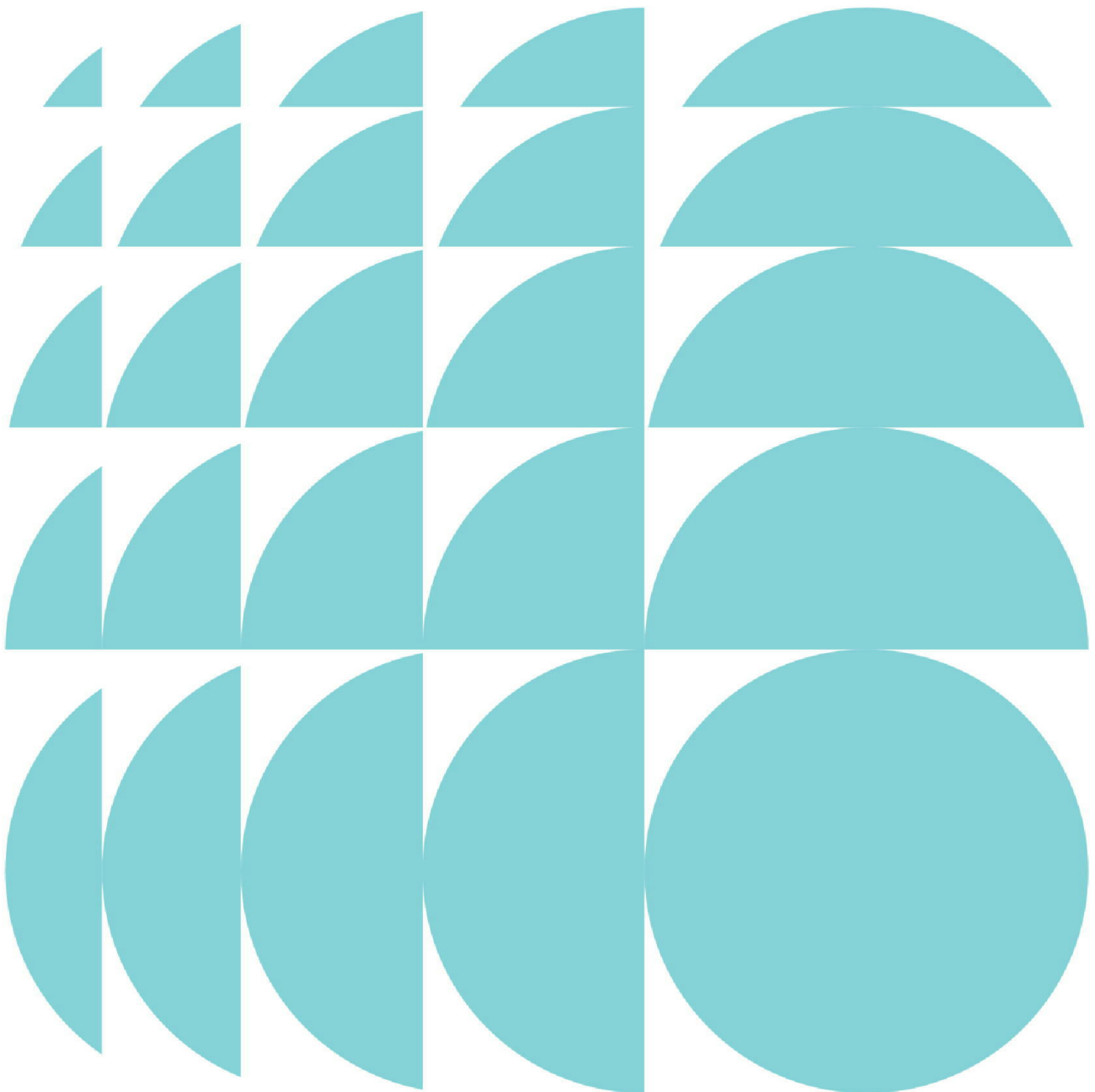




CONTACT

Christopher Curtis Senior Urbanist CCurtis@ethosurban.com +61 2 9956 6962

Reproduction of this document or any part thereof is not permitted without prior written permission of Ethos Urban Pty Ltd.

This document has been prepared by:



This document has been reviewed by:



Geordie Gilmour, Christopher Curtis 22 June 2018 Tim Ward 22 June 2018

Reproduction of this document or any part thereof is not permitted without written permission of Ethos Urban Pty Ltd. Ethos Urban operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed, it is a preliminary draft.

VERSION NO.	DATE OF ISSUE	REVISION BY	APPROVED BY
C	22/06/2018	CC	TW

Ethos Urban Pty Ltd
ABN 13 615 087 931.
www.ethosurban.com
173 Sussex Street, Sydney
NSW 2000 t 61 2 9956 6952

Contents

1.0	Introduction	4
1.1	Concurrences and Referrals	4
1.2	Pre-Lodgement Meeting	4
1.3	Background	5
1.4	Planning Agreements	10
2.0	Site Analysis	10
2.1	Site Location and Context	10
2.2	Site Description	11
2.3	Existing Site Conditions	11
3.0	Description of Proposed Development	16
3.1	The Village Centre	17
3.2	Subdivision	18
3.3	Site Grading	18
3.4	Access and Movement	19
3.5	Streetscape	20
3.6	Stormwater Management	20
3.7	Contamination Management	21
3.8	Utility Services	22
3.9	Waste Management	22
3.10	Construction Management	22
4.0	Assessment of Environmental Impacts	23
4.1	Environmental Planning Instruments	23
4.2	Pre-DA Advice	25
4.3	Subdivision Design	26
4.4	Streetscape and Public Domain	27
4.5	Ecology	27
4.6	Contamination	27
4.7	Bushfire	28
4.8	Heritage	28
4.9	Traffic and Access	29
4.10	Water Cycle Management	30
4.11	Construction Management	34
4.12	Site Suitability	35
4.13	Social and Economic Issues	35
4.14	Public Interest	35
5.0	Conclusion	36

Figures

Figure 1	ADI St Marys Site Location Plan	5
Figure 2	Overall Site Plan of the St Marys ADI Site	7
Figure 3	Amendment No. 1 to the Central Precinct Plan	8

Contents

Figure 4	The Stage 3D Site in the Context of the Broader Central Precinct Site, and Surrounding Development	11
Figure 5	The Stage 3D site is located near the centre of the wider Central Precinct urban area	12
Figure 6	The Proposed Stage 3D Subdivision Layout	17
Figure 7	The existing layout (thin line) and the proposed boundary layout (bold line) of the Village Centre	18
Figure 8	Proposed road hierarchy for Stage 3D	19
Figure 9	Central Precinct Stormwater Quality Management Strategy	31

Tables

Table 1	Proposed Road Network Details	19
Table 2	Pre-DA Key Points	25
Table 3	Stormwater Quality Treatment Modelled Effectiveness	32
Table 4	Central Precinct Salinity Review Summary of Results	33

Appendices

Appendix A <i>RPS</i>	Subdivision Plans
Appendix B <i>Cardno</i>	Civil Engineering & Infrastructure Report
Appendix C <i>Cardno</i>	Civil Engineering Plans
Appendix D <i>Cardno</i>	Cost Summary
Appendix E <i>EcoLogical</i>	Bushfire Protection Assessment
Appendix F <i>WSP</i>	Traffic Impact Assessment
Appendix G <i>WSP</i>	Salinity Assessment Review
Appendix H <i>Cardno</i>	Waste Management Plan
Appendix I <i>AECOM</i>	Streetscape Plans

Contents

Appendix J Pre-Lodgement Advice
Penrith City Council

Appendix K Urban Design Review Panel Advice
Penrith City Council

Supplementary Information Item 1 Village Centre Urban Design Concept Masterplan
AECOM

1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Penrith City Council in support of a Development Application (DA) for Subdivision and Civil Works at Stage 3D of Central Precinct, St Marys (herein referred to as 'Stage 3D' or 'the site').

The DA seeks approval for:

- the subdivision of part of Lot 3000 DP1220974, to dedicate public roads and create one 'superlot' for the future town centre;
- boundary adjustments to Lots 1308 and 1309 on DP1215096 to reflect the agreed scale of the Village Centre lot and accommodate the road design;
- design and construction of the proposed internal road network, including:
 - internal local roadways;
 - on-street parking;
 - pedestrian and cycle ways;
 - road reserve landscaping; and
 - services and stormwater drainage infrastructure.
- provision of utility infrastructure such as stormwater drainage, sewerage, telecommunications and water;
- grading of the site for final town centre lot, landscape shaping, boundary interfaces and roadway levels; and
- associated street tree planting, lighting and embellishments.

This SEE has been prepared by Ethos Urban on behalf of Maryland Development Company (Lendlease), and is based on the Subdivision Drawings provided by RPS (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs, the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

1.1 Concurrences and Referrals

The proposed development is 'integrated development' in accordance with section 91 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). In addition to development consent, the development requires a bushfire safety authority issued by the Commissioner of the Rural Fire Service (RFS), in accordance with section 100B of the *Rural Fires Act 1997* (RFA 1997). Please refer to **Sections 4.1.6** and **4.7** for further information.

1.2 Pre-Lodgement Meeting

A pre-lodgement meeting (pre-DA) was held with Penrith Council on 17 May 2017 (PL17/0045) regarding this Stage 3D application, as well as Stages 4A, 4B, 3B1, 3B2, and 3C. An application for Stages 4A & 4B was lodged with Penrith City Council on 9 June 2017 and approved on 20 December 2017 (DA17/0491). An application for Stage 3B1 was lodged on 25 July 2017 and approved on 27 November 2017 (DA17/0675). An application for Stage 3B2 was lodged on 25 September 2017 and is currently under assessment (DA17/0889). Stage 3C will be subject to a future application.

Lendlease and AECOM also presented the Concept Village Centre Masterplan to Council staff (from Planning, Engineering, Landscaping and Community departments) on 1 February 2018. Council's Urban Design Review Panel have also reviewed the proposal for the Village Centre on 14 February 2018 and provided advice and

comment (UDRP18/0004). Additional comments were received from Council on 22 March 2018. The relevant pre-DA matters are addressed in **Section 4.2** of this report.

1.3 Background

1.3.1 St Marys Site

The former Australian Defence Industries (ADI) site at St Marys (the St Marys site) was endorsed by the NSW Government for inclusion on the Urban Development Program (UDP) in 1993. With a total site area of 1,545 hectares, the St Marys site is located approximately 45km west of the Sydney CBD, 5km north-east of the Penrith City Centre and 15km west of the Blacktown City Centre, as shown in **Figure 1**.

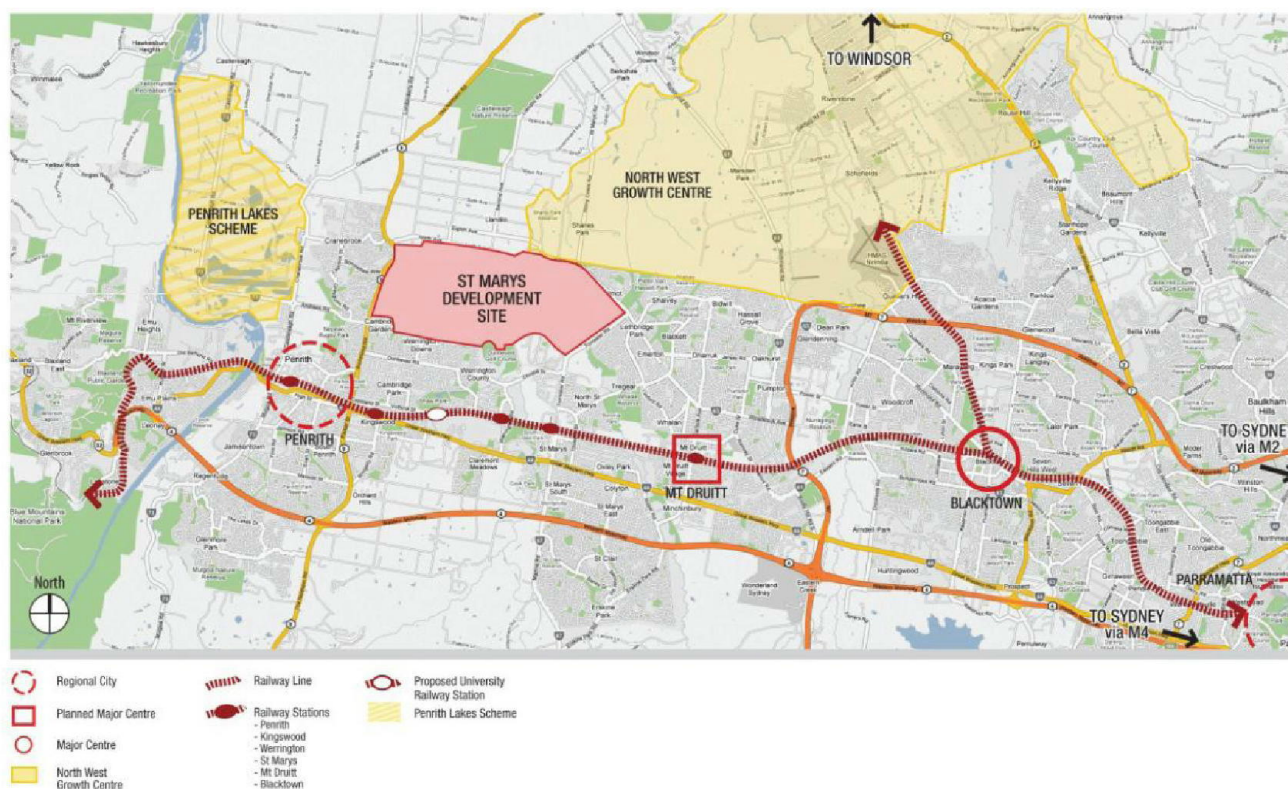


Figure 1 ADI St Marys Site Location Plan

Source: St Marys Central Precinct Concept Plan

Since 1993, the St Marys Site has been earmarked to provide housing for Sydney's growing population within an environmentally sustainable framework. Development of the site has been underway since 2004.

Following the St Marys site's inclusion on the UDP in 1993, it was agreed between Blacktown City Council (BCC) and Penrith City Council (PCC) (as the relevant local government authorities for the land) and the State Government that any rezoning of the St Marys site for urban development would occur via a Sydney Regional Environmental Plan (SREP) process.

Prior to preparing the SREP, in accordance with the provisions of the Environmental Planning Assessment Act 1979, a Regional Environmental Study (RES) was prepared.

The time between 1994 and 2000 reflects a period in which numerous and extensive investigations were undertaken into the environmental values and development capacity of the St Marys site. This period also involved input and consultation with BCC and PCC, relevant state agencies, and the general public.

The first significant body of work involved preparing the RES, which was exhibited for public comment in October 1995, and finalised in May 1996. The RES investigated the key planning issues of:

- biodiversity;
- aboriginal heritage;
- decontamination;
- total water cycle management;
- transport:
- urban form;
- air quality; and
- business/employment development.

The RES concluded that the St Marys site was suitable for urban development, subject to further assessment of Aboriginal heritage, biodiversity, and flooding at the site. This additional information helped inform the joint State and local government Section 22 committee formed (under the EP&A Act) to determine areas which should be conserved for biodiversity and Aboriginal heritage purposes and areas suitable for urban development.

The SREP and accompanying Environmental Planning Strategy (EPS) for the St Marys site were made in 2001 to formally set in motion the achievement of sustainable urban development outcomes at the St Marys site.

1.3.2 Sydney Regional Environmental Plan No. 30 – St Marys

Sydney Regional Environmental Plan Number 30 is the main statutory planning framework document for the St Marys site. It contains planning principles, objectives, zoning and other provisions to control development.

At the time of the gazettal of SREP 30, the planning strategy for development of the St Marys site included:

- establishing a 630-hectare Regional Park;
- dedicating 48 hectares of regional open space for parks and passive and active recreation areas; and
- developing approximately 730 hectares of land for urban uses.

There have been two subsequent amendments to SREP 30, most noteworthy (from a biodiversity conservation perspective) was the increase in the area zoned for Regional Park (reflecting the Commonwealth Government's decision to conserve all land listed by the Australian Heritage Commission on the Register of the National Estate). This particular amendment resulted in the protection of a further 220 hectares of Cumberland Plain Woodland (CPW), bringing the area of land zoned as Regional Park to nearly 900 hectares. A third amendment is currently being assessed by the Department of Planning and Environment which seeks to rezone the employment land in the northern area of Central Precinct to urban.

The land set aside for urban development (outside of the future 900ha Regional Park) is included within one of six (6) development precincts established under SREP 30 (refer to **Figure 2**). The subject site is located within the development precinct referred to as 'Central Precinct'.



Figure 2 Overall Site Plan of the St Marys ADI Site

Source: Central Precinct Plan

Prior to consent being able to be granted for development within a precinct, SREP 30 requires that the Minister first declare land as a release area, and following this a Precinct Plan is prepared and adopted for the precinct. In this regard, the Central (and Western) Precinct were declared release areas by the then Minister for Planning on 29 September 2006. These releases follow earlier declarations from the Minister for the release of other precincts, including the Eastern, North Dunheved and South Dunheved Precincts.

1.3.3 The Central Precinct Plan and Development Control Strategy

Upon gazettal of Amendment No. 2 of SREP 30 in February 2009, the Central Precinct was zoned Urban in the southern part of the Precinct and Employment in the northern part of the Precinct. Land zoned Urban is intended to accommodate primarily residential uses, with limited non-residential uses such as local retail and commercial uses.

The Employment zone is intended to accommodate primarily employment generating land uses which are compatible with surrounding development and which will complement established employment areas and retail and commercial centres in the Blacktown and Penrith Local Government Areas.

The Central Precinct Plan (CPP) and accompanying Development Control Strategy (DCS) were adopted by Penrith Council at its ordinary meeting on 23 March 2009. These are to guide the future development of the Central Precinct. Currently, Amendment No. 1 of the CPP is due to be endorsed shortly by Penrith Council. This amendment seeks the relocation of the Village Centre character area to the central area of the Precinct. This will provide greater flexibility for the future development of the Village Centre through its relationship to the adjacent Regional Open Space. Amendment No. 2 of the CPP is also being considered by Penrith Council and seeks changes to the DCS component to provide a wider variety of housing typologies.

The CPP illustrates the way the Central Precinct is to be developed. The Framework Plan of the CPP, as proposed in Amendment No. 1, is provided at **Figure 3**. As illustrated, the proposed development of the Central Precinct entails:

- employment and related uses in the northern part of the precinct;
- a Village Centre Character Area, comprising a mix of retail, commercial, community, open space and residential uses, in the central part of the precinct;

- predominantly residential development in the remainder of the precinct;
- construction of roads, including external connections to both the west and east, and stormwater infrastructure; and
- provision of local open space, riparian corridors, and stormwater basins.

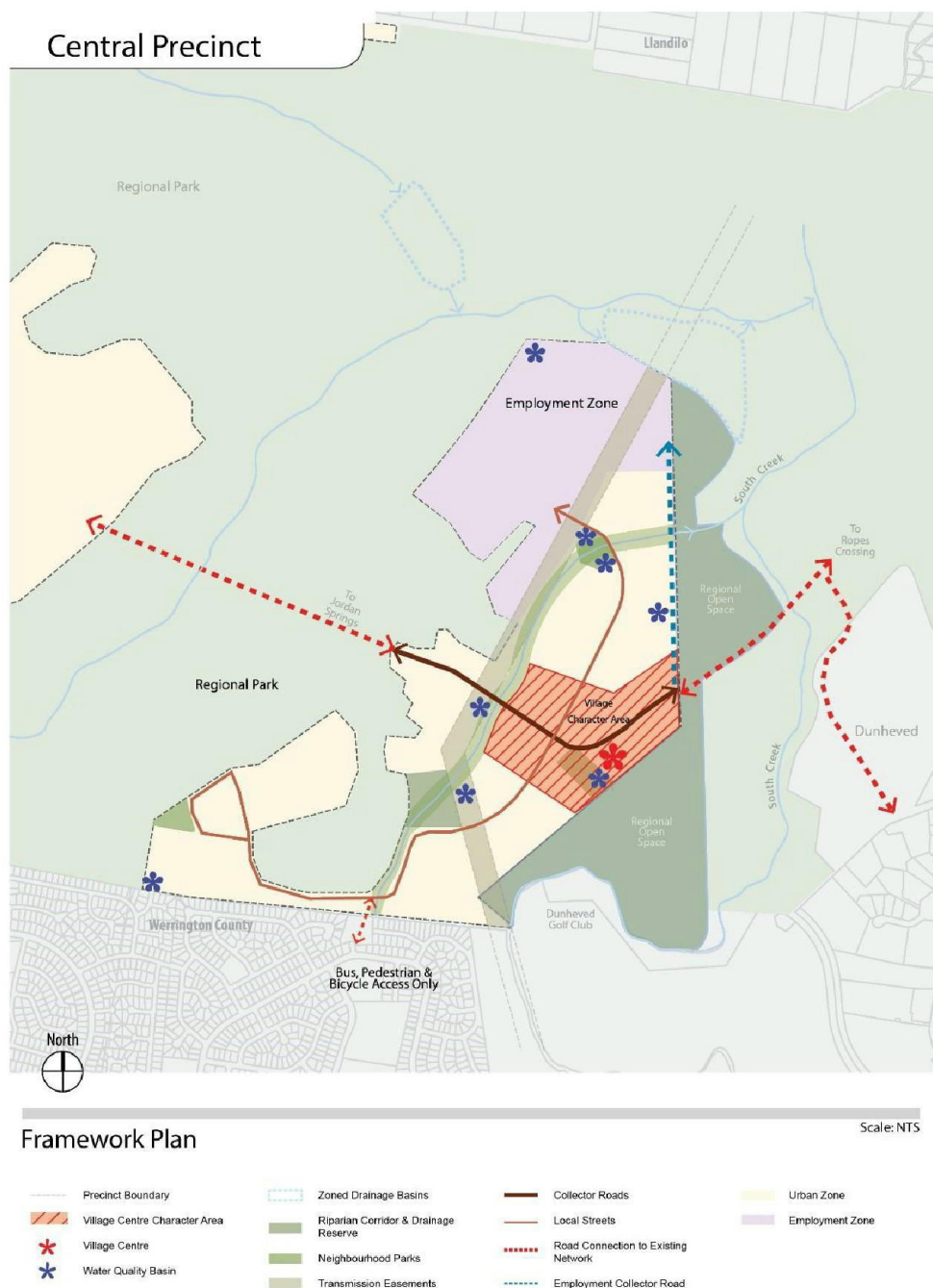


Figure 3 Amendment No. 1 to the Central Precinct Plan

Source: St Marys Central Precinct Concept Plan – Amendment No. 1

1.3.4 Previous DAs

This DA must be considered within the context of the other key DA's for Central Precinct already lodged/approved by Council. Of particular importance to the subject DA are the following:

- Bulk Earth Works, Interim Stormwater Infrastructure, Landscaping, Tree Removal, and Environmental Management Works Including Realignment of an Existing Riparian Corridor. The application is classified as 'Designated Development' being a Waste Management Facility or Works - Landfilling which required determination by the NSW Joint Regional Planning Panel – DA14/1228, approved 20/8/2015;
- Subdivision of One Allotment into Five Allotments for the Future Regional Park, Central Precinct and Residue Lots – DA14/1429, approved 15/2/2016;
- Stage 1 Subdivision, the subdivision of Lot 1037 in DP1149525 to create 380 residential lots in 10 sub-stages and associated civil works and landscaping – DA15/0299, approved 19/11/2015;
- Stage 2 Subdivision, creation of 278 x Residential Torrens Title Lots, 4 x Residue Lots and Associated Road Construction, Drainage and Earthworks, Landscape Works and Bus Only Connection (Southern Boundary) – DA15/1216, approved 9/3/2016;
- Stage 3A Subdivision, creation of 79 x Torrens Title Residential Lots, 1 x Residue Lot and Associated Road Construction & Infrastructure Works - DA16/0113, approved 30/12/2016;
- Stage 4A & 4B Subdivision, creation of 142 x Torrens Title Residential Lots, 2 x Residue Lots and Associated Road Construction & Infrastructure Works - DA17/0491, approved 20/12/2017;
- Stage 3B1 Subdivision, creation of 53 x Torrens Title Residential Lots and Associated Landscape and Civil Works - DA17/0675, approved 27/11/2017;
- Stage 3B2 Subdivision, consolidation of 2 x Lots into 1 x Open Space Lot and Torrens Title Subdivision x 4 Residue Lots & Public Roads - DA17/0889, currently under assessment;
- Stage 5A Subdivision, subdivision into 119 x Residential Lots, 1 x Drainage Lot & Public Roads – DA17/0920, currently under assessment;
- Demolition of the East West Connector Road – DA17/0834, approved 21/2/2018;
- Site Remediation Works of Land Under Historical Material Stockpiles - DA16/0888, approved 7/11/2017;
- Stage 1 Blacktown Ropes Connector – Construction of approx. 1.5km of the East West Connector Road (West) and construction of a new Ropes Creek Bridge – DA-18-00559, lodged with Blacktown City Council on 29/3/2018;
- Stage 2 Blacktown Ropes Connector – Construction of approx. 670m of the East West Connector Road, 850m of the Dunheved Links Road, and construction of a new South Creek Bridge – DA-18-00561, lodged with Blacktown City Council on 29/3/2018;
- Stage 2 Blacktown Ropes Connector – Construction of East-West Connector Road (including South Creek Bridge and Dunheved Links Road) and bulk earthworks to regional open space – DA18/0221, lodged 8/3/2018;
- Stage 3 Links Road – Construction of part of Dunheved Links Road, and Links Road Intersection – DA18/0381, lodged 18/4/2018; and
- Village Centre Park DA – Construction of Village Centre Park, which incorporates a kick-about area, village green, and bioretention basin – DA18/0587, lodged 13/6/2018.

There have been several modification applications submitted to make the relevant changes to these approved DAs as the project has evolved.

Due to the large number of DAs for the project there have been a variety of stakeholder engagement processes undertaken. These include community information sessions, monthly meetings with Council officers and the required notification and advertising of lodged applications.

1.3.5 Commonwealth Approvals

The Commonwealth environmental assessment of the development of the St Marys site was completed under the (now repealed) *Commonwealth Environment Protection (Impact of Proposals) Act 1974 (EPIP Act)* with certification provided under the *Environmental Reform (Consequential Provisions) Act 1999*.

As the St Marys project as a whole was assessed under the *EPIP Act*, no further assessment in relation to Commonwealth threatened species and ecological communities is required under the *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act).

In addition, the development of the St Marys site has previously been assessed by the Australian Heritage Commission pursuant to the requirements of the *Australian Heritage Commission Act 1975*.

1.4 Planning Agreements

A Planning Agreement was finalised between St Mary's Land Ltd and PCC in December 2006. Whilst this Planning Agreement principally related to the development of the South Dunheved Precinct, it also sets out traffic and transport contributions relating to the development of the Central and Western Precincts.

The Planning Agreement was updated in 2009 to include human services, open space and stormwater infrastructure contributions resulting from the development of the Central and Western precincts. The Planning Agreement is currently being amended by Penrith City Council and Lendlease as a result of the proposed CPP Amendment No. 1 to deal with changes to contributions.

An agreement has also been made between NPWS and Lendlease with regards to contributions towards various embellishments of the Regional Park. This agreement includes commitments with regards to fencing, access, and the urban/Regional Park interface. Upcoming works within the Regional Park include the provision of visitor facilities such as amenity blocks and picnic areas, and at-grade car parking spaces.

2.0 Site Analysis

2.1 Site Location and Context

The site to which this application applies is the Stage 3D area of the Central Precinct, as shown at **Figure 4**. The Central Precinct is located approximately 2.9km to the east of the Jordan Springs Town Centre, 3.3km east of The Northern Road, and approximately 6km north-east of the Penrith City Centre. The urban footprint of Central Precinct is approximately 135ha in area.

The Stage 3D site is located in the central portion of the Precinct and adjoins the current Stage 1 residential subdivision and future Village Centre Park to the south-west, the Stage 3B2 residential subdivision and Wianamatta Parkway to the north-east, and future Regional Open Space to the east.

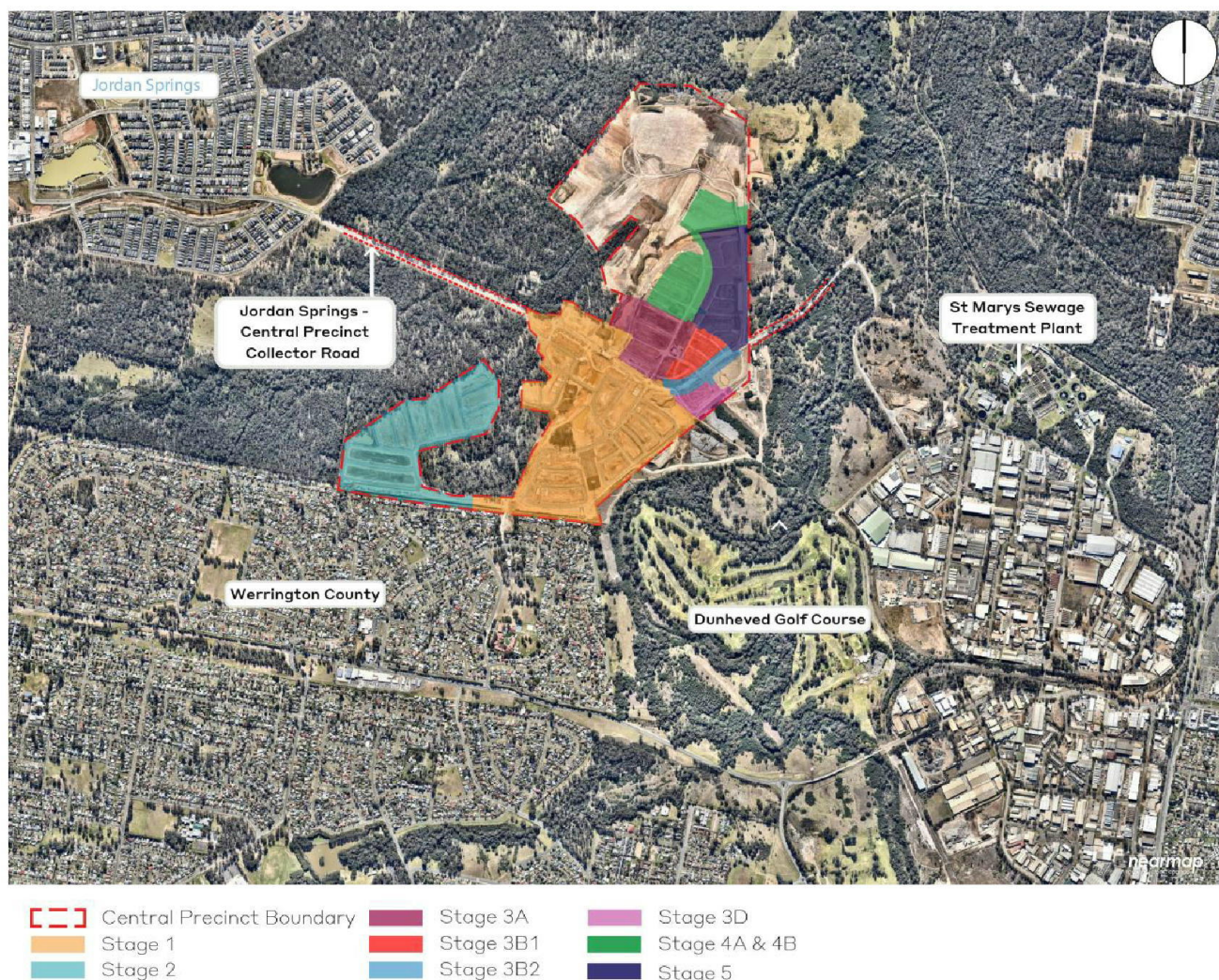


Figure 4 The Stage 3D Site in the Context of the Broader Central Precinct Site, and Surrounding Development

Source: Nearmap & Ethos Urban

2.2 Site Description

The Stage 3D site is legally described as part Lot 3000 DP1220974 and covers an area of approximately 1.9 hectares. The site is owned by St Marys Land Limited and is being developed by Lendlease (the applicant). St Marys Land Limited is a subsidiary of ComLand Limited. Maryland Development Company is the joint venture company that was established by ComLand and Lendlease to develop the larger St Marys Site.

It is noted that the site was formerly known as part Lot 1037 DP1149525, however an earlier development application (DA14/1429) sought consent for the subdivision of this lot into five allotments for the future Regional Park, Central Precinct and residue lots. Consent was granted by Penrith Council on 15 February 2016. Since this time, several lot registrations under previous DAs (DA15/0299 for Stage 1, DA15/1216 for Stage 2 and DA16/0113 for Stage 3A, DA17/0491 for Stage 4, DA17/0675 for Stage 3B1, and DA17/0889 for Stage 3B2) have occurred or are due to occur shortly which have resulted in the larger residue lot changing lot descriptions (the balance of the Central Precinct area).

2.3 Existing Site Conditions

At present, the Stage 3D site is generally flat with no vegetation, following bulk earthworks completed under the Bulk Earthworks DA (DA14/1228). The Civil Engineering Plans at **Appendix C** include an Existing Conditions Plan,

which depicts the site conditions prior to the works of the Bulk Earthworks DA. An aerial photo of the site is shown at **Figure 5**.

The Bulk Earthworks DA was granted consent by the Sydney West Joint Regional Planning Panel (JRPP) on 20 August 2015. This DA allowed Lendlease to clear, grade and import two million cubic metres of fill to the Central Precinct site. It also permitted the removal of all vegetation within the site, sparing minor sections within the future riparian corridor and local parks where possible. The existing (pre-bulk earthworks) soil profiles and vegetation will therefore be retained in some locations within the Central Precinct, allowing for the preservation of as much of the existing landscape character as possible.

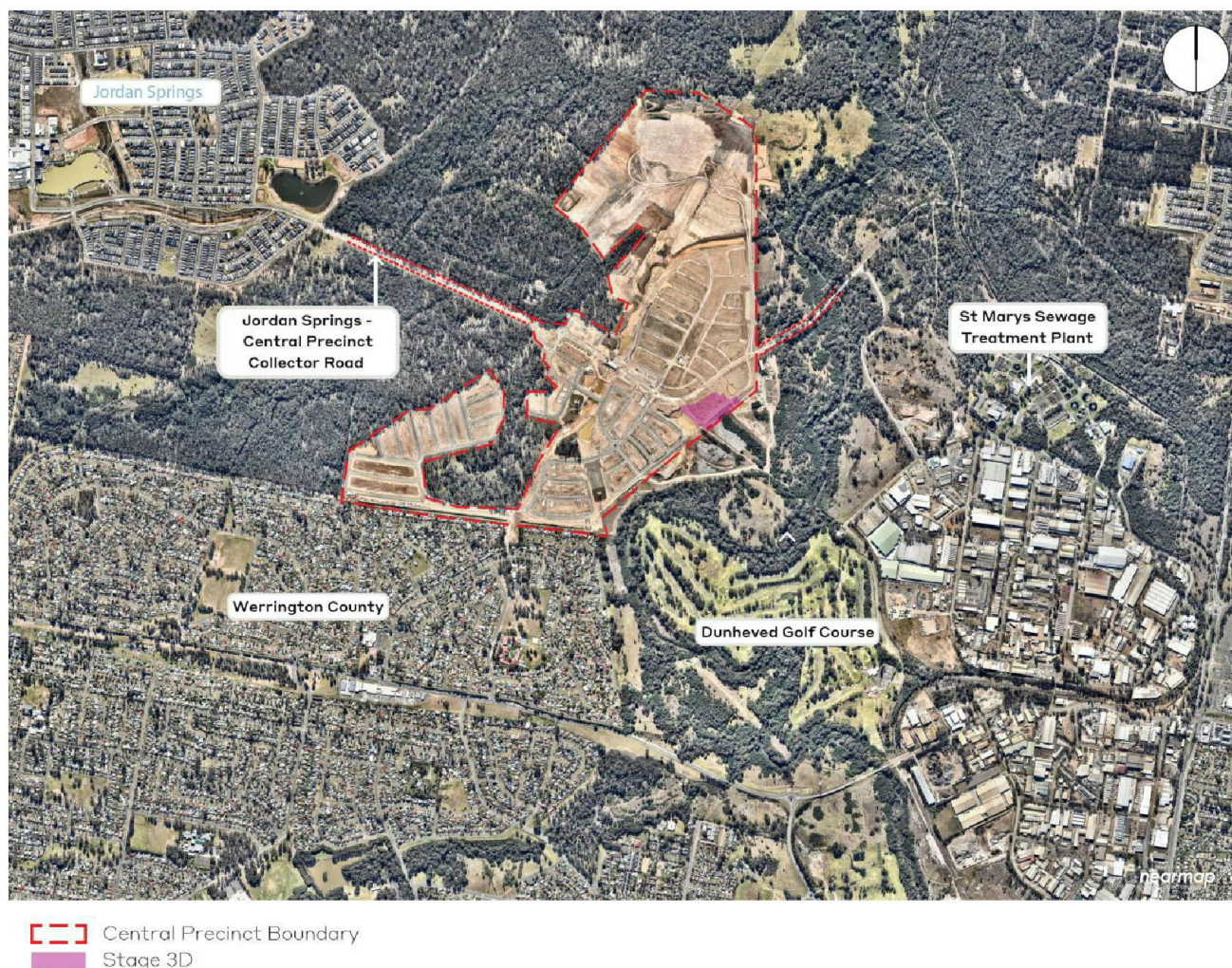


Figure 5 The Stage 3D site is located near the centre of the wider Central Precinct urban area

Source: Nearmap & Ethos Urban

2.3.1 Existing Utility Services & Easements

A TransGrid managed electrical main and associated 70m wide easement runs north-south through the Central Precinct urban area. This transmission line and easement is largely located in the western half of the precinct, and is approximately 360m away from the Stage 3D site at the closest point.

There are also two sewer mains servicing the development (Jordan Springs Carrier and Werrington Carrier). All of these services are shown on the Civil Engineering Plans included at **Appendix C**. The easements and services will remain in situ with the development designed in consideration of their location and functionality. Sewer easements within the proposed public road reserves may be removed subject to approval by Sydney Water.

2.3.2 Bushfire Hazard

Land within the Central Precinct, including that of the Stage 3D site, is largely classified as Bushfire Prone Land due to the proximity of large areas of unmanaged bushland within the adjacent Regional Park, and the future riparian corridor. Specific bushfire management, protection and mitigation strategies are included in the adopted CPP. These have been discussed further in the Bushfire Protection Assessment (BPA) included at **Appendix E**. Revision of the existing bushfire mapping may be required given the extent of clearing under DA14/1228.

2.3.3 Water & Drainage

A detailed analysis of the drainage characteristics of the Central Precinct site prior to development is contained in the Water, Soils & Infrastructure Report (2009) prepared by Jacobs SKM (SKM) that forms part of the CPP. This report has been supported by two subsequent reports prepared by Cardno – the Jordan Springs East Precinct Stormwater Quality Management Report (January 2017) and the Central Precinct Stormwater Detention Strategy (January 2017) – which were provided to Council as part of the proposed CPP Amendment No. 1 and to reflect the design evolution of the site.

The Central Precinct is noted as being naturally flood prone across its eastern area, with the most recent revision of the report by SKM (July 2015) assessing that once filled the 1% AEP water surface profile gradually rises from 19.4m AHD at the northern extent of the Central Precinct to 21.0m AHD at the southern extents of the Precinct. The Bulk Earthworks DA works raise the ground levels of future lots so that they are at minimum 500mm above the predicted 1% AEP South Creek water surface profile. These works completed under the Bulk Earthworks DA ensure that the area of all proposed residential lots is above the 1% AEP water surface level.

The Civil Engineering & Infrastructure Report at **Appendix B** describes the existing water and drainage systems following the Bulk Earthworks DA (DA14/1228). That DA contains interim stormwater infrastructure and environmental management works including the realignment of the existing drainage corridor identified on the 1:25,000 topographic maps.

2.3.4 Contamination

The St Marys Development Site was broadly remediated over the period from 1993 to 1999, with validation reports prepared and several Site Audit Statements (SAS) issued to qualify this. The Contamination Management Plan (CMP) was prepared by JBS&G and submitted as part of DA15/0299, and the Specific Remedial Action Plan (SRAP) report prepared by JBS&G and submitted as part of DA16/0888 outlines that there are two SASs applying to the whole of the Stage 3D site (SASs CHK001/1 and CHK001/6). CHK001/1 is issued for the highest possible land use (being residential land use) across the entire Central Precinct site excluding those areas relating to existing structures and stockpiles, which are covered under CHK001/6, and CHK001/7. CHK001/6 is issued for continued commercial/industrial use. Two further SASs, known as KJL 118-EW7,8,9,12,RipD2&E and KJL118-EW6.1/6.2 and D1 Residential, submitted to Council as part of the Subdivision Certificate application for the Stage 3B1 subdivision, have been issued validating the land, including the entirety of the Stage 3D site, as suitable for residential use.

Site Audit Statement CHK001/1 St Marys Site

This SAS identified the St Marys Development site as being suitable for residential development, including for vegetable garden and poultry use – the highest level of clearance available. The only condition other than excluding the areas covered by other statements (being Ropes Crossing and areas under existing structures on site) was that an appropriate CMP be developed. The CMP is to be implemented throughout the life of the development at Central Precinct and has been reviewed by a site auditor. Part of the Stage 3D subdivision area was previously signed off under this SAS, which has determined that the area is suitable for residential uses including vegetable garden and poultry, and also for open spaces and parks (amongst other uses). If any unexpected areas of concern are uncovered during the works, the approved CMP, CRS, and SRAP outline the protocol to be undertaken, as per the process approved under the Stage 1 subdivision (DA15/0299), and submitted under the Site Remediation Works (DA16/0888), including the procedure for remediation, if required.

Site Audit Statement CHK001/6 St Marys Site

This SAS relates to a number of buildings, hard stand areas, roads, and stockpiles which exist across the St Marys Development Site. As well as the requirement for an appropriate management plan, there is a condition that when the facilities are removed, the soils beneath them shall be tested for ordinance and for chemical contamination. In

accordance with the SAS and DA14/0411 and DA14/1228 new site audit statements for these areas are required in accordance with NSW EPA guidelines. A number of SAS have been issued including areas within Stages 1 and 2.

Site Audit Statements KJL 118-EW7,8,9,12,RipD2&E and KJL118-EW6.1/6.2 and D1 Residential

These SASs relate to areas of Central Precinct covering Stages 3B1, 3B2, 3C, 3D, 4A, 4B, & 5, and Stages 1, 3A, 3B1, 3B2, 4A, & 3D, respectively. These SASs certify that the entirety of the Stage 3D area is now suitable for the development use of *“residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry.”*

2.3.5 Soil & Ground Water

Extensive groundwater and salinity investigations have been carried out across the St Marys site over the years. A summary and review of the previous studies and investigations relevant to the Central Precinct was undertaken by SKM within their Water, Soil and Infrastructure Report (2009) forming part of the CPP. A further review of the site geology and soils was undertaken by Cardno as part of their Salinity Assessment Review, which applied to the whole of the Central Precinct site. This review was included in the Stage 3A subdivision application (DA16/0113).

In summary, the Central Precinct has the following subsurface conditions:

- quaternary aged deposits of fine grain sand, silt and clay is located along the banks to the east and northern boundary of the Central Precinct site. The alluvial clays are highly silty and of medium plasticity;
- the site is underlain by Triassic Bringelly Shale (from the Wianamatta Group) in the western part of the site;
- the site comprises two alluvial soil landscape types – Luddenham soils (moderate salinity potential) and South Creek soils (high salinity potential);
- two groundwater-bearing systems are present within the St Marys site being the shallow (regolith (soil) and deep (fractured shale bedrock) aquifers;
- apparent electrical conductivity (ECa) was identified to be generally low in the in areas adjacent to lower parts of the site and higher conductivities beneath more elevated ground;
- soil analysis shows that the clays are of generally low to moderate salinity in the top 1m; and
- shallow groundwater of low salinity occurs at depths of 3 – 6m.

2.3.6 Access

Once completed, it is proposed that access for the site will be via Jordan Springs to the west and Ropes Crossing to the east, with an estimated 55% and 53% of trips made towards the east, and 45% and 47% of trips made to the west in the respective AM and PM peaks (refer to the Traffic Impact Assessment at **Appendix F**).

The Jordan Springs – Central Precinct Connector Road was approved by the JRPP on 19 November 2015 as part of the Stage 1 subdivision works. The Connector Road runs west-east through the middle of Central Precinct, including a section immediately adjacent to the northern boundary of Stage 3D. Vehicular access between the Connector Road and Stage 3D will be provided directly from Roads 013 and 027. The roads run north-west to south-east and are included in this application (refer to the Civil Plans at **Appendix C** for further information).

Access to the site via Ropes Crossing to the east along the existing east-west roadway is also to be made available to the public (also known as Ropes Crossing – Central Precinct Connector Road). This roadway is identified in SREP30 as a link road between the precincts across the St Marys Development Site but is not publicly accessible at present. DAs have been lodged with Blacktown and Penrith Councils for this connection. The Connector Road is now known as the Wianamatta Parkway through the Central Precinct.

A bus-only connection through to Werrington will provide public transport connectivity, proposed as part of the approved Stage 2 Subdivision works (DA15/1216).

2.3.7 Heritage

Aboriginal Heritage

Extensive archaeological studies have been prepared across the St Marys Development Site since 1994, including the preparation of a Strategic Management Model (SMM). Subsequent investigations have identified thousands of artefacts across the entire St Marys Development Site, including across the Central Precinct.

An Archaeological Assessment of Indigenous Heritage Values in the Central Precinct (Jo McDonald, 2008) forms part of the adopted CPP. Four salvage excavation management areas within the Central Precinct have already been identified as requiring archaeological salvage works prior to development taking place (CP1, CP3, CP4, and CP6). Permits allowing testing and salvage excavations of Aboriginal objects or places on the site have been issued by the OEH under section 90 of the National Parks and Wildlife Act 1974 (NPW Act) (AHIP No. C0000362) and works are currently being undertaken in accordance with this Aboriginal Heritage Impact Permit (AHIP). Previous advice by GML provided in earlier DAs outlines that all Aboriginal heritage management works within the Stage 3D subdivision area are complete and development works may proceed in the area.

European Heritage

There are no areas or items of European heritage identified as being within the area affected by Stage 3D. The nearest European heritage items or areas are recognised as Site 3, which is located within the Stage 1 area of Central Precinct, and Site 2, located within the southern section of the Regional Open Space area of Central Precinct, and the adjoining Regional Park.

2.3.8 Surrounding Development

North

To the north of the site is the proposed Stage 3B2 residential subdivision (DA17/0889), with areas of further residential development as part of the Central Precinct development beyond. Further north is the Regional Park and the existing suburb of Llandilo.

West

To the west the site is bordered by open space as part of the Stage 1 residential subdivision (DA15/0299). Further to the west is Wianamatta Regional Park. The Park will be dedicated to the NPWS. Beyond the Regional Park is the Jordan Springs development, a new suburb, which upon completion will contain around 6,500 residents in 2,500 homes. Jordan Springs forms part of the St Marys ADI Site redevelopment.

East

To the east of the site is future residential development and an area of Regional Open Space. Further to the east is South Creek and Wianamatta Regional Park. Beyond this are the Dunheved Precincts and the St Marys Sewage Treatment Plant, St Marys Water Recycling Plant and Sydney Water Maintenance Depot. Further beyond is the suburb of Ropes Crossing, which contains around 6,000 residents in 2,200 homes, a public Primary School, a sporting field, and a village centre with a variety of shops, including a supermarket. Ropes Crossing is also part of the St Marys ADI Site site.

South

To the area to the south of the site is an area of Regional Open Space. Beyond this is the Dunheved Golf Club.

2.3.9 Site Opportunities and Constraints

The main planning and design opportunities presented by the site are that it:

- is zoned for urban development;
- is of a suitable size to accommodate development;
- is above the predicted 1% Annual Exceedance Probability (AEP) for the South Creek water surface profile, following the works completed under the Bulk Earthworks DA (DA14/1228);

- has utility services available to support development;
- is adjacent to planned high quality open space areas within the future Regional Open Space, and the nearby Regional Park; and
- has subsoil conditions suitable for development.

The Stage 3D site is unusual in that it is not impacted by any APZs, as sufficient buffer distances are provided to potential bushfire hazards. The opportunities and constraints applying to the site have been addressed by the proposal, which is described in the subsequent chapters of this report.

3.0 Description of Proposed Development

This application seeks approval for the following development:

- the subdivision of part of Lot 3000 DP1220974, to dedicate public roads and create one 'superlot' for the future town centre;
- boundary adjustments to Lots 1308 and 1309 on DP1215096 to reflect the agreed scale of the Village Centre lot and accommodate the road design;
- design and construction of the proposed internal road network, including:
 - internal local roadways;
 - on-street parking;
 - pedestrian and cycle ways;
 - road reserve landscaping; and
 - services and stormwater drainage infrastructure.
- provision of utility infrastructure such as stormwater drainage, sewerage, telecommunications and water;
- grading of the site for final town centre lot, landscape shaping, boundary interfaces and roadway levels; and
- associated street tree planting, lighting and embellishments.

Subdivision Plans prepared by RPS are included at **Appendix A**. Civil Engineering Plans showing the Stage 3D subdivision site within the context of the overall future structure of the Central Precinct are provided at **Appendix C**.

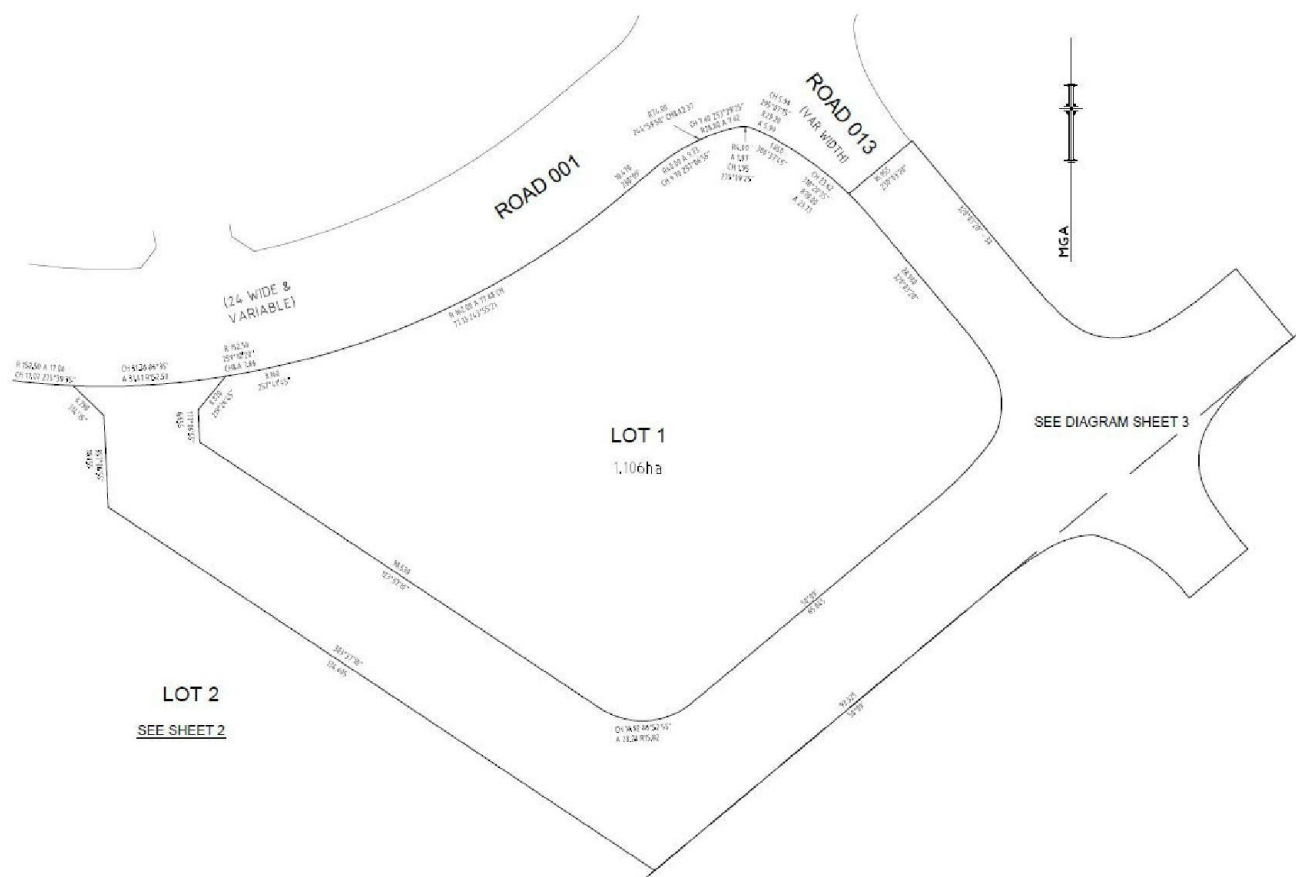


Figure 6 The Proposed Stage 3D Subdivision Layout

Source: RPS

3.1 The Village Centre

As shown in the Village Centre Urban Design Concept Masterplan at **Supplementary Information Item 1 (SI1)**, the Village Centre is intended to provide a range of local services and retail outlets to support the residential development of the Central Precinct. The internal design of the Village Centre has been developed in collaboration with Council, and while not the subject of this DA (which will establish the overall site of the Village Centre), has been provided to demonstrate that the proposed superlot is appropriately designed to be a viable and desirable Village Centre.

As is shown at **SI1**, it is intended that the Village Centre will contain a variety of uses, including:

- Small scale retail tenancies;
- A local supermarket acting as the anchor tenant;
- A child care centre with internal and outdoor play spaces;
- Apartment and terrace style residential dwellings; and
- Through-site links to the adjacent Village Centre Park and Community Activation Shelter (subject of a separate application – DA18/0587).

The Concept Masterplan (**SI1**) is submitted in support of the subdivision application to demonstrate the viability of the proposed subdivision, the vision for the town centre, and the appropriateness of the proposed civil works – this application remains only to be for subdivision and civil works. No built form is proposed as part of this DA. The Concept Masterplan outlines the vision for the Village Centre and is to inform future applications for the development of the site.

3.2 Subdivision

The proposed subdivision will create one superlot, for the future Central Precinct town centre, with the balance of Lot 3000 to remain as a residue for future subdivision. As mentioned, this application seeks only subdivision and civil works – any subsequent development on the superlot will be subject to separate future DAs. It is envisaged any future applications will be generally consistent with the Concept Masterplan for the Village Centre.

The proposed subdivision has been designed to meet the subdivision layout principles at Section 4.4 of the adopted CPP.

3.2.1 Boundary Adjustment

To achieve the required size of the Village Centre superlot, the intended road design and gross pollutant trap, and associated future parking provisions as agreed with Council, adjustments to the adjacent Lots 1308 and 1309 DP1215096 are required. Lots 1308 and 1309 contain the site for the future Village Centre Park (subject of a separate DA). This adjustment involves the re-alignment of the north-eastern boundary of the Village Centre Park site further south as shown in **Figure 7**.

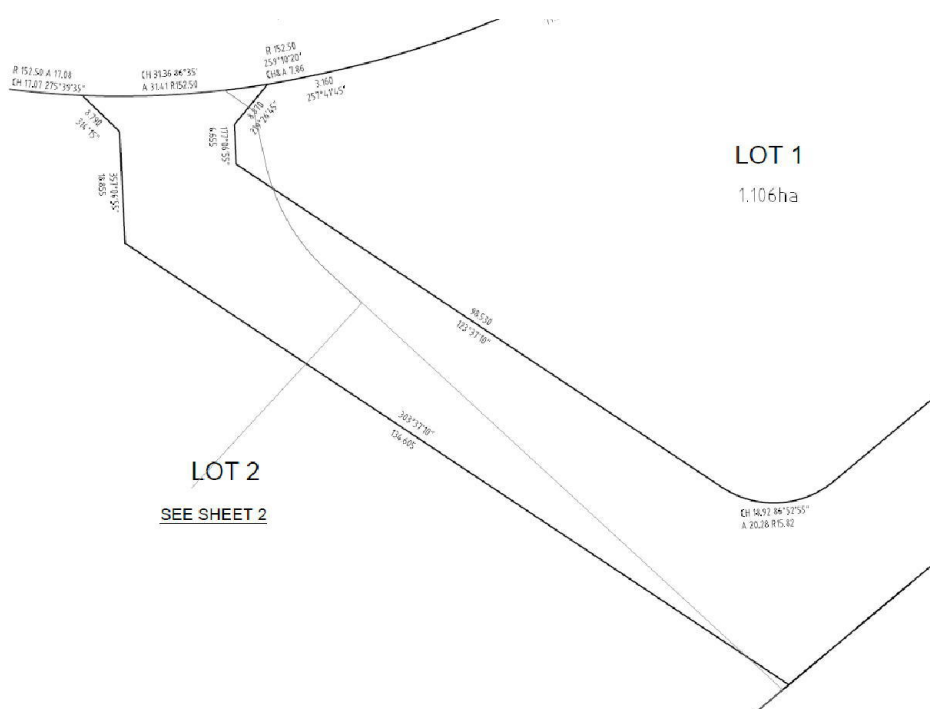


Figure 7 The existing layout (thin line) and the proposed boundary layout (bold line) of the Village Centre

Source: RPS

3.3 Site Grading

Civil Engineering Plans prepared by Cardno illustrating the final levels of the site are included at **Appendix C**, and details of Earthworks and Grading is included in Section 4 of the Civil Engineering and Infrastructure Report at **Appendix B**.

Since the submission and approval of the Bulk Earthworks DA (DA14/1228), further refinement of the road and lot layout have required minor adjustments to the finished surface levels within Stage 3D. Details regarding these minor adjustments are included in the Civil Report at **Appendix B**.

The site is proposed to be graded with a gentle descent of 2.5m (from AHD 24 to 21.5) from the north-west to the southern extent of the site.

No public domain landscaping (other than streetscape and verge planting) is proposed under this DA.

3.4 Access and Movement

3.4.1 Road Hierarchy and Design

Central Precinct

The Central Precinct Street Hierarchy shows the indicative road layout for the entire Central Precinct. The road system consists of a Connector Road (Road 001, known as the Wianamatta Parkway) which crosses the centre of the precinct (east-west). Road 002 (Armoury Road) joins into Road 001 at a roundabout in a north-south direction. Connectivity into Stage 3D is via local roads through Stage 3B2 and the Wianamatta Parkway.

Stage 3D

The proposed road layout is shown in the Civil Engineering Plans at **Appendix C**. Several new permanent roads are proposed to be constructed within the proposed subdivision layout. The proposed layout and road typologies are shown below in Figure 7. As noted above Stage 3D will be accessed from the Connector Road (also known as Wianamatta Parkway), which is a 'C2 Collector Road' type. The first part of a future access road into the Regional Open Space is also proposed to be constructed as part of this stage due to the required roundabout access.

Stage 3D proposes new road cross sections more appropriate to the character of the Village Centre. It is noted that these road typologies are not identified within the current CPP, however due to the nature of the Village Centre site and its future intended uses, are deemed appropriate to manage traffic speeds, provide parking, and ensure efficient access to and from the adjacent Regional Open Space. These have been discussed at length with Council with general agreement on their design as outlined in **Table 1**.

Table 1 Proposed Road Network Details

Road Type	Road Reserve Width	Pavement Width	Kerb Type
V1 Village Centre Local Street	16.6m	8.0m	Kerb and gutter both sides
V2 – V6 Village Centre Local Street	21.5m	7.4m	Kerb and gutter both sides
V7 Village Centre Local Street	18.4m	7.4m	Kerb and gutter both sides

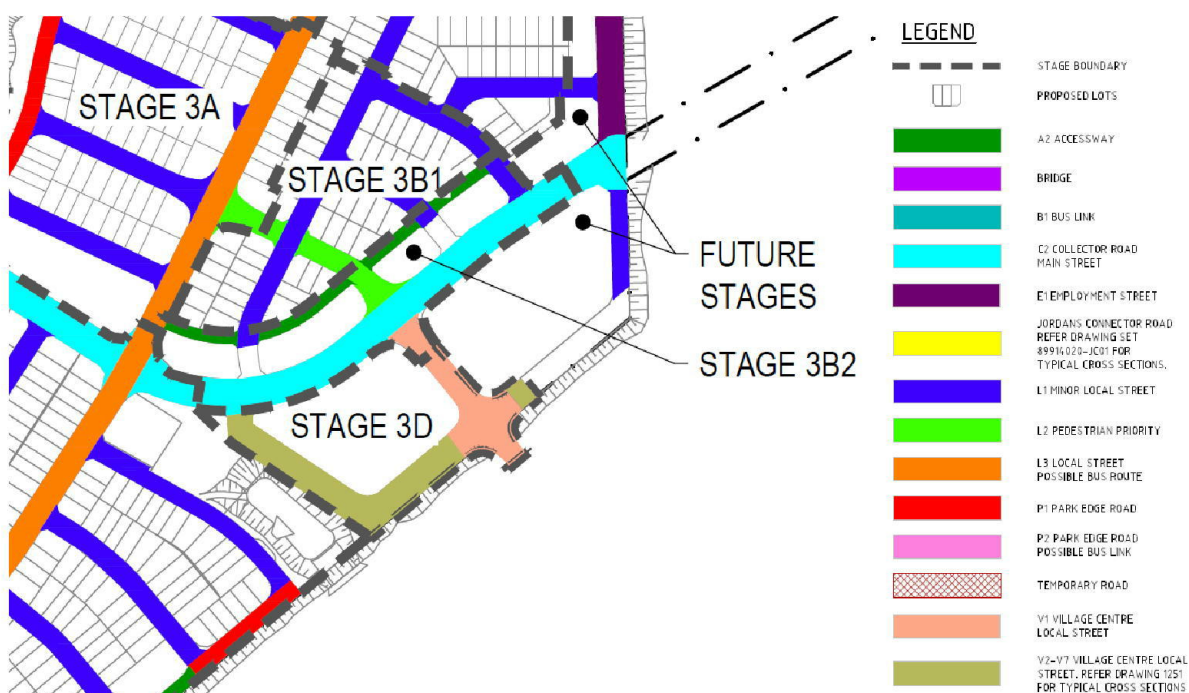


Figure 8 Proposed road hierarchy for Stage 3D

Source: Cardno

Evacuation and Emergency Access Route

The evacuation and emergency access route in the south of Stage 2 will allow for flood evacuation and emergency vehicle access between Central Precinct and Henry Lawson Avenue. The proposed route was approved as part of the Stage 2 DA (DA15/1216). The road will be single lane with no passing bay. Services will be located along the carriageway. The Jordan Springs Connector Road provides evacuation to the west in the event of an emergency and, once open (subject to future approvals), the Ropes Crossing Connector Road will provide evacuation to the east.

The Concept Plan and the Landscape Masterplan (previously provided) show the proposed footpaths, cycle route and bus route networks throughout the Central Precinct and the way the site connects with those networks.

3.5 Streetscape

The Bulk Earthworks DA (DA14/1228) gained approval for the clearing of all vegetation on the site. These works have since been completed.

The proposal seeks approval for road reserve landscaping including street tree and groundcover planting, and installation of pavement and street furniture, as detailed in the Village Centre Streetscape plans at **Appendix I**.

In accordance with the Central Precinct Plan and accompanying Landscape Masterplan, the proposed plantings, pavement materials, and street furniture have been selected to:

- create legibility throughout the Precinct and the street hierarchy, through the use of different pavement materials and plantings in different areas;
- create a town centre with character and an urban feel, through design language, materiality and planting choices;
- provide connectivity and safe pedestrian movement between the Village Centre and the adjoining Village Park and Regional Open Space;
- provide appropriate street furniture items, including seats and bins, in locations where they are most likely to be needed and used;
- provide pavements which are hard wearing, maintainable, and use a limited material palette;
- complement the proposed land uses and buildings within Central Precinct in terms of size and scale of the tree species;
- assist with solar access and shade during certain months and according to the north-south or east-west orientation of streets;
- form a consistent tree avenue; and
- consider public safety and the need to avoid hazards that may result from leaf and branch drop or obstacles in vehicular sight lines.

3.6 Stormwater Management

The proposed stormwater management strategy for Stage 3D is shown in the Civil Engineering Plans at **Appendix C** and described in the Civil Engineering & Infrastructure Report at **Appendix B**. The strategy includes the construction of a piped drainage network, the drainage corridor (riparian corridor) located in Stages 1, 3, and 4, and seven water quality basins located strategically across the Central Precinct. The stormwater drainage network has been designed to safely convey major and minor flows to basins or open channels before discharging from the Precinct into South Creek.

The required size and orientation of these drainage systems ensure that post development flows do not have an adverse impact on downstream watercourses following filling from the site. The drainage strategy also takes into account the future development pattern of the Central Precinct and addresses temporary measures that may be required to facilitate construction.

The area of Stage 3D will drain to Basin B (located in the Village Centre Park to the south of this stage) via permanent stormwater pipes on completion.

3.7 Contamination Management

While the SASs issued for the Central Precinct do not identify any areas of concern within the Stage 3D site area, any unexpected finds will be managed in accordance with the process outlined in DA16/0888 and the Specific Remedial Action Plan (SRAP) (Rev 4, 16 June 2017), submitted as part of a Request for Further Information for that DA. DA16/0888 sought approval for remediation works across the entire northern part of the Central Precinct site, and was approved by Council on 31 October 2017. A Conceptual Remedial Strategy (CRS) for Stages 3 to 5 of Central Precinct (and hence for this Stage 3D site) was also submitted as part of the approved Stage 3A subdivision application (DA16/0113).

Site Audit Statements KJL 118-EW7,8,9,12,RipD2&E and KJL118-EW6.1/6.2 and D1 Residential have been issued, confirming that the Stage 3D site is appropriate for residential uses.

Beyond this, the only other remediation work that would need to occur is if there are unexpected finds of contaminated material (as outlined in the CMP). In these cases, the strategies proposed by JBS&G provides an outline of the necessary steps for remediation.

The scope of the CRS and SRAP includes:

- an outline of the previous uses and the past remedial strategy investigations on the site;
- an outline of the areas and contaminants of concern that may require remediation (with the areas under former sealed roads and buildings covered in the SRAP);
- an assessment of the potential remedial options and the preferred option;
- potential remedial approach and strategy;
- scope of remediation works;
- a definition of the validation sampling, analytical and quality plan to demonstrate successful remediation of the site;
- the internal material tracking and stockpiling procedures for handling of any materials generated by remedial works; and
- the occupational health and safety (OHS) and environmental management plans for the remediation and validation works.

The actions of the CRS and SRAP aim to make the site suitable for the intended land uses on site. The proposed preferred remedial strategy is outlined in CRS as:

- excavation and offsite disposal of any identified asbestos fibre contaminated material;
- excavation and offside disposal of any identified metals, explosives, pesticides, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPHs) and Polycyclic aromatic hydrocarbons (PAH) contaminated material; and
- excavate and hand pick the bonded asbestos containing material (ACM) contaminated soils for reuse in subsurface areas (under roads and/or open space) following validation. Bonded ACM fragments removed during the handpicking process will be disposed offsite to a suitable licenced facility.

It should be noted that there are no 'cap and containment' measures being proposed to remediate the site. Any material placed will be validated as suitable to remain onsite in accordance with the CRS and SRAP.

Further detail on the proposed remediation strategy and past investigations were provided to Council as part of the approved Stage 1 Subdivision (DA15/0299) and Site Remediation Works (DA16/0888) applications.

3.8 Utility Services

Consultation with relevant utilities service providers was undertaken in the preparation of the CPP (documentation of which is provided at Appendix F of the CPP) and by the applicant in relation to previous DAs for the subdivision of the Central Precinct for urban and employment land uses. From these consultations, it is concluded that the site is serviceable with potable water, gas, sewer, electricity, and telecommunications, subject to extensions/augmentation of utilities infrastructure as part of the future development of the Central Precinct. Further detail is included in the Civil Infrastructure and Engineering Report at **Appendix B**.

3.9 Waste Management

An identification of the materials involved in the proposed development of this subdivision, the estimated volume of said materials, and proposed measures to maximise material reuse and recycling and minimise waste (where relevant) are set out in the Waste Management Plan included at **Appendix H**.

3.10 Construction Management

Construction activities would be undertaken between 7:00am and 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday. No work is to take place on Sunday or public holidays. Any construction work outside of these hours will be subject to prior consultation with PCC and Roads and Maritime Services.

Peak truck movements into and out of the site is envisaged to occur during the initial minor earthworks stage with the following daily truck movements expected:

- Approximately 20 passenger vehicles/ small tippers/ medium heavy rigid vehicles arriving to site each morning and departing each afternoon.
- Approximately two delivery vehicles (i.e. Truck and Dog trailers or similar) arriving and departing per hour during construction hours.

Access for construction will be via Jordan Springs Boulevard, Lakeside Parade and the Jordan Springs Connector Road (also known as Wianamatta Parkway) to the west. This is not considered to have a significant impact on traffic, due to the low volumes of construction traffic required for Stage 3D.

Further details on construction management will be provided in a Construction Management Plan to be completed prior to the commencement of works.

4.0 Assessment of Environmental Impacts

This section considers the planning issues relevant to the proposed development and provides an assessment of the relevant matters prescribed in section 4.15(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

4.1 Environmental Planning Instruments

4.1.1 SREP 30 – St Marys

The proposed development is consistent with the Performance Objectives set out in the clauses 22 to 35 of SREP 30 for the following reasons:

- the proposed development is in accordance with the ecologically sustainable development of the land, as prescribed by the CPP;
- the proposed subdivision works will not result in impacts to air quality above those of the assessed Bulk Earthworks under DA14/1228, with appropriate management measures to be incorporated during construction consistent with those currently in operation across the site;
- proposed works are confined to the Urban and Regional Open Space zones, ensuring the conservation significance of the Regional Park is protected;
- appropriate consents and approvals to disturb Indigenous heritage items have been obtained to allow for development to occur;
- the proposal represents the next stage in creating a new residential community within the Central Precinct, which will be serviced by a full range of both hard and soft infrastructure;
- the future Village Centre within the proposed subdivision will provide convenient access to a range of services and local retail outlets for residents of the surrounding residential stages;
- the interim and long-term Stormwater Management Strategies ensure appropriate water cycle management in relation to the proposal;
- the road layout of the proposed subdivision is generally consistent with the design intent and desired street hierarchy outlined within the CPP, and will integrate with the approved and proposed surrounding road network;
- the proposal contributes towards the provision of an attractive and safe built environment which satisfies a diverse range of community needs;
- the development supports the provision of a range of building types and forms within the Central Precinct, ensuring a wide range of choice in housing; and
- the subdivision layout ensures an appropriate delineation of private and public spaces.

Stage 3D is zoned 'urban' in accordance with Clause 36 of SREP 30 with part of the proposed road network entering land zoned as Regional Open Space. The proposal is consistent with the objectives for the Urban Zone set out in Clause 40 (1) of SREP 30, as it will ensure that the zone provides for local retailing and related services.

Clause 20 of the SREP requires the consent authority to take the relevant Precinct Plan into account when assessing the proposed development. Additionally, it is noted that CPP Amendment No. 1 has been publicly exhibited by Council and is due to be endorsed in the near future. Accordingly, and as per the precedent set in *Stockland Development Pty Ltd v Manly Council* (2004) 136 LG ERA 254, Council is entitled to also take into account the draft CPP amendment when considering a development application for land in Central Precinct. The development of Stage 3D is consistent with the CPP Amendment No. 1 (which proposed the relocation of the Village Centre and its associated character area), and is due to be endorsed shortly by Council. Refer to Section 4.1.3 for further discussion.

4.1.2 St Marys Environmental Planning Strategy 2000 (St Marys EPS)

The St Marys EPS contains performance objectives for future development of the St Mary's site (i.e. the area covered by SREP 30). In order to adopt a precinct plan for the St Mary's site, Council must ensure such a plan is

consistent with the aims and objectives of the St Marys EPS. The proposed development is consistent with the CPP, with residential development envisaged within the Urban Zone.

The consistency of this DA with the aims and performance objectives of the EPS has therefore been addressed by Council in its consideration and subsequent adoption of the CPP in relation to:

- conservation (particularly in relation to the conservation of natural values within a Regional Park);
- cultural heritage;
- transport;
- urban form;
- energy and waste;
- potential impacts to flora and fauna;
- human services;
- soil salinity; and
- contamination.

Performance objectives for water and soils (as set out in Section 6 of the St Marys EPS) will be satisfied through the implementation of measures set out in the Stormwater Management Plan (included in the Civil Report at **Appendix B**) and implementation of recommendations within the Salinity Review (**Appendix G**).

The Waste Management Plan at **Appendix H** will promote the minimisation of waste and maximisation of reuse and recycling both on and off site as far as practicable, consistent with performance objectives for energy and waste set out in Section 9 of the EPS.

4.1.3 Central Precinct Plan

The proposed Stage 3D works are generally consistent with the CPP Amendment No.1 due be endorsed by Council in the near future in that they will be:

- developing land for local retail and commercial purposes in accordance with the Framework Plan;
- supporting the establishment of a well-connected street network, allowing for high levels of permeability for pedestrians, cyclists and motorists;
- creating a legible street hierarchy that supports the future character and expected volumes of traffic;
- promoting ease of movement and walkability through short and well-connected block lengths;
- providing landscape treatments that support the neighbourhood identity and ensures that the landscape character dominates the street;
- designing a road layout that provides sufficient space for street planting, landscape treatments, and paths;
- ensuring the development connects with the external road network;
- providing parking and access appropriate to the Village Centre, contributing to its convenience as a local retail centre; and
- designing a street network in accordance with the agreed street types.

Amendment No.2 is currently with Council for public exhibition and seeks changes to Part 5 of the CPP.

4.1.4 Development Control Strategy

The proposed development is generally consistent with the controls in the DCS of the CPP Amendment No.1 with regards to street planting which maintains adequate lines of sight for vehicles and pedestrians and is durable and suited to the road environment and which include endemic native species. The proposal does seek to introduce new road typologies unique to the Village Centre as outlined in the Civil Engineering Plans at **Appendix C**.

As above, the CPP Amendment No.1 is anticipated to be endorsed shortly, and provides a variety of changes from the current CPP in response to market demand and housing affordability and diversity, and includes the relocation of the Village Centre to the location the subject of this application. Amendment No.2 seeks changes to the DCS to allow for appropriate lot size and mix to be consistent with current market and affordability demands and proposes changes to housing typologies however does not affect this Stage 3D superlot subdivision.

4.1.5 State Environmental Planning Policy 55 – Remediation of Land

SEPP 55 requires that a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated.

The site has been validated as suitable, in accordance with Clause 7 of SEPP 55, as documented within SASs KJL 118-EW7,8,9,12,RipD2&E and KJL118-EW6.1/6.2 and D1 Residential.

4.1.6 Rural Fires Act 1997

The subject site is identified as bushfire prone land. A Bushfire Safety Authority from the RFS is therefore required in relation to the proposed development (subdivision), in accordance with Section 100B of the *Rural Fires Act 1997*, Clause 44 of the *Rural Fires Regulation 2013* and '*Planning for Bush Fire Protection 2006*' (RFS 2006). See **Section 4.7** for assessment.

4.2 Pre-DA Advice

A meeting with the Urban Design Review Panel was held on 14 February 2018 with a number of key points raised regarding the Village Centre Concept Masterplan. Additional comments were also provided on 22 March 2018 from Councils internal departments. These are addressed in **Table 2** below.

Table 2 Pre-DA Key Points

Key Issue	Response
Urban Design Review Panel Meeting	
The proposed design amendments represent a significant improvement to previous schemes that were discussed in 2016 and provide for an integrated retail and open space offering for the Central Precinct.	The proposed Village Centre subdivision as part of this DA will assist in a future application for the detail of the lot in accordance with the concept design.
The allotment orientation of the proposed village centre is however still a constraint, as it results in south facing tenancies. While it is noted that this would be resolved if the village centre and park could switch, it is understood that the DCS amendments have been endorsed by Council and the location has been agreed to. If however there was opportunity for this to be revisited it may achieve a better development outcome for the village centre.	The south facing tenancies have been realigned to face the Village Centre Park in response to this comment.
The activation of south facing retail tenancies is critical in their viability. Pedestrian movements past the shop front must be encouraged within the design to ensure suitable consumer trade and street activation.	Noted. This detail will be provided as part of the future DA for the Village Centre detail. The proposed childcare facility is now located in this area, fronting the Regional Open Space.
The proposed child care centre within Precinct C should be moved to Precinct D as a first floor offering with roof top outdoor play areas (above ground). This would provide for greater activation at street level, of the ground floor tenancies, and encourage public movement and patronage in this location.	This has been reflected in the Masterplan in response to Council's comments, however will be the subject of a future DA.
The above suggestion would enable a continuation of terrace style housing between Precinct B and C to frame the entry road to the regional; open space facilities. The treatment of the southwestern side of the access road should have specific regard to that proposed on the north-eastern side of the access road (in terms of built form typology, landscape design and street setbacks).	Future medium density housing has also been placed in this location in response to Council's comments.

Key Issue	Response
The toilet and storage facilities for the CAS must be relocated out of the sight line / path of travel and should be incorporated into the CAS structure.	Not applicable – this comment relates to the Village Centre Park which is adjacent to the Stage 3D subdivision.
It was suggested that the pedestrian crossing be moved to opposite the CAS however this would discourage pedestrian movements around the south facing tenancies of Precinct C and D. A balance between likely pedestrian movements (negating the incentive for uncontrolled crossing of the road) and tenancy activation must be struck and further considered.	Refer to the Civil Engineering Plans at Appendix C and the Streetscape Plans at Appendix I for further detail. The connectivity of these spaces has been considered in the design of the Stage 3D subdivision road network. The pedestrian crossing has been shifted slightly north opposite the CAS.
The supermarket and its presentation to the east / west link road (immediately north) is critical to ensure that the facade is not occupied by advertising media in windows or blank walls.	Noted. This will be detailed in a future DA.
The materials of the CAS should be confirmed noting that timber may encourage spider and insect activity between the slats. Suggestions were made for bronze coloured slats or similar to achieve an earthy appearance without a maintenance burden for Council.	Not applicable – this comment relates to the Village Centre Park which is adjacent to the Stage 3D subdivision.
Council Internal Department	
Shadow diagrams are required. Concern is raised regarding over shadowing from residential block 'B' over the north-eastern edge (post the UDRP feedback). The amenity in any private open space in this area may be compromised	Concept shadow plans have been provided in the Village Centre Concept Masterplan. Detailed shadow diagrams will form part of any future DA.
Setbacks shall be generous enough to allow for the root zone to establish for a large sized canopy tree on all perimeter roads, especially along the main boulevards.	Noted. This will be detailed in a future DA.
Noting Council's preference in relation to the perimeter road and on-street car parking arrangements around the Village Centre - Any variations must be supported by a road safety audit and traffic report for consideration.	The proposed road typologies are unique to the Village Centre and recognise its characteristics as a local commercial and retail hub. The Traffic Impact Assessment at Appendix F addresses these new typologies, and a Road Safety Audit is currently underway and will be submitted for Council's consideration once complete.
Further consideration shall be given to pedestrian movements around the village centre to ensure that pedestrian crossings are suitably located.	As above. The pedestrian crossing to the Village Centre Park has been relocated to respond to key access routes per Council's comments.
It is expected that a Concept Plan for the village centre will include (at a minimum) the following details: • Building envelope plan including setbacks • Landscape plan including interface treatments with ROS and CAS/Village Park • Indicative building footprints, max. building heights & land uses • Proposed car parking areas and service vehicle loading area locations • Shadow diagrams • Road safety Audit	Refer to the Concept Masterplan provided as supplementary information to this SEE. These details requested by Council have been included in the Concept Masterplan. Further detail will be included within future built form DAs.

4.3 Subdivision Design

4.3.1 Yield & Density

Stage 3D does not propose any residential dwellings as part of its subdivision rather it establishes the superlot for the future development of the Village Centre which will include a variety of residential typologies. The Stage 3D subdivision is located within the future Village Centre Character Area as intended under the current CPP Amendment No.1. The subdivision is consistent with the principles of the CPP as it will:

- accommodate a variety of dwelling typologies;
- provide tree-lined streets; and

- creates strong visual and physical links to the Regional Open Space and Regional Park.

4.3.2 Safety

This DA is for subdivision, site grading, and construction of roads, street landscaping and drainage infrastructure. Details of future built form and the way it addresses the principles of Crime Prevention Through Environmental Design (CPTED) will be addressed in subsequent applications for the construction of buildings and open spaces, noting that the CPTED principles apply to this subdivision DA, with no hidden areas which can lead to anti-social behaviour being proposed.

Further, it is important to note that the proposed subdivision has been designed to facilitate the development of the site in a manner that can achieve safety in its design. The proposal considers such principles, through:

- street designs that provide safe, well-lit pedestrian routes;
- providing appropriate lighting and well-lit paths on street kerbs;
- subdivision patterns that establish permeable and walkable neighbourhoods;
- activation of street frontages; and
- landscaping that allows for view corridors and clear sight lines particularly between the Village Centre and the Village Centre Park.

4.4 Streetscape and Public Domain

The proposed development has been assessed with regard to the Landscape and Open Space Strategy, which forms part of the CPP Amendment No.1. The proposal is considered consistent with the Strategy in that it:

- supports the even distribution of open space (including the future Regional Park) which is within five minutes' walk of dwelling lots, by providing a permeable street layout which is designed to enable easy and safe pedestrian movement to and from the adjoining open spaces;
- effectively integrates landscaping and subdivision layout with that of proposed stormwater works;
- effectively uses view lines and setbacks from the surrounding Regional Park to visually enhance future adjoining development;
- uses native vegetation to assist in efficient water use;
- enhances and ecologically supports existing native vegetation within and adjoining the site, particularly that of the nearby Regional Park; and
- promotes 'quality' open space and recreation experiences rather than quantity only.

4.5 Ecology

The Bulk Earthworks DA (DA14/1228) approved by the JRPP assumes the removal of all vegetation within the Central Precinct. A Species Impact Statement (SIS) was submitted with this application, which applies to the Stage 3D site. It is considered unnecessary to resubmit this report as the vegetation within the Central Precinct has been removed under the approved DA14/1228.

4.6 Contamination

As discussed in the CPP, and above at **Section 2.3.4** and **Section 3.7**, the St Marys Precinct has been subject to extensive investigation and, where necessary, remediation, throughout the 1990s. The Environmental Protection Agency (EPA) has been involved throughout this process and an EPA-accredited Site Auditor issued SASs for the St Marys site. Whilst the majority of the Stage 3D site was signed off as suitable for residential use under SAS CHK001/1, there is an area which was formally covered by a bitumen road, and unable to be assessed under CHK001/1 (due to being inaccessible at the time).

This area was later assessed under CHK001/6, and signed off as suitable for commercial/industrial use. The land to which Stage 3D applies has since been remediated in accordance with the agreed remediation strategy, and has

been validated for residential use (under SASs KJL 118-EW7,8,9,12,RipD2&E and KJL118-EW6.1/6.2 and D1 Residential).

Beyond this, the only other remediation work that would need to occur is if there are unexpected finds of contaminated material. In these cases, the strategies proposed by JBS&G as stated in the CMP provides an outline of the necessary steps for remediation.

Contamination Management Plan

The CMP applies to parts of the overall Central Precinct site already remediated, audited and declared suitable for its intended land uses. It provides a framework for identifying and addressing any discovery of chemical contamination or potentially explosive ordnance to ensure a safe working environment for workers during development and to avoid unacceptable impact on the natural environment.

The CMP provides a plan that site workers can be inducted into and a flow chart illustrating lines of action and responsibility should any unexpected finds occur.

The approaches in the CMP are intended for use only during the site preparation phase of development, during which structures may be demolished and disposed of, land levels may be altered, and redundant infrastructure is removed and new infrastructure is installed.

The CMP includes an Unexpected Finds Protocol which provides clear guidance on the safe and appropriate actions in the event of encountering potential chemical or explosive ordnance contamination during site development works.

4.7 Bushfire

The subject site is identified as bushfire prone land. A Bushfire Safety Authority from the RFS is therefore required in relation to the proposed development (subdivision), in accordance with Section 100B of the *Rural Fires Act 1997*, Clause 44 of the Rural Fires Regulation 2013 and 'Planning for Bush Fire Protection 2006' (PBP) (RFS 2006).

Bushfire Protection Assessment

A Bushfire Protection Assessment (BPA) has been prepared by EcoLogical Australia and is included at **Appendix E**. The BPA has been prepared in response to the requirements contained in the Bushfire Protection Assessment – St Marys Western and Central Precincts' report prepared by BES (2009), which forms part of the CPP.

It is noted in the BPA that the separation distances provided within the proposal exceed both the PBP and AS 3959-2009 minimum requirements regarding the width of Asset Protection Zones (APZ) and as such no APZs are required.

Additionally, based on the existing arrangements and separation distances of the Stage 3D subdivision area from the nearest bushfire hazard, there are no BAL ratings or applicable construction standards.

4.8 Heritage

4.8.1 Indigenous

An Aboriginal Archaeological Assessment has been undertaken by Godden Mackay Logan (GML) Heritage Consultants in relation to the Central Precinct site, as submitted with previous DAs. It outlines the heritage management works for the Central Precinct with reference to the site as being post Bulk Earthworks. The assessment outlines the extensive amount of studies and investigations previously undertaken on the St Marys site and the status of the Aboriginal heritage management works within the Precinct under the AHIP (#C0000362).

As noted in **Section 2.3.7** an AHIP (#C0000362) has been issued by DECCW under Section 90 of the National Parks and Wildlife Act 1974 which covers the site, including all archaeological sites located across the Central Precinct.

Stage 3D contains only areas of Management Zone 3, identified as 'Community Collection (Low Archaeological Potential). All Aboriginal heritage management works within the site area are complete including salvage excavation and community collection of artefacts in accordance with Conditions 11-14 of the AHIP. Additionally, surface collection of artefacts by the Aboriginal community was undertaken during top soil stripping under the BEW DA (DA14/1228). Subsequently, no heritage works are required during the subdivision works associated with Stage 3D as part of this DA.

4.8.2 European

As detailed in **Section 2.3.7**, no archaeological or European heritage items are located within Stage 3D.

4.9 Traffic and Access

A Traffic Impact Assessment (TIA) has been prepared by WSP and is included at **Appendix F**. The TIA assesses the anticipated traffic implications of the proposed development with regards to pedestrian and bicycle requirements, traffic generation, site suitability and access, and transport impacts on the surrounding road network. A Road Safety Audit is currently being prepared and will be submitted for Council's consideration once complete.

The following section provides an assessment of the traffic impacts of the development during the construction and operational phases of the proposed development, based on the above reports.

4.9.1 Traffic Impacts

The TIA (refer to **Appendix F**) evaluates the anticipated transport implications of the proposed development in the context of the cumulative impacts from the previously approved stages of Central Precinct. The report provides an assessment of the subdivision layout & road typologies, trip forecasting, internal intersection operation and road capacity of the surrounding road network.

The report concludes that proposed Stage 3D works provide an appropriate road typology layout and will not affect the levels of service internally and externally of the Precinct, nor will it have an impact on the road network, given that the proposal is for superlots, which are considered to be non-traffic generating.

Traffic Generation and Intersection Performance

The TIA notes that, given the proposal is for a single superlot, this is assumed to be non-traffic generating lots at this stage. Any future application to develop the Village Centre will include a TIA, which will identify the traffic generation of the proposed development.

As such, the cumulative trip generation for the stages in Central Precinct approved and currently under assessment (consisting of Stages 1, 2, 3A, 4A, 4B, 3B1, 3B2) is unchanged from the most recent application, at approximately 749 trips per AM Peak, and 955 trips per PM Peak.

Stage 3D traffic generation is based on two assumed scenarios for development of the Village Centre as highlighted in the Concept Masterplan (subject of a separate application) – a low density and medium density scenario. The low-density scenario provides for 518 trips in the AM peak and 625 trips in the PM peak, compared to 505 trips in the AM peak and 560 trips in the PM peak for the medium density scenario. This results in a total of 1,267 trips in the AM peak and 1,580 trips in the PM peak (assuming the low-density scenario due to its higher trip generation) across the committed and proposed developments in the Central Precinct. Intersection performance has been modelled and is within the mid-block capacity at each location. Note that these traffic generation calculations are subject to future detailed applications for the Village Centre.

The total number of trips outlined above refers to the trip generation of the entire Central Precinct to date and are not representative of the mid-block volumes anticipated on any particular road within the precinct. An analysis of the mid-block capacity and intersection performance has been undertaken and these are operating within required guidelines. Additional modelling has previously been undertaken as part of the Jordan Springs East - Internal Road and Intersection Assessment prepared by WSP dated November 2017, and the traffic volumes modelled are generally consistent with this report.

The intersection of Road 001 (the Wianamatta Parkway that provides access to Stage 3D) and Road 002 (which provides north-south access through the Central Precinct) has been modelled using SIDRA based on all approved and proposed developments in the Central Precinct, and with the East West Connector Road opened. The results found the intersection to be performing satisfactorily, with a Level of Service 'A' rating, and an average delay of 8.0 seconds (Road 002, north approach) and 8.7 seconds (Road 001, west approach) in the AM and PM peak periods. A mid-block volume of 444 vehicles per hour in the AM peak (eastbound) and 416 vehicles per hour in the PM peak (westbound) of the intersection is within the maximum 900 passenger car units per lane per hour.

Importantly, intersection of Road 001 and Road 013 (which provides direct access to the Village Centre) has also been modelled and found to be performing at a Level of Service 'A' in both AM and PM peak periods, with a 9.1 second average delay (Road 013 north approach) and 9.9 second average delay (Road 013 south approach) in the AM and PM peaks respectively. The mid-block volume is again within the maximum 900 passenger car units per lane per hour, with a maximum of 475 vehicles per hour in the AM peak in the eastbound direction, and 570 vehicles per hour in the PM peak in the westbound direction. Refer to the TIA at **Appendix F** for full modelling results and discussion.

Internal Road Network and Subdivision Layout

The Stage 3D internal road network includes the provision of local streets. The TIA confirms that the proposed road types are appropriate for their intended functions. Stage 3D will be serviced by internal roads which connect to 'Road 001' (the Connector Road).

External Road Network

The Jordan Springs – Central Precinct Connector Road, as proposed and approved as part of the Stage 1 Subdivision DA (15/0299), will convey traffic from Central Precinct through Jordan Springs to The Northern Road. Subject to future council approvals the Central Precinct will be connected via road to Ropes Crossing in the east and Dunheved to the south east via the Ropes Crossing - Central Precinct Connector Road. The construction and opening of the Connector Road will vastly change trip distribution for the Precinct, where 55% and 53% of trips are made towards the east in the respective AM and PM peak. The East-West Connector Road development applications are currently under assessment by Penrith Council and Blacktown Council.

As mentioned above, the proposal is for a single superlot only, which is considered non-traffic generating (future applications for development of the Village Centre will include their own TIA). Accordingly, there will be no impact on traffic volumes within the broader external road networks from that contemplated in Stage 3D (prior to its development), where key roads and intersections were determined to operate at a satisfactory level (refer to the TIA at **Appendix F** for further information). Detailed analysis of the traffic generation of Stage 3D will be the subject of a future application for the Village Centre development, notwithstanding the traffic generation assessment based on the low-density and medium density scenarios for its future development.

4.9.2 Concept Design

A Road Safety Audit (RSA) gives a formal examination of the future roads performance with regards to crash potentials and safety. A RSA which examines the concept design of Stage 3D is currently being prepared and will be provided for Council's consideration when complete.

4.10 Water Cycle Management

A Soils, Groundwater and Salinity Management Strategy for the Central Precinct was adopted by Council as part of the CPP. The implementation of the measures set out in the Civil Engineering & Infrastructure Report (refer to **Appendix B**) and the Engineering Plans at **Appendix C** will ensure the proposal is consistent with the CPP, specifically:

- appropriate sediment and erosion controls measures will be implemented during the construction and earthworks phase of development. These measures will be in accordance with Landcom's Managing Urban Stormwater: Soil and Conservation ('The Blue Book') and the requirements of Council; and
- post development flows will be consistent with the CPP water cycle management provisions.

A letter provided to Council in January 2015 demonstrated that there was no adverse impact arising from the wider Central Precinct development on downstream properties/waterbodies, which includes the Stage 3D site.

4.10.1 Water Quality

The proposed Stormwater Strategy takes into account the regional objectives required by SREP 30 for the Central and Western Precincts. Clause 28 (2) of SREP 30 requires that:

The use of the land to which this plan applies is to incorporate stormwater management measures that ensure there is no net adverse impact upon the water quality (nutrients and suspended solids) in South Creek and Hawkesbury-Nepean catchments.

The regional stormwater strategy prepared by SKM was endorsed with the CPP, and incorporates strategically located basins within the Regional Park. Further to this, the Jordan Springs East Precinct Stormwater Quality Management Report (January 2017) by Cardno, which was submitted to Council in March 2017, outlines the strategy for stormwater quality for the entire Central Precinct, and is compliant with the objectives of both SREP30 and Council's DCP.

The key components of the stormwater quality management strategy are shown at **Figure 9** below, and include:

- rainwater tanks on each residential lot;
- seven bio-retention basins;
- Gross Pollutant Traps within each urban catchment; and
- the riparian corridor which runs through the Central Precinct site.

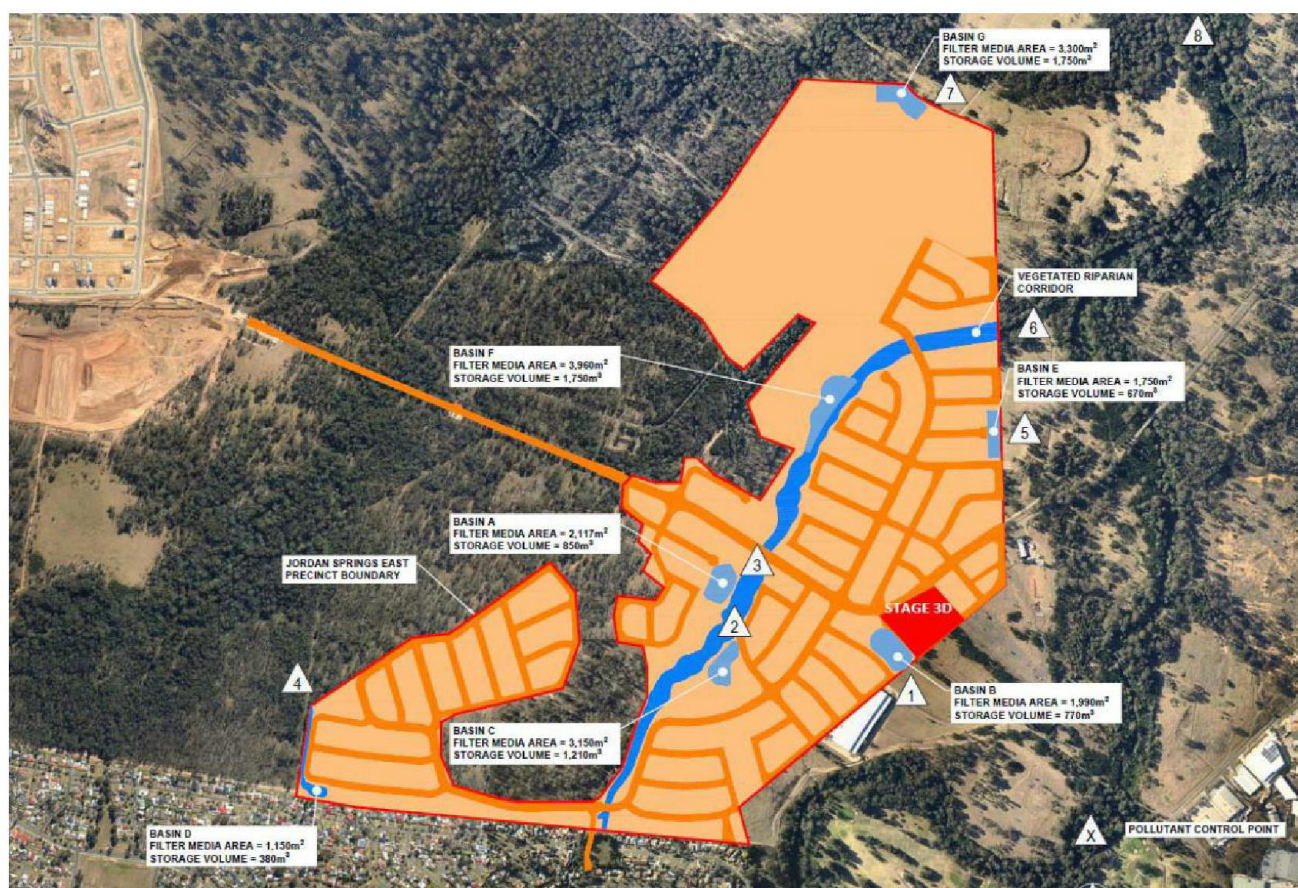


Figure 9 Central Precinct Stormwater Quality Management Strategy

Source: Cardno

To determine the future effectiveness of this strategy, MUSIC modelling was undertaken to assess the strategy's stormwater treatment effectiveness a completion. The results of this modelling are summarised below in **Table 3**, and show that the strategy will meet and exceed the targets set in the Penrith Council DCP.

Table 3 Stormwater Quality Treatment Modelled Effectiveness

Pollutant	Council DCP Pollutant Reduction Target	Modelled Pollution Reduction
Gross Pollutants	90%	98%
Total Suspended Solids	85%	87%
Total Phosphorus	60%	63%
Total Nitrogen	45%	48%

Source: Cardno

The stormwater quality management infrastructure proposed for Stage 3D is consistent with the overall strategy. Treatment of stormwater runoff will occur in Bio-retention Basin B (refer to **Figure 9**). At present Basin B functions as a sediment basin. A temporary channel is proposed to convey runoff to Basin B until a permanent stormwater pipe connection is provided as part of the village park civil works.

4.10.2 Water Quantity

The stormwater drainage network has been designed to comply with Council and industry engineering standards with the objective of safely conveying major and minor flows to basins or open channels before discharging into a suitable downstream watercourse. The Civil Engineering & Infrastructure Report at **Appendix B** provides an outline of the stormwater strategy and water quantity management.

Stormwater pits have been located in suitable locations within the road geometry, maintaining a general maximum flow width of 2.5m from the face of the kerb during the design storm event. Where possible overland flow paths have been (subject to preliminary design) designed to accommodate the 1% AEP storm through maintaining velocity-depth products of 0.3m²/s or less and a maximum depth equal to or less than 300mm. Where these parameters are exceeded, risk management strategies commensurate to the potential risk will be developed through the preparation of detailed design documentation.

Cardno have adopted the Bureau of Meteorology Intensity-Frequency-Duration coefficients to assess the design of the road layout and ability of the site to drain. The assessment concludes that there is suitable capacity within the proposed stormwater management strategy to accommodate the internal and external overland flows and drain the site appropriately.

Given the consistency of the proposed development with the management strategies incorporated within the CPP, the proposed development is considered to be appropriate with regard to water management.

4.10.3 Erosion and Sediment Control

As part of the Bulk Earthworks DA (DA14/1228), a number of erosion and sediment control measures were implemented, which will be continued as the works associated with the Bulk Earthworks DA continue. These measures included the establishment of a temporary sediment basin within the adjacent Village Centre Park site. This arrangement is proposed to continue as part of the Stage 3D works. Additional temporary basins may be incorporated within the stages where required.

Additional mitigation measures currently in effect on site under the current subdivision works include:

- utilisation of a paved temporary construction entry/exit point off Links Road during construction to prevent the most heavily travelled routes from becoming a source of sediment and dust;
- temporary drains and diversion banks designed to maintain non-erosive velocities and direct runoff to temporary sediment trapping structures or divert clean runoff to stabilised outlets;
- filters located at all downstream locations of disturbed areas;

- runoff from disturbed areas diverted to temporary sediment basins located at strategic locations across the site;
- progressive re-vegetation during construction staging to stabilise disturbed areas; and
- stockpiling of material with diversion banks upstream of stockpiles to prevent the stockpiled material being washed away.

In line with the above, several control measures are proposed as part of the Stage 3D works, including silt fences, inlet sediment traps, stabilised site entry, and sandbag sediment traps. The full details of the proposed measures are shown on the erosion and sedimentation control plans and diagrams contained within the Civil Engineering Plans at **Appendix C**.

It is considered that the proposed development, through continuing to meet the standards and undertake the mitigation measures proposed under the Bulk Earthworks DA (DA14/1228) and those proposed in the Civil Engineering Plans at **Appendix C**, will be appropriately managed to reduce potential for adverse impacts on the site and downstream water courses.

4.10.4 Salinity

Salinity in the Central Precinct has been well documented. A review of previous salinity investigations undertaken and reports prepared by others for the Central Precinct has been undertaken by Cardno (refer to **Appendix G**). A summary of Cardno's review of the investigations is provided within **Table 4** below.

Table 4 Central Precinct Salinity Review Summary of Results

Investigation	Result
Electromagnetic Induction (EMI) Survey	Non-saline to slightly saline profile in the Central Precinct (with the exception of moderate saline anomalies)
Soil Salinity	Salinity publications indicates that the soils on the site are potentially moderately saline, with areas of high salinity potentially present on site generally following the South Creek east-west tending tributary located north of the site. Electrical Conductivity testing reveals that at a depth of 0.25m: • About 19% of the results were non-saline; • About 54% of the results were slightly saline; • About 27 % of the results were moderately saline.
Soil Ph	Majority of soils are residual in nature and are not expected to be acidic.
Dispersive Soil	It is expected that the soils are susceptible to erosion. This dispersion potential can be ameliorated by regimented compaction and moisture control during fill placement.
Regional Hydrogeology & Groundwater Salinity	Groundwater on site is moderately saline.

Source: Cardno

Cardno conclude that based on the investigations undertaken to date, the moderately saline conditions encountered on site are typical of the area in general. Further, the Bulk Earthworks DA (DA14/1228) involved the placement of a fill platform over the Stage 3D site, and as such minimal disturbance of the underlying saline soils is expected as a result of subsequent development.

The Cardno letter at **Appendix G** provides recommendations for the placement of fill, and regarding the development of Stage 3D, outlines a number of construction requirements for areas with salinity potential which should be implemented in the proposed landscaping, stormwater and drainage of the site. These measures aim to reduce rainwater infiltration in locations where recharging of the water table is likely to result in saline minerals rising up through the soil, including:

- landscaping, such as:
 - the use of salt tolerant species where planting is required in discharge areas;
 - the use of low water requiring species in gardens and landscaping;

- use of irrigation systems which are carefully designed to prevent over watering, and appropriate maintenance of those systems to minimise the potential for leaks;
- in landscaped areas, the use of mulching to minimise evaporation and reduce irrigation requirements; and
- the use of non-saline soils in landscaped areas.
- stormwater and drainage considerations, including designing:
 - the slope of exposed/open concrete slabs and surrounding areas to minimise ponding and the potential for increased infiltration;
 - drainage systems to minimise leakage and infiltration; and
 - to maintain natural drainage patterns at the site where possible.

Cardno further outline that future buildings and underground services will be predominantly placed within the imported fill material and subject to importation of suitable material, salinity, aggressivity, and sodicity is not expected to impose risk to these structures. Additional precautionary measures are also proposed for the development of structures which will be adopted and implemented where necessary as part of the proposed development and ultimate construction of future buildings.

4.11 Construction Management

Prior to works being undertaken, the site contractor will prepare a detailed Construction Management Plan (CMP). The CMP for the civil works will address matters such as traffic and pedestrian management, noise and vibration, and construction waste.

Construction Hours

It is proposed for construction hours to be in accordance with standard working hours as defined by the Environment Protection Authority. This would result in the working hours across the Stage 3D site as being:

- Monday to Friday: 7am to 6pm;
- Saturday: 8am to 1pm; and
- No work on Sundays or public holidays.

Any construction work outside of these hours will be subject to prior consultation with PCC and Roads and Maritime Services.

Waste Management

The WMP that accompanies this DA (**Appendix H**) will ensure that reuse and recycling of construction materials is maximised both on and off the site and that waste is minimised as far as practicable.

Construction Traffic Management

As the construction of this stage is expected to occur at the same time as the construction of the Central Precinct – Ropes Crossing Connector Road, construction traffic will instead access the Stage 3D site via Jordan Springs Boulevard and Lakeside Parade in Jordan Springs, and entering the Precinct from the west. Associated traffic impacts on the surrounding road network and local area during construction will be minimised through a range of measures such as site inductions, site inspections and record keeping, and the enforcement of driver protocols, vehicle access and truck routes.

A detailed Construction Traffic Management Plan (CTMP) will be submitted as part of the CMP prior to the commencement of works. The CTMP will adequately address potential impacts associated with the proposed construction, and ensure that the surrounding road network can satisfactorily accommodate the additional temporary construction vehicle movements to and from the site.

Noise and Vibration, Dust and Air Quality

The Bulk Earthworks DA (DA14/1228) as approved outlines several mitigation measures to reduce noise, vibration, dust and air quality impacts as a result of construction at the site. These measures have been carried through and modified as required to reflect the works for each subdivision stage, including those proposed for Stage 3D, to ensure any possible impacts are mitigated. A Construction Environmental Management Plan will be prepared as part of construction certificate documentation.

4.12 Site Suitability

The proposed development is entirely appropriate in that:

- it is/will be adequately serviced by roads, utilities and stormwater infrastructure, as proposed/approved by various DAs lodged/approved with Council;
- the proposed development is generally consistent with and supports the intended outcomes of the CCP and the CPP Amendments No.1 and No. 2;
- required site preparation works have been undertaken to make the site suitable with regards to demolition of structures and land clearing, bulk earthworks to prevent flooding, and existing and construction of supporting infrastructure;
- appropriate works and protocols are being undertaken to make the site suitable with regards to contamination and remediation;
- the works will support the built form and public domain objectives for the Central Precinct;
- the site is zoned to accommodate the proposal in accordance with SREP 30; and
- it will help to stimulate the housing and employment markets in the local and regional area of Penrith.

4.13 Social and Economic Issues

The proposed development of urban land for future residential and commercial purposes (subject to future development applications & approvals) will provide further housing and retail choice within the region and is well connected to community services, public transport, parks and open spaces.

Further, the proposed development will support several construction jobs as well as longer term economic benefits associated with ongoing employment within the commercial component, and flow on effects from establishing a new residential community, in accordance with the long-term strategic planning objectives for the site.

Housing stock and product availability is a key issue in today's property market, and Central Precinct seeks to provide a variety of housing types more suited to the needs of the market. The proposed integrated dwellings and apartments proposed to be built on the lot in Stage 3D (subject to future application/s) seek to address this housing affordability issue and provide opportunities for the community to enter into the property market.

4.14 Public Interest

The proposal is generally consistent with the current CPP, which has been formally exhibited and subsequently adopted by Council. The proposal is also consistent with the proposed changes to the CPP under Amendment No. 1, due to be endorsed shortly by Council, and No. 2, due to go on public exhibition soon. The proposed development, through the provision of new housing and commercial floorspace and the resulting increase in population and employment (respectively), will also support and stimulate economic activity in the local area. The Village Centre will provide future retail to service the needs of the community.

5.0 Conclusion

The proposed Stage 3D subdivision is consistent with the aims, objectives and planning strategies for the St Marys site set out in SREP 30, the St Marys EPS and the CPP (Amendments No. 1 and No. 2).

The proposed development facilitates the ongoing development of the Central Precinct and the provision of future residential and commercial development. In doing so, it will deliver substantial economic and social benefits, including providing additional housing, employment, and retail opportunities and choice for the Penrith area.

The impacts of the proposed development have been assessed throughout this report and by specialist consultant studies. This assessment demonstrates that the proposed development adequately considers the environmental, cultural heritage, water cycle & soils, transport & access, contamination, and bushfire matters. Based on this assessment, the proposed development will not result in adverse impacts in relation to these considerations.

Considering the merits of the proposal, and in absence of any significant adverse environmental, social or economic impacts, we respectfully request that the proposed development be approved subject to appropriate conditions of consent, as required.