the operational commuter peaks of the adjoining public road network; and

- The adjoining public road network has been assessed by others to provide motorists with an acceptable level of service incorporating the full redevelopment of the surrounding precinct, including the subject development.

In consideration of the above, it is considered that the surrounding road network will be readily capable of accommodating the extent of traffic projected to be generated by the subject development in a safe and efficient manner.

6. CONCLUSION

This report assesses the potential traffic and parking implications associated with a proposed sports and recreational facility to be located at Lot 754 DP 1180111 Caddens Road, Caddens. Based on this assessment, the following conclusions are now made:

- The location and form of the proposed sports and recreation precinct is reasonably consistent with the Structure Plan formulated for the Caddens Release Area contained within PDCP 2014;
- The proposed site access arrangements are compliant with the relevant AS2890.1:2004 specifications with respect to driveway design and provision of sight distance;
- The proposed off-street passenger vehicle parking area has been designed to accord with the relevant requirements of AS2890.1:2004 and is therefore envisaged to provide motorists with safe and efficient internal manoeuvring arrangements;
- The subject development has been projected to generate a peak operational parking demand of 50 vehicles;
- The proposed off-street parking provision of 57 spaces is therefore projected to satisfactorily accommodate the peak operational parking demand as required;
- The adjoining public road network has however been assessed to be capable of accommodating between 20 and 40 parking passenger vehicles in a parallel arrangement immediate adjacent to the subject site, depending on the evolution of the planned road network alterations;
- It is accordingly envisaged that the immediately adjoining public road network is further capable of accommodating the additional peak operational parking demands over and above that estimated within this assessment, without unreasonable impacts on adjoining road safety and efficiency or residential amenity;
- The adjoining public road network currently accommodates moderate traffic demands with spare capacity;
- The adjoining road network is planned to undergo significant alteration /upgrade to accommodate the full Caddens Release Area redevelopment;
- The subject development has been projected to generate up to 100 vehicle movements to and from the subject site, in any given hourly period, representing less than one ingress and one egress vehicle movement per minute;
- The abovementioned extent of traffic generation is not projected to occur simultaneously with the operational commuter peaks of the surrounding road

network;

- The planned adjoining public road network has been previously assessed by others to be capable of accommodating the future peak traffic demands, including the traffic projected to be generated by the proposed sports and recreational precinct.

It is considered there is no parking or traffic related issues that should prevent approval of the subject application. This action is therefore recommended.



Appendix B

Site Audit Statement/Report (Under Separate Cover)



Appendix C

Salinity Report (Under Separate Cover)