

Preliminary Civil Engineering & Servicing Report for Material Change of Use

Southern Thornlands Precinct One

Job No: B00702

Submission to: Urbex Pty Ltd.

Date: 20 June 2025

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2025/1656

Date: 31 October 2025



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Document Control Sheet

Project	Southern Thornlands Precinct One
Report Title	Preliminary Civil Engineering & Servicing Report for Material Change of Use
Job Number	B00702

Revision History

Revision Number	Prepared by	Reviewed by	Date
A	Willem Rockett & Bodhi James	Peter Ingerman	20 June 2025
B			
C			
D			
E			

Distribution Details

Destination	Revision						
	A	B	C	D	E	F	G
Urbex Pty Ltd.	X						
Economic Development Queensland (EDQ)	X						
File: Empower Engineers & Project Managers	X						

Approvals

Issue Approved:	PI
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2. Site Characteristics

2.1 Location

The proposed development site is located on the eastern side of Springacre Road, Thornlands and is currently comprised of six allotments. The street address and SP descriptions of the proposed development site is listed in Table 2-1 below.

Table 2-1 | Property Data

Item	Street Address	RP Description
1	62-74 Springacre Road, Thornlands	Lot 12 on RP 53653
2	76-94 Springacre Road, Thornlands	Lot 13 on RP 53653
3	96-108 Springacre Road, Thornlands	Lot 14 on RP 53653
4	110-118 Springacre Road, Thornlands	Lot 2 on RP 128089
5	120-122 Springacre Road, Thornlands	Lot 1 on RP 128089
6	124-138 Springacre Road, Thornlands	Lot 16 on RP 53653

This site is bounded by a public road to the west (Springacre Road) and Eprapah Creek to south-east, with potential for future urban residential on lots to the north, west and south, as part of an overall Priority Development Area (PDA).

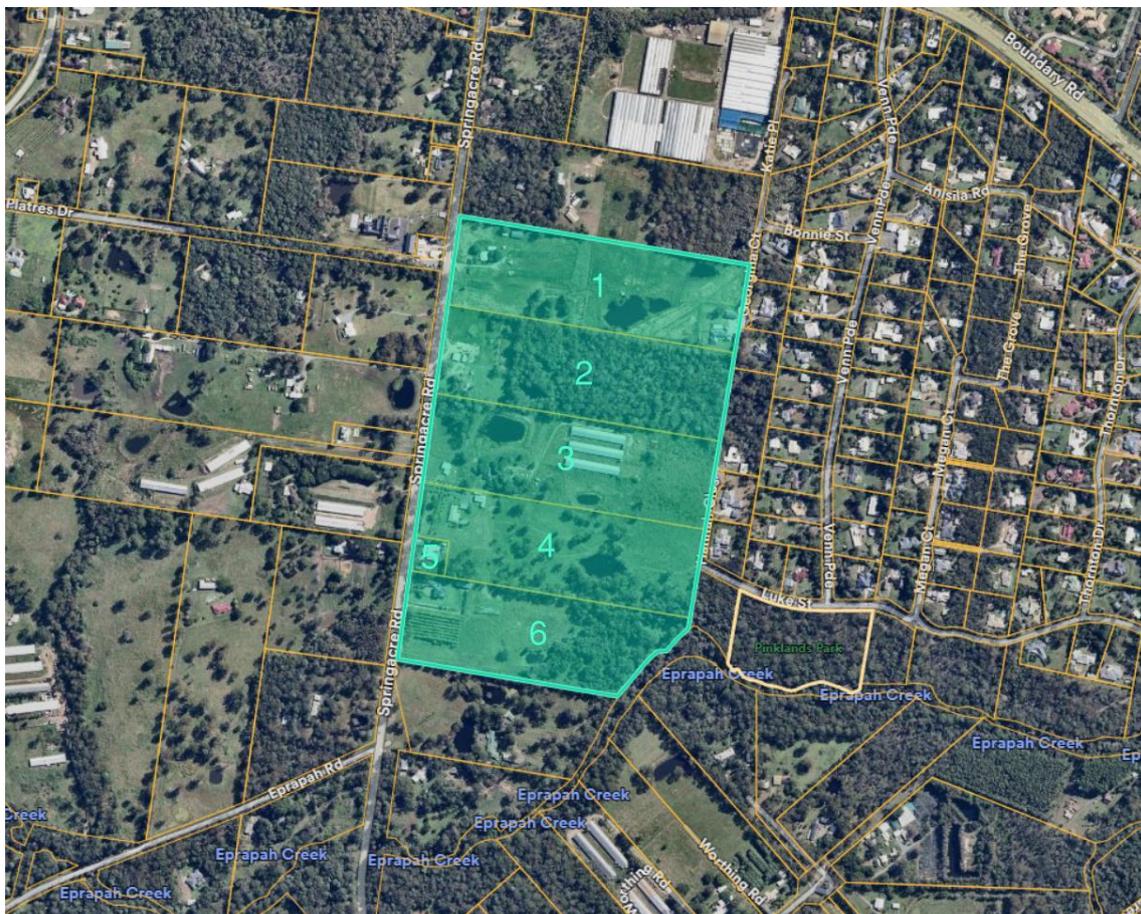


Figure 2-1 | Aerial Photo of the Proposed Development Site and Surrounds – NearMap ©

2.2 Land Use

2.2.1 Existing

The existing sites have a combined area of approximately 40.41 ha and are currently occupied by a combination of pasture and cultivated fields, native and exotic vegetation, small and large farming sheds, farm dams and single dwelling houses. The sites also have several unsealed internal access tracks. There are several dams onsite however based on the provided survey information none the dams have low flows pipes or formed overflow weirs. As such the onsite dams are not considered to attenuate flows in the predevelopment scenario.

The existing properties and allotments on the western side of Springacre Road are not part of this Precinct 1 development application. Figure 2-2 below details the existing structures and vegetation of the proposed development sites.



Figure 2-2 | Proposed Development Sites Existing Condition

2.2.2 Proposed Development

The proposed development is to consist of an internal road network, residential lots of mixed sizes and an open space conservation zone which will also be included as part of the stormwater system. The proposed development layout can be seen in Appendix A. All engineering services are to be provided to each allotment as part of the proposed development. This includes the following:

- Road Access via Springacre Road
- Stormwater Drainage;
- Sewer Connection;
- Reticulated Water Connection; and
- Electrical and Communication Services

Figure 2-3 below shows the proposed land uses for the development. This is consistent with the plans shown in Appendix C.

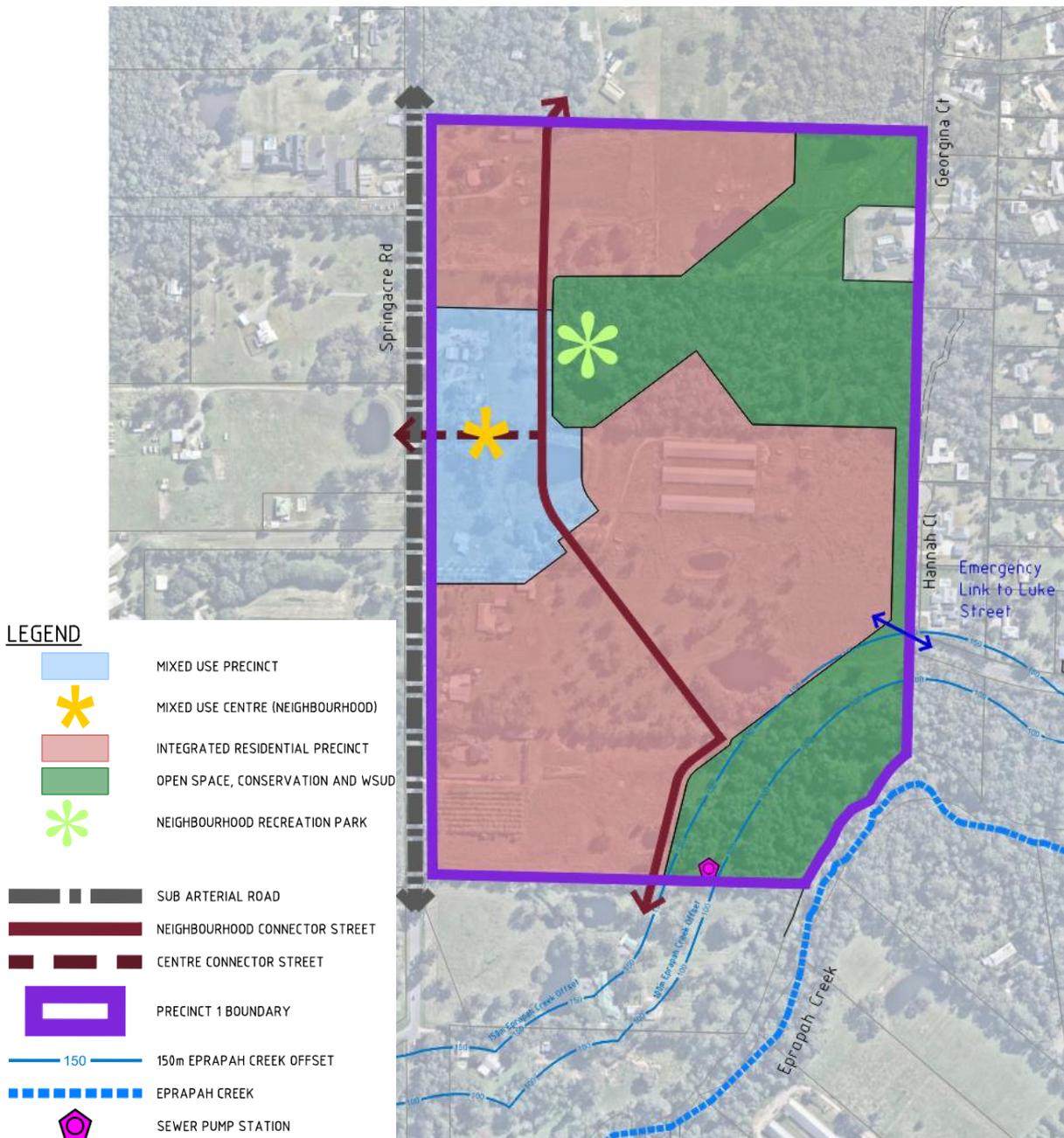


Figure 2-3 | Proposed Land Uses

2.2.3 Development Staging

The development staging shall be determined through the RAL Application and approved by EDQ.

2.3 Topography and Site Drainage

The site is divided by a central ridge running east-to-west, splitting the site into two distinct catchments, north and south.

The levels across the northern half of the site vary from RL 44.0 at the western boundary to RL 39.5 at the site's centre and RL 25.0 at the north-eastern boundary. The levels across the southern half of the site vary from RL 39.5 at the site's centre to RL 15.0 at the south-eastern boundary.

The site falls with an approximate grade of 6.0% on average with surface water currently flowing to four discharge locations across the site:

1. The north-eastern boundary of the development discharging to an existing private property (40-60 Springacre Road) and channel near Georgina Court
2. The eastern boundary of the development discharging to the existing drainage infrastructure adjacent to Hannah Close and ultimately Eprapah Creek.
3. The southern boundary of the development drains towards Eprapah Creek.
4. The north-western boundary of the development discharging to an existing property (40-60 Springacre Road) and road reserve adjacent to Springacre Road.

It is noted that there is an external catchment which flows naturally to the proposed development site from the west via cross drainage under Springacre Road and overland flow. There is also a catchment to the north of the Precinct One Sites which flows naturally into the Precinct One Area.

For the purposes of stormwater modelling, it shall be assumed that external flows entering the site are doing so at undeveloped flow rates in the pre-development scenario. However, because the upstream catchment is flagged for development as part of a greater PDA, the post development flow from this catchment shall be assumed to be developed in a similar nature to the internal catchments. This will allow for conveyance through the site and stormwater detention of the regional flows. This information is summarised in Figure 2-4 below.

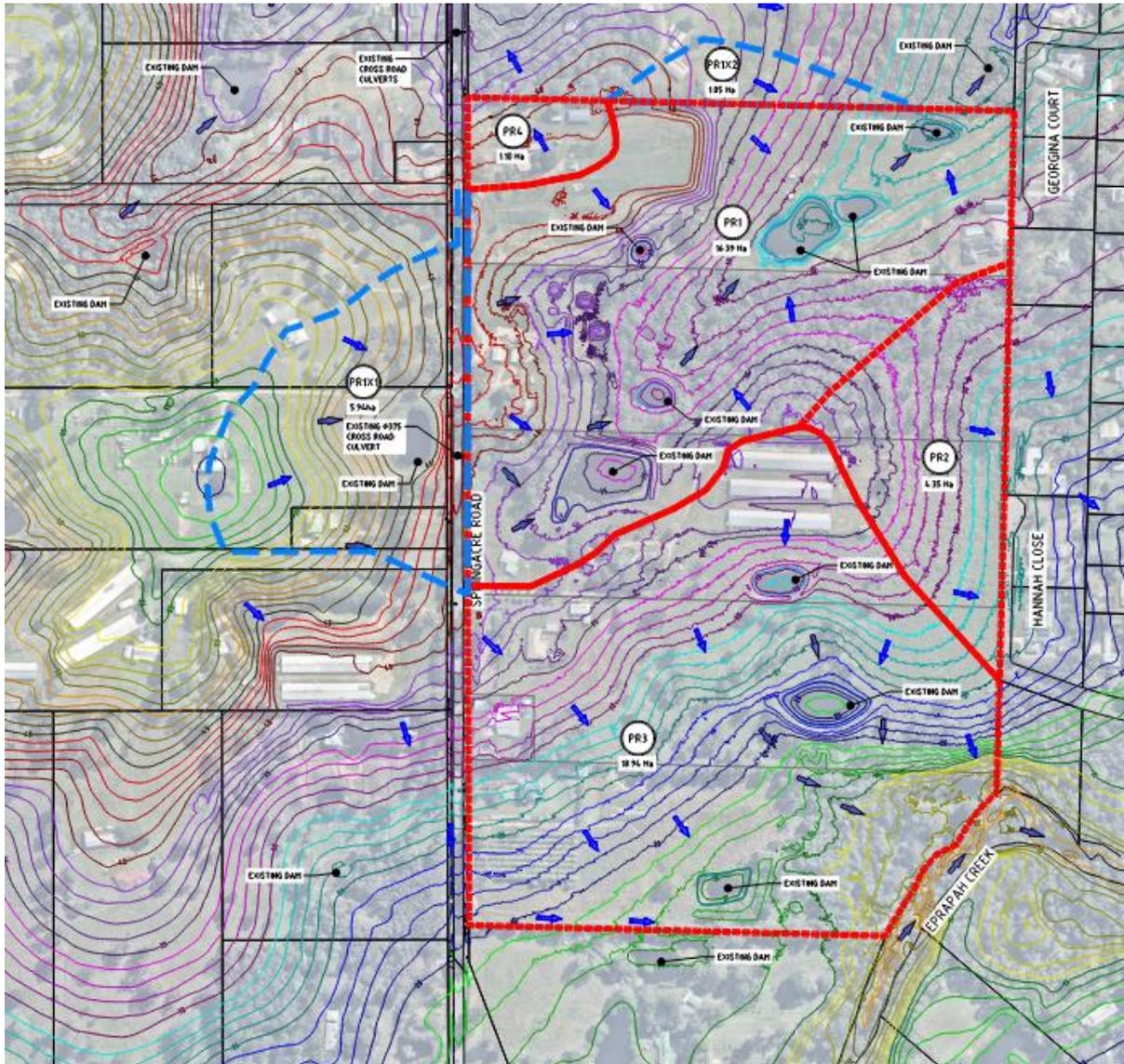


Figure 2-4 | Existing Catchment Diagram

3. Existing and Proposed Civil Engineering Infrastructure

The MCU phase strategy drawings show the proposed infrastructure to service the proposed land use change and are included in Appendix C. The final infrastructure servicing strategy for Precinct and the wider PDA is subject to further planning with Economic Development Queensland (EDQ) which will consider the wider Southern Thornlands PDA requirements.

3.1 Stormwater

The proposed stormwater strategy to manage stormwater quality, quantity and overland flow shall be developed in accordance with the RCC City Plan, Queensland Urban Drainage Manual (QUDM), Australian Rainfall & Runoff Guidelines 2019 (ARR2019), the 2017 State Planning Policy (SPP 2017) and other best practices documents as applicable.

3.1.1 Stormwater Drainage Network

The proposed development shall include a stormwater drainage network which captures and conveys stormwater runoff to the discharge points of the site. The Minor Storm drainage system shall consist of a Pit and Pipe Network which is to be designed in accordance with the Redland City Council Planning Scheme and the Queensland Urban Drainage Manual (QUDM). The road reserve shall be used to convey the Major storm via overland flow to the discharge point. The design of the stormwater system and the road cross section shall ensure that allotments are not subject to inundation by overland flow during the major storm event. The minor and major storm events shall be selected in accordance with the guidance provided in QUDM and the Planning Scheme. The detailed design and documentation of the stormwater drainage network shall be subject to the approval by EDQ as part of the subsequent RAL application/s for Precinct One.

3.1.2 Stormwater Detention

The proposed development shall increase the impervious fraction when compared to the existing condition. This is likely to result in an increase in peak flow during the critical rainfall events. It is proposed that several detention basins are installed at key locations within the site to ensure that the pre-development peak flow is not exceeded in the post development scenario at each of the discharge points. It is proposed that stormwater detention shall be provided for all events from the 0.5 EY to the 1% AEP Events. Regional detention basins shall be designed to cater for developed internal catchments and developed external catchments which discharge to the subject sites. Stormwater detention is to be sized within an appropriate runoff routing software package and guidance from QUDM, The RCC Planning Scheme and other best practices documents. This information shall be documented in a Stormwater Management Plan and submitted to EDQ for approval as part of the subsequent RAL application/s for Precinct One. The schematic locations for stormwater detention and nominal external catchment flows are shown within Figure 3-1 below.

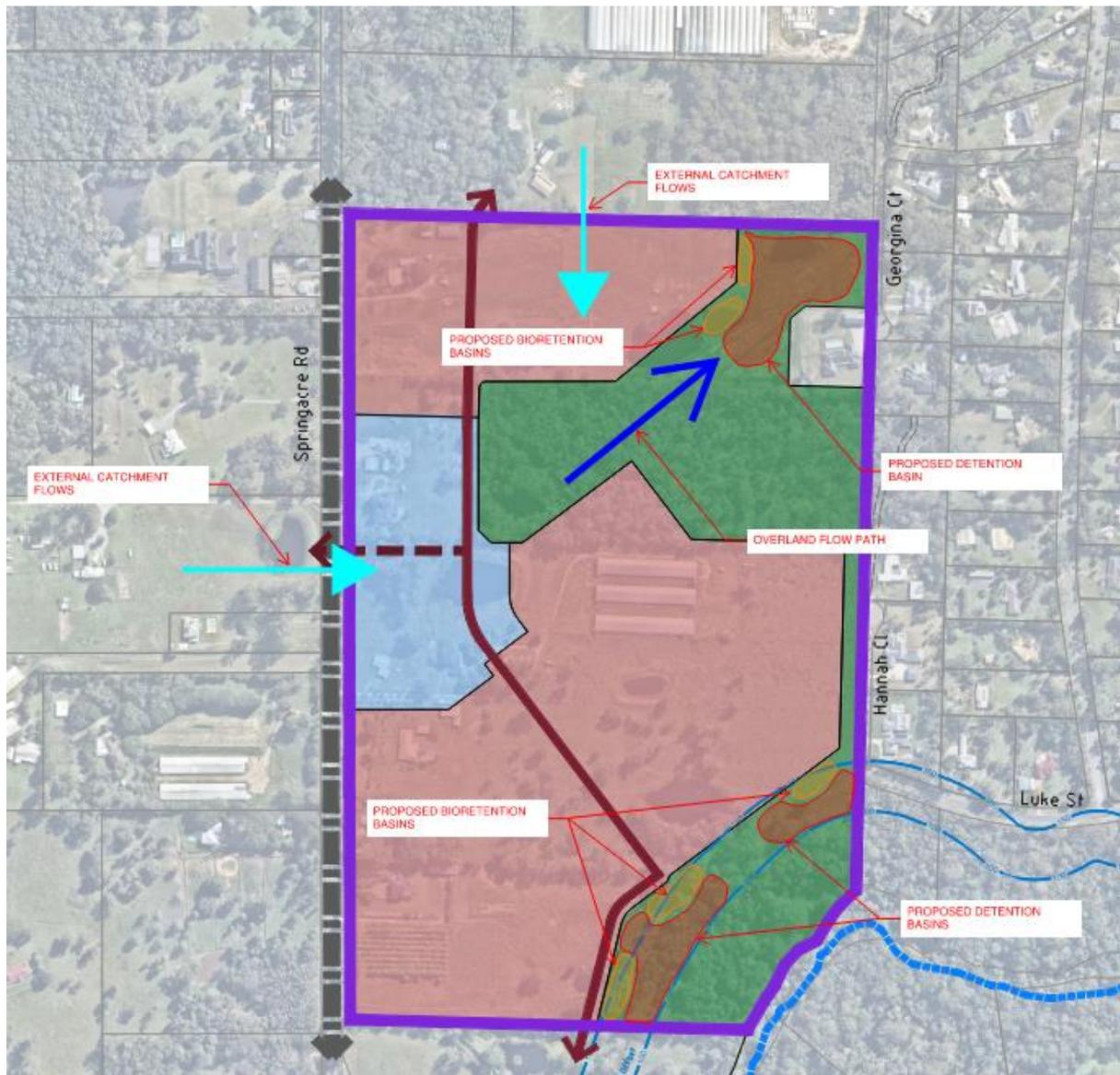


Figure 3-1 | Stormwater Management Strategy - External Catchments, Overland Flow, Stormwater Quality and Detention

3.1.3 Stormwater Quality Treatment

Stormwater Quality Treatment shall be provided for the project site in accordance with the 2017 State Planning Policy (SPP 2017). Table 3-1 is a summary of the information within Appendix 2 of SPP 2017 and forms the pollutant reduction targets for all stormwater quality treatment associated with the proposed development site.

Table 3-1 | Pollutant Reduction Targets for Proposed Development as per SPP 2017

Pollutant	Pollutant Reduction Target
Total Suspended Solids (TSS)	80 %
Total Phosphorus (TP)	60 %
Total Nitrogen (TN)	45 %

Gross Pollutants (GP)	90 %
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It is proposed to install a number of bioretention basins within the ultimate development. These shall be sized within the MUSIC Model utilising the parameters within the RCC Planning Scheme and the MUSIC Modelling Guidelines for SEQ as published by Healthy Land and Water. The nominal locations for the bioretention basins can be seen in Figure 3-1 above. These regional bioretention basins may be sized to include external developed catchment loads where appropriate means exist to capture frequent flows (i.e. storms up to the 0.5 EY Event). This information shall be documented in a Stormwater Management Plan and submitted to EDQ for approval as part of the subsequent RAL application/s for Precinct One.

The bioretention basins shall include a coarse sediment forebays as an opportunity to control coarse sediments and gross pollutants. Opportunities shall also be investigated during the detailed design to include buffer strips, swales and other stormwater quality improvement devices as part of the overall treatment train.

3.1.4 Overland Flow

An overland flow path exists from the western external catchment which flows through the subject site. This overland flow shall be managed in the following way:

- 1% AEP Flow to be captured as part of the ultimate development works West of Springacre Road (Catchment PCX1 in Figure 3-2 below);
- Captured flows shall be piped through the subject sites and discharged into the open space area (Within Catchment PC1 in Figure 3-2 below);
- Discharged flows are to be conveyed via overland flow to the proposed detention basin;
- Combined internal and external flows discharged from the detention basin at the lawful point of discharge (North-west corner of the site as shown in Figure 3-2 below).

In order to analyse the flows through the site, it is proposed that as part of the detailed design submission, a detailed 1D/2D Hydraulic model shall be prepared. This model shall be used to determine the flow, depth, velocity, flood hazard and other characteristics of the overland flow. The outputs of this model shall be documented in a Stormwater Management Plan and submitted to EDQ for approval as part of the subsequent RAL application/s for Precinct One.

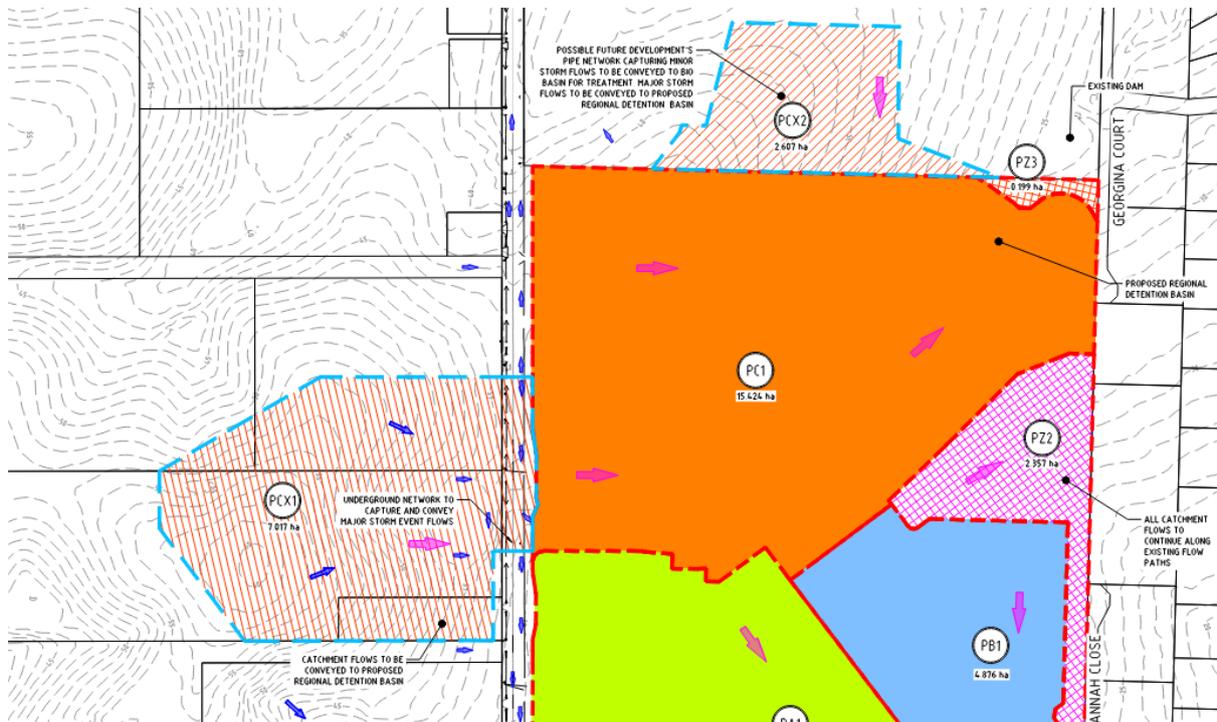


Figure 3-2 | External Developed Catchment Interaction with Precinct One

3.1.5 Flooding

As identified within the RCC Planning Scheme, the proposed development sites contain flood prone areas as identified within Figure 3-3 below. For the south-western section of the site, adjacent to Eprapah Creek, the flood prone area is associated with creek flooding. No development is proposed within the regional diversity corridor offset 150 m from Eprapah Creek. The Flood Prone Area is wholly located within the biodiversity corridor and does not extend into the area to be developed.

There is a natural gully which flows from the centre of the site to the north-western boundary which is also included as a flood prone area. It is proposed that this area is to be generally retained and flow from external western catchments shall be directed through the site and to the discharge point. All allotments within the proposed development area shall be designed such that there is a minimum of 300 mm freeboard to all allotment levels and inundation from flood prone areas does not extend into allotments. An appropriately calibrated stormwater model shall be used to confirm this during the detailed design.

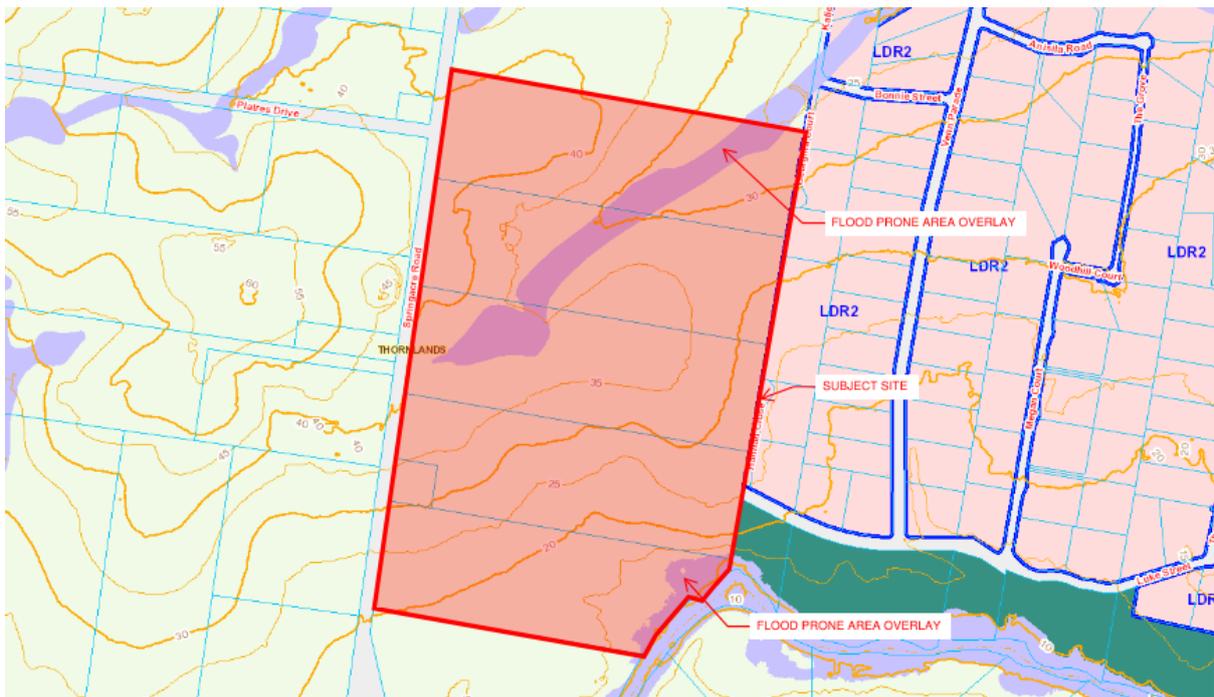


Figure 3-3 | Flood Prone Areas within the Subject Site

3.2 Sewerage Reticulation

3.2.1 Existing Infrastructure

The existing sewage infrastructure in proximity to Precinct One can be seen in Figure 3-4. No existing sewer infrastructure is directly adjacent to the proposed site.

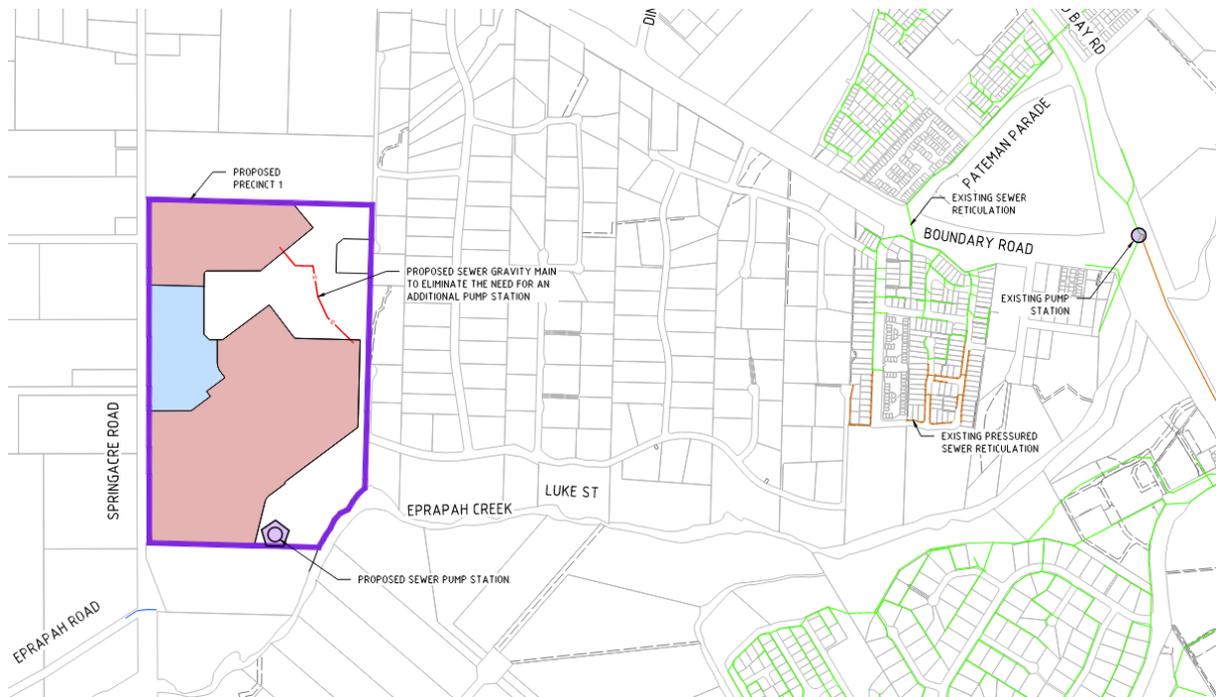


Figure 3-4 | Sewerage Infrastructure in proximity to Precinct One

3.2.2 Proposed Infrastructure

To service Precinct One for sewer, a new sewage pump station is to be established within the site. A rising main shall convey flows to the existing RCC sewer network. Opportunities exist for the sewage pump station to service other developed areas within the PDA. This approach provides a practical and scalable solution that is consistent with the broader infrastructure vision for the Southern Thornlands PDA.

Empower understands that EDQ is actively engaging with Redland City Council to facilitate an integrated sewer solution as part of their formulation of the PDA-wide Development Scheme and Development Charges and Offset Plan (DCOP). These ongoing discussions will inform the alignment, capacity and delivery responsibilities for sewer infrastructure across the PDA.

The proposed strategy ensures that sewer servicing for Precinct 1 is both feasible, scalable and adaptable and does not prejudice the delivery or staging of EDQ's ultimate infrastructure plans for the PDA. Further detail will be resolved at the RAL stage in consultation with EDQ and RCC.

3.2.3 Design Loading

The sewer design loading shall be based on the proposed lot layout for the development and design parameters in the SEQ WS&S D&C Code. The total number of equivalent persons (EP's) the sewerage network must service as part of the proposed development shall be based on an EP/ET ratio of 2.7; as per Appendix A of the SEQ WS&S D&C Code.

3.3 Water Reticulation

3.3.1 Existing Infrastructure

Existing water infrastructure is present at the Frontage of Springacre Road. The Springacre Road water main is a DN 150 AC Main. Figure 3-5 below shows the location of existing infrastructure adjacent to the proposed development site, as well as the nearby water network.

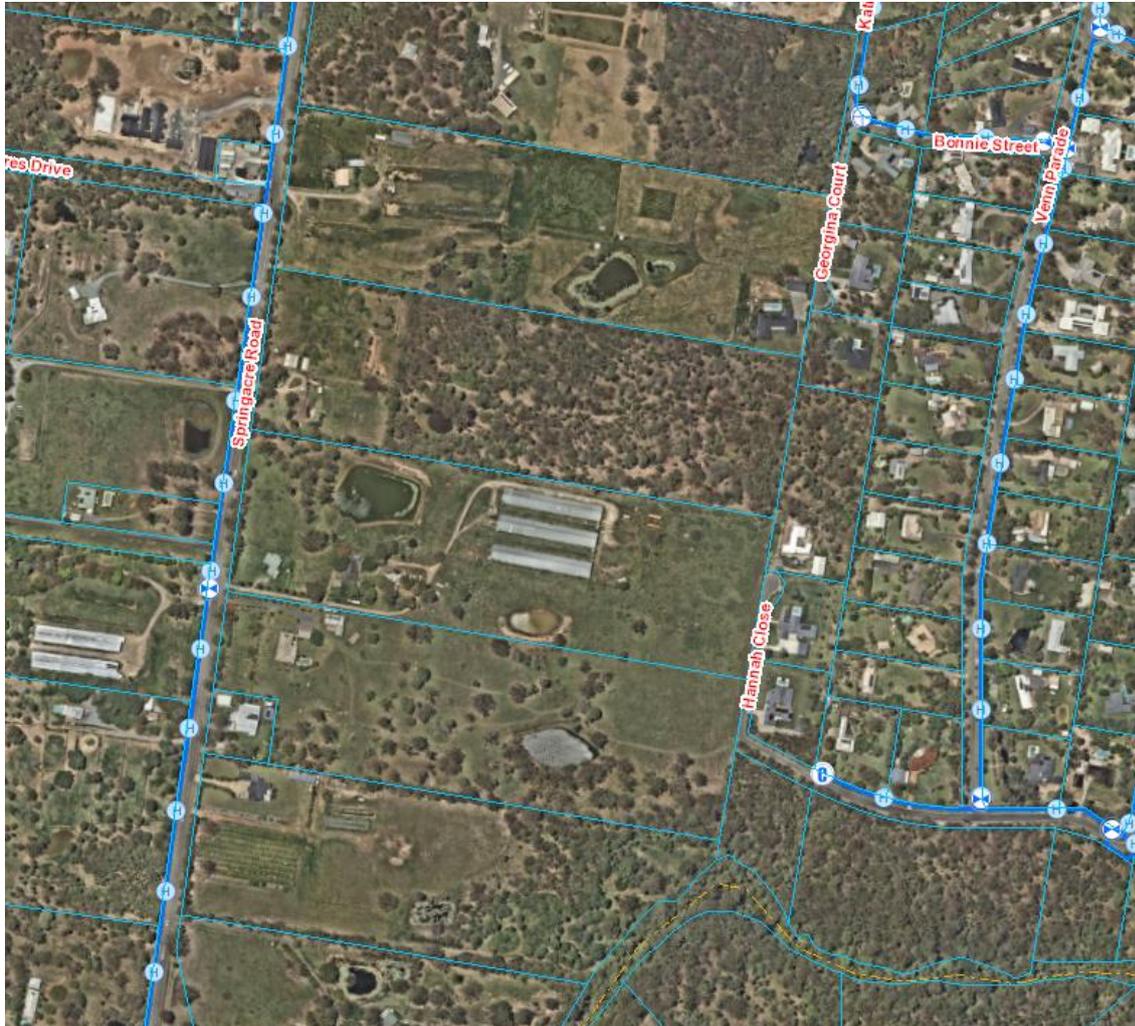


Figure 3-5 | Existing Water Network as per Red-E-Map

3.3.2 Proposed Infrastructure

Multiple water servicing options are available to support the proposed development of Precinct 1, each providing varying levels of capacity and flexibility depending on staging and final design outcomes. These options shall be further refined during the subsequent RAL application in consultation with Economic Development Queensland (EDQ). Empower Understands EDQ are currently liaising with Redland City Council (RCC) to develop a coordinated water servicing strategy for the Southern Thornlands PDA as part of the broader Development Scheme and Development Charges and Offset Plan (DCOP).

An interim water servicing solution is available via connection to the existing DN 150 watermain located adjacent to the site. This option may be appropriate for early stages of development, subject to further capacity analysis. An alternate connection opportunity is also available to the north, toward Boundary Road, which may offer enhanced capacity and long-term network resilience.

In addition, a trunk watermain solution is available to the south via Bunker Road. This aligns with the likely ultimate trunk infrastructure strategy currently under consideration by EDQ and RCC for the PDA.

The proposed solution shall be designed to ensure flexibility in servicing and shall not prejudice the delivery of EDQ's ultimate water infrastructure plans for the PDA. The preferred servicing strategy will be confirmed through the RAL process in collaboration with EDQ and RCC.

3.4 Development Access

3.4.1 External Roads & Intersection

The rural zoned site in its existing condition is currently serviced by Springacre Road. The existing Springacre Road is a sub-arterial road within the Redland City Council Network. The existing road has a rural profile with a spray sealed wearing course and roadside swale drains.

The proposed development site provides access to all lots via a new intersection on Springacre Road. A traffic study has been prepared by SLR Consulting to support the MCU and provides additional technical guidance in regards to the suitability of Springacre Road. Preliminary design of the intersection on Springacre Road has been undertaken to confirm that a future road connection to Woodlands Drive as part of the overall PDA is possible. This assessment has confirmed that there are multiple options which grade suitably from Springacre Road to Woodlands Drive.

The detailed design of the interim and ultimate intersections shall be in accordance with Austroads Guide to Road Design and the SLR Traffic Report. The interim and ultimate intersection designs throughout the project shall consider input from all key stakeholders including EDQ, Council, Traffic Consultants and other relevant parties.

3.4.2 Internal Roads

The internal road network to the development and the associated road hierarchy shall be subject to a traffic assessment based on the proposed layout. This shall be confirmed during the RAL Stage and shall be subject to the approval of EDQ.

3.5 Earthworks

The software package 12D will be used to model the preliminary earthworks plan for the proposed development. The 12D model will show the likely extents of earthworks cut and fill for the proposed development stages. The preliminary earthworks plan will be developed based on information within the Redland City Council City Plan.

The earthworks design, where possible, will minimise steep grades on lots and reduce the requirements for retaining walls. The natural slope of the development area will be incorporated into the earthworks design, and it is intended that the earthworks cut to fill is to be balanced. The preliminary design of earthworks will be undertaken with the intention that where possible all lots will fall to the street. This will reduce the need for rear of lot services for stormwater and sewer. Steep grades on lots will also be avoided.

Where retaining walls are required within allotments, they are to have a desirable maximum height of 2.5 m. Noting the steep grade within the existing site, this may not be possible in all areas and the design shall seek to adopt an absolute maximum retaining wall height of 3.0 m. This is to be confirmed through a detailed design and submitted to EDQ for approval as part of the RAL Stage. It is proposed that all retaining structures are to be installed in accordance with AS 4678-2002. It is noted that structural design of retaining walls is to be undertaken by others.

Earthworks for the proposed development sites are to be constructed in accordance with AS3798-2007 – Guidelines on Earthworks for Commercial, and Residential Developments and Redland City Council requirements. Testing of fill will also be undertaken as part of the construction stage of the development. All fill shall be placed, compacted, and tested to a Level 1 standard as specified within the Australian standards.

3.6 Electrical, Streetlighting & Communications

Currently, 11 kV High Voltage feeder lines exist on the Springacre Road Frontage with several distribution transformers and Customer Energy Resources (CER). These can be seen in Figure 3-6 below.

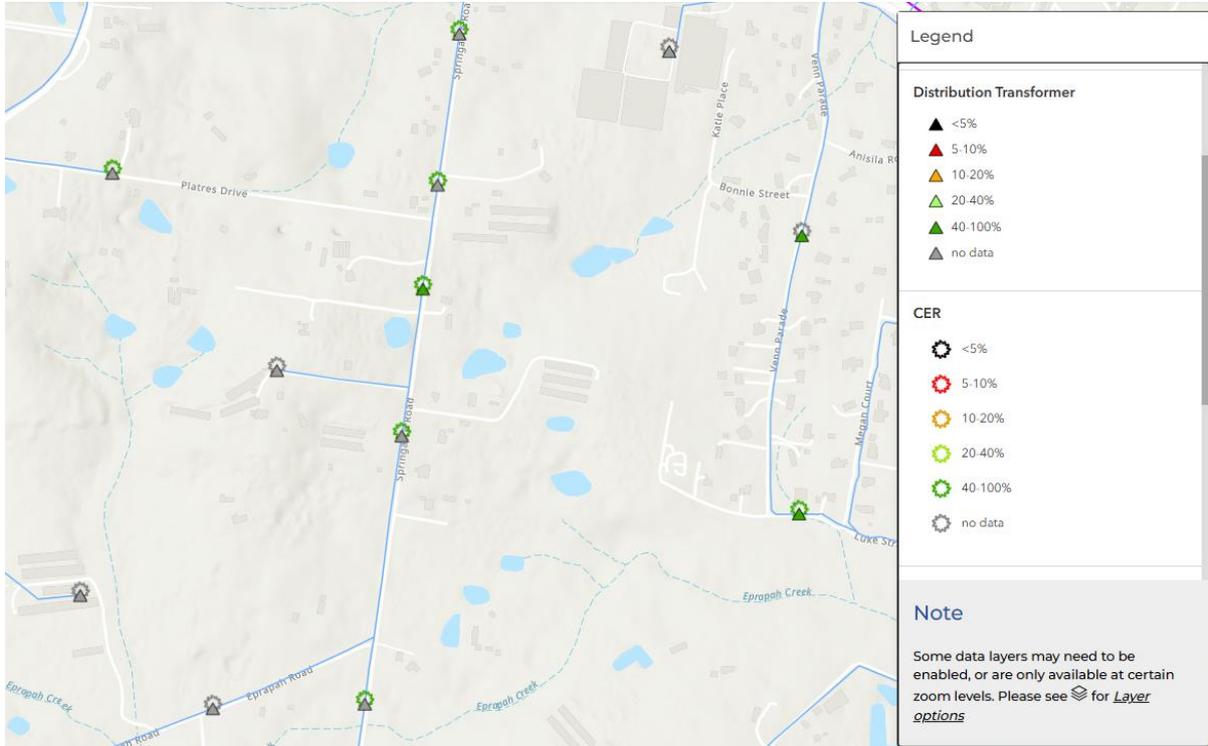


Figure 3-6 | Existing External HV Infrastructure

As part of the proposed development, once the site layout has been finalised, it is proposed to undertake a HV and LV assessment of the site to determine the minimum upgrade requirements externally. It is proposed that each allotment within the development shall be provided with a LV Service. In addition to the LV Design, the internal streetlighting design shall be provided to all internal roads in accordance with Australian Standards and the requirements of the Redland City Council Planning Scheme. The internal HV Electrical Design shall nominate the location and staging requirements for all HV Infrastructure. The internal subdivision detailed LV and HV Design shall be prepared in accordance with Energex standards and guidelines. This information shall be documented and submitted to Energex for approval as part of the separate approval.

Communications infrastructure shall also be provided to each allotment as part of the detailed design. This shall be subject to the approval of the relevant communications providers.

3.7 Erosion and Sediment Control

A comprehensive erosion and sediment control plan is to be prepared and submitted as part of the operational works application for this development. The erosion and sediment control plan is to be prepared in accordance with standards outlined by Redland City Council and the standards specified within the International Erosion Control of Australasia (IECA) Best Practices Erosion and Sediment Control (BPESC), November 2008. The erosion and sediment control plan will aim to mitigate potential erosion in the first instance and utilise end of line sedimentation devices. Recommendations for the ongoing monitoring and maintenance of sedimentation devices will also be included as part of the erosion and sediment control plan.

3.8 Asset Handover

It is the intention of the applicant that all engineering infrastructure which forms part of these developments is to be handed over to Redland City Council upon the completion of construction and acceptance "off maintenance". This includes infrastructure such as:

- Stormwater
- Reticulated Water
- Sewerage
- Roads and Drainage
- Parks
- Conservation areas
- Bioretention/detention Basins
- Streetlights.

Electrical and communications assets shall be owned, operated and maintained by their respective approval authorities.

4. Conclusion

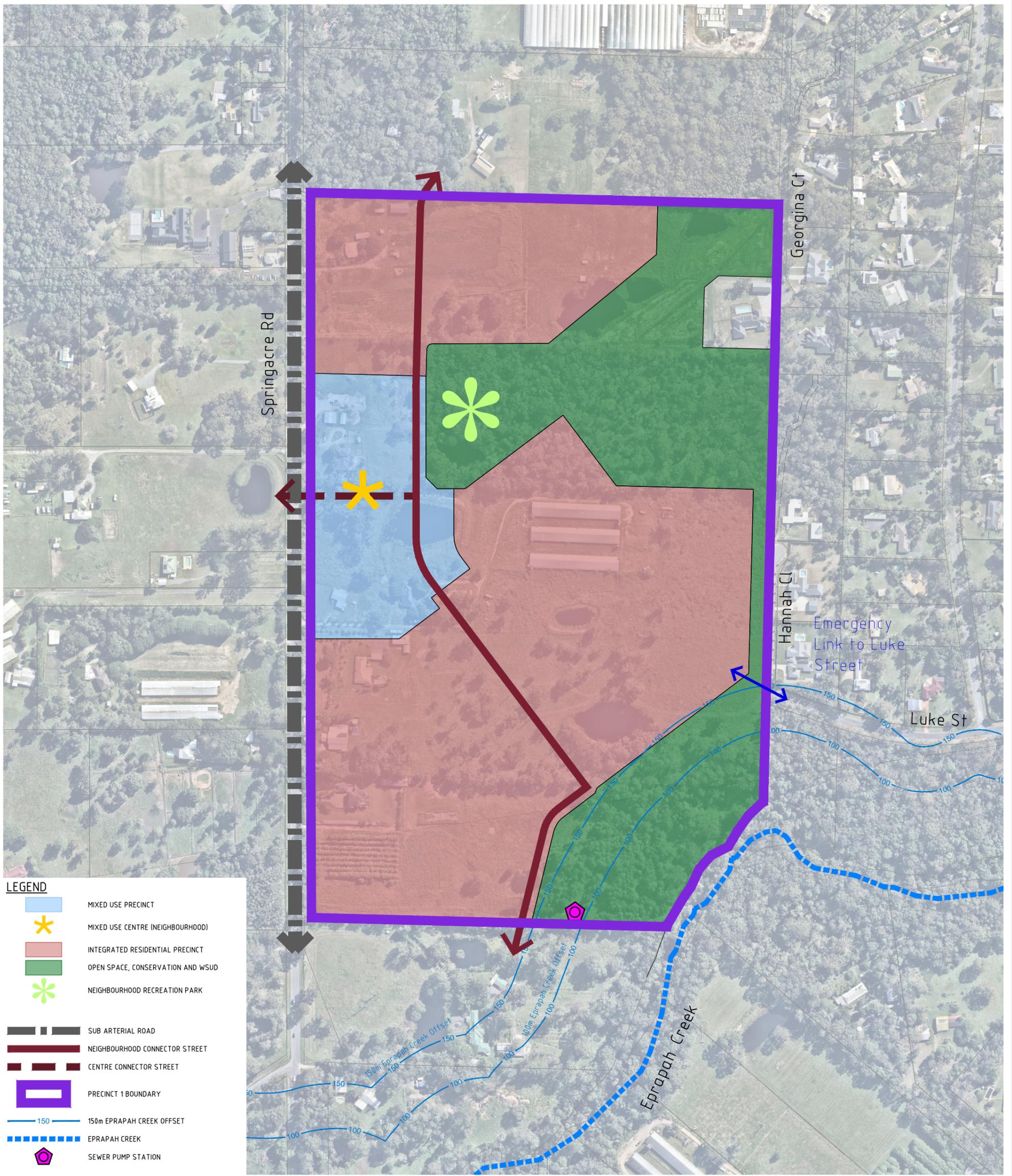
The engineering infrastructure report and associated proposed plans found within Appendix C has identified that the proposed development can be adequately serviced. The engineering infrastructure nominated within this report is consistent with the Southern Thornlands Interim Land Use Plan and does not inhibit the future development of the PDA. The servicing strategy for all engineering features assessed within this report shall be further refined as part of future submissions.

The proposed development will require access to the following existing services and infrastructure from their associated providers:

- Sewerage Reticulation (Redland Water)
- Water Reticulation (Redland Water)
- Stormwater Quality and Quantity Treatment (Redland City Council)
- Internal and External Road Networks (Redland City Council)

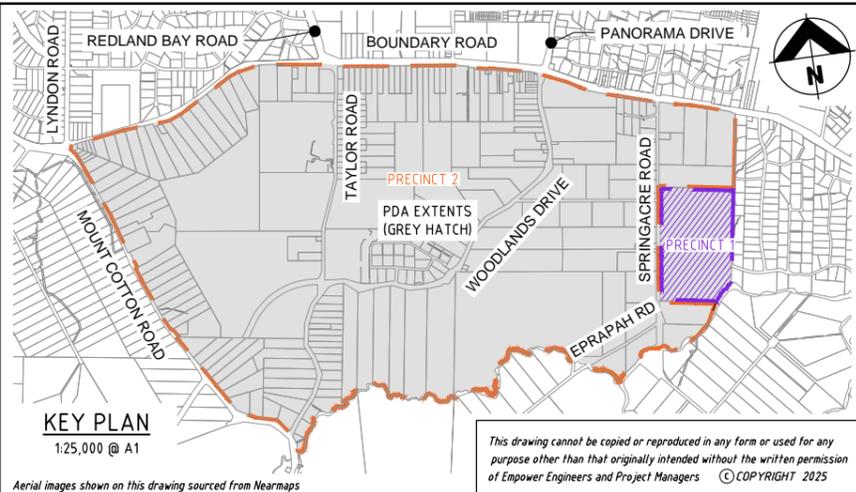
It is proposed that the ownership of all infrastructure will be transferred to the appropriate service providers, as detailed above, upon completion of construction works and acceptance off maintenance. The design methodology implemented as part of the detailed design phase shall be consistent with the EDQ Requirements, as well as other best practices engineering standards and guidelines.

**Appendix A. Southern Thornlands
Land Use Plan**



LEGEND

	MIXED USE PRECINCT
	MIXED USE CENTRE (NEIGHBOURHOOD)
	INTEGRATED RESIDENTIAL PRECINCT
	OPEN SPACE, CONSERVATION AND WSUD
	NEIGHBOURHOOD RECREATION PARK
	SUB ARTERIAL ROAD
	NEIGHBOURHOOD CONNECTOR STREET
	CENTRE CONNECTOR STREET
	PRECINCT 1 BOUNDARY
	150m EPRAPAH CREEK OFFSET
	EPRAPAH CREEK
	SEWER PUMP STATION



Client
URBEX PTY LTD

Project
SOUTHERN THORNLANDS PRECINCT 1

Title
LAND USE PLAN

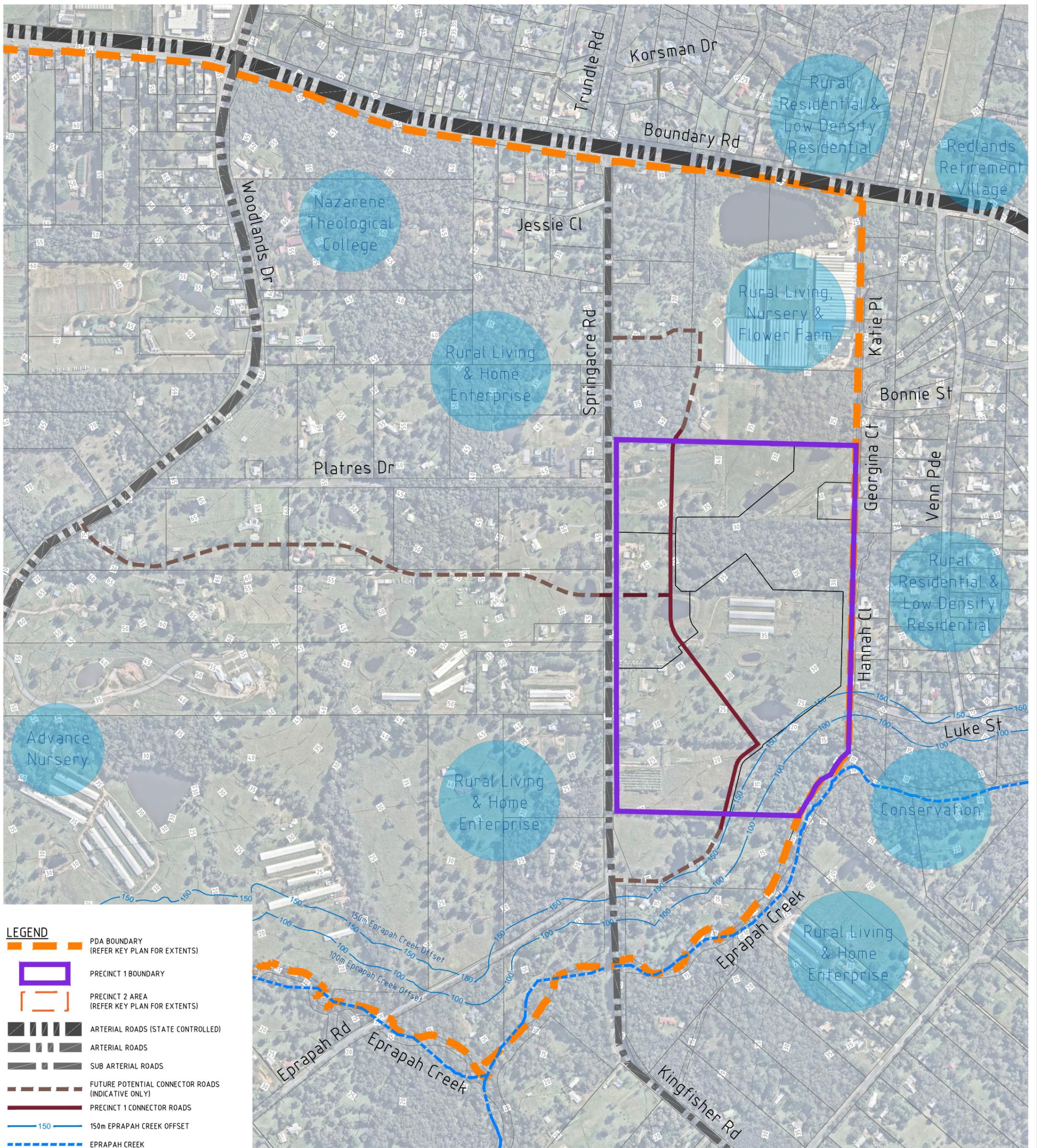
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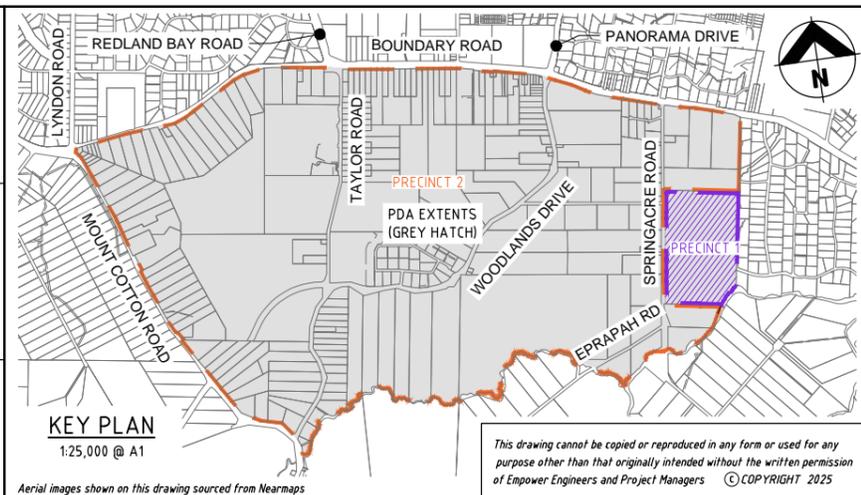


**Appendix B. Precinct One and
PDA Context Plan**



LEGEND

- PDA BOUNDARY (REFER KEY PLAN FOR EXTENTS)
- PRECINCT 1 BOUNDARY
- PRECINCT 2 AREA (REFER KEY PLAN FOR EXTENTS)
- ARTERIAL ROADS (STATE CONTROLLED)
- ARTERIAL ROADS
- SUB ARTERIAL ROADS
- FUTURE POTENTIAL CONNECTOR ROADS (INDICATIVE ONLY)
- PRECINCT 1 CONNECTOR ROADS
- 150m EPRAPAH CREEK OFFSET
- EPRAPAH CREEK



Client
URBEX PTY LTD

Project
SOUTHERN THORNLANDS PRECINCT 1

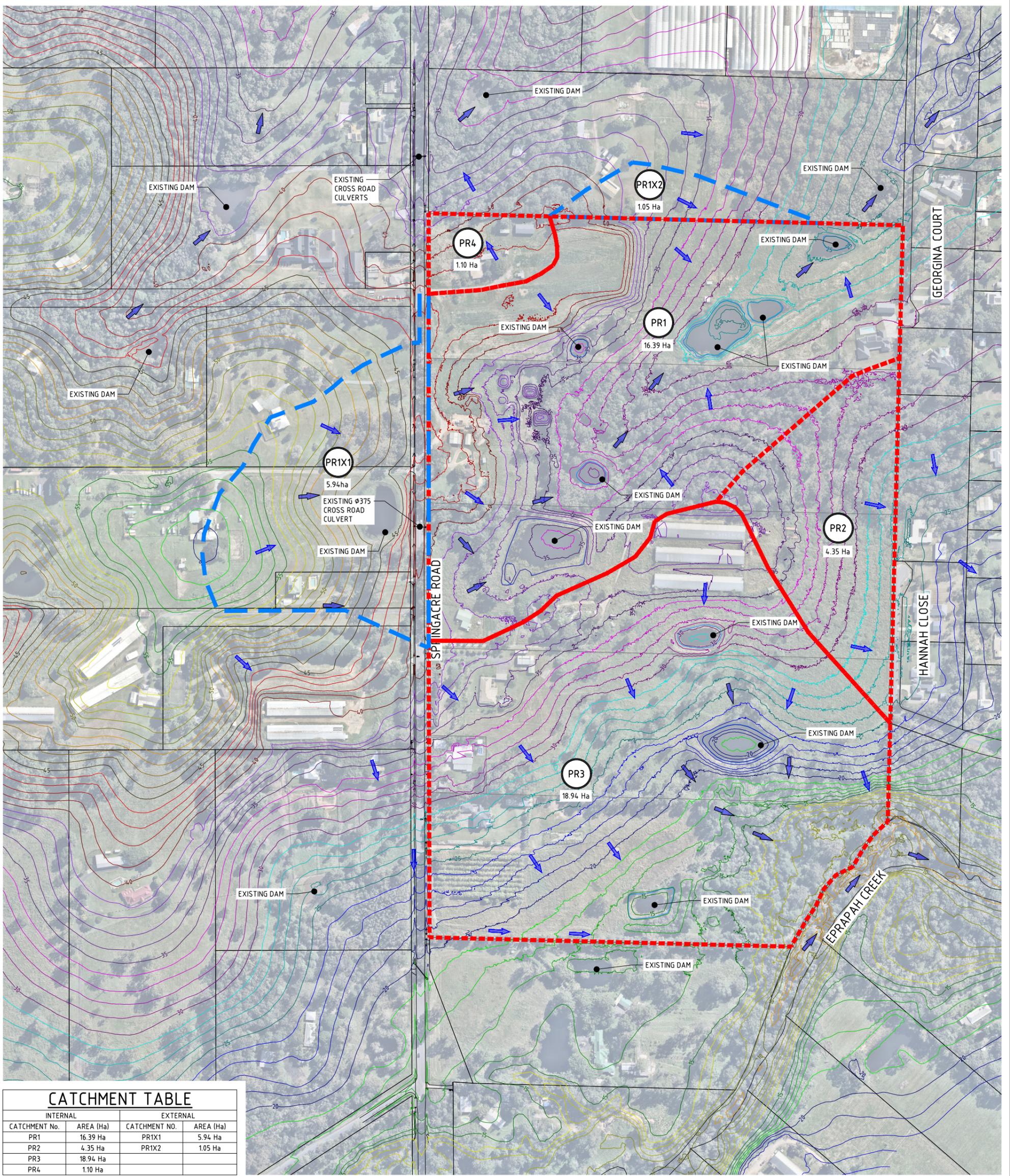
Title
CONTEXT PLAN

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Appendix C. Engineering Plans



CATCHMENT TABLE			
INTERNAL		EXTERNAL	
CATCHMENT No.	AREA (Ha)	CATCHMENT NO.	AREA (Ha)
PR1	16.39 Ha	PR1X1	5.94 Ha
PR2	4.35 Ha	PR1X2	1.05 Ha
PR3	18.94 Ha		
PR4	1.10 Ha		

LEGEND

- EXISTING CONTOURS
- LOT BOUNDARY
- INTERNAL STORMWATER CATCHMENT
- EXTERNAL STORMWATER CATCHMENT
- CATCHMENT NUMBER
- STORMWATER OVERLAND FLOW
- CONCENTRATED STORMWATER FLOW



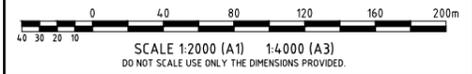
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URBEX PTY LTD

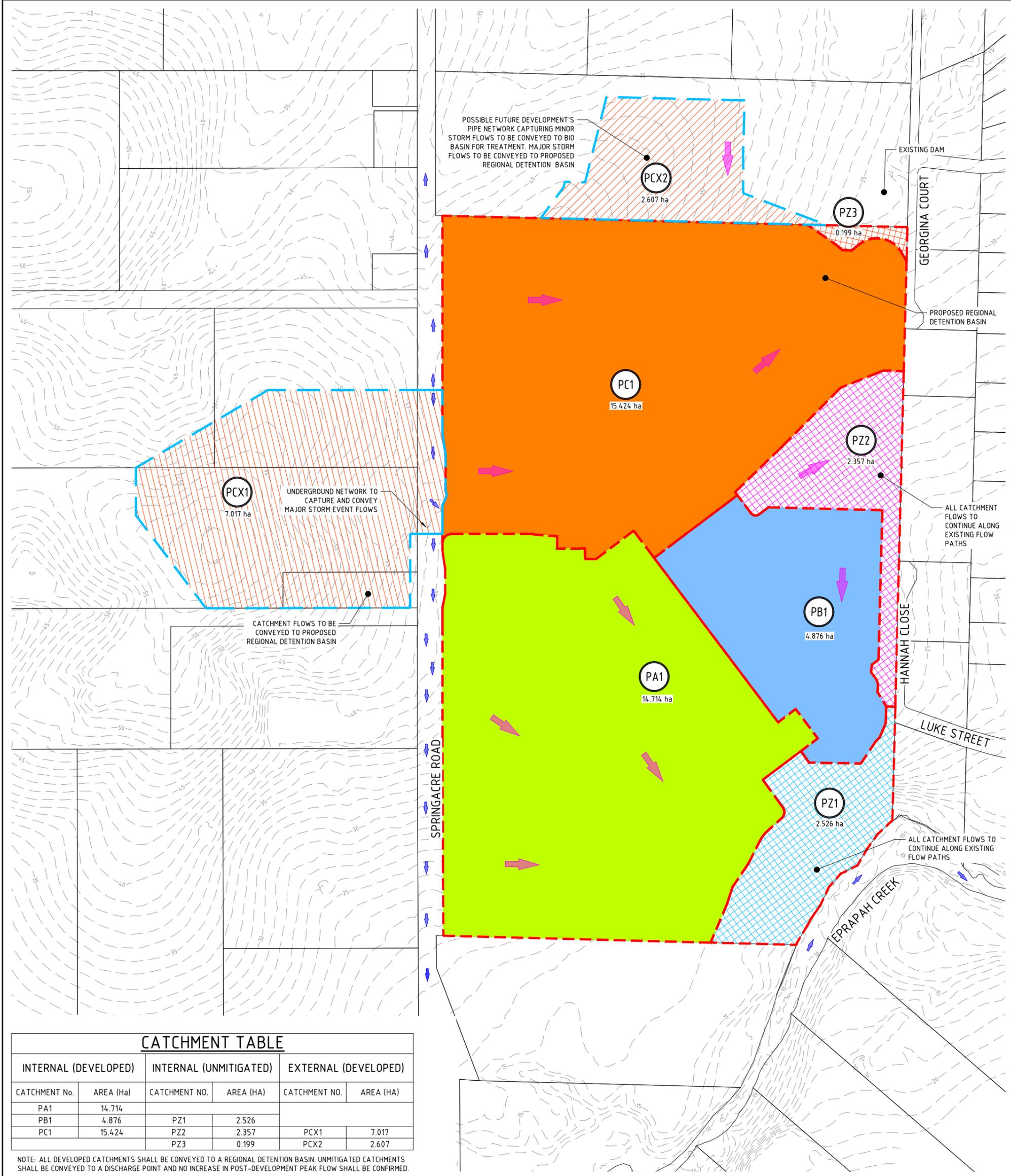
Project
SOUTHERN THORNLANDS PRECINCT 1

Title
**STORMWATER QUANTITY
PRE DEVELOPMENT CATCHMENT PLAN**

Drawn	Design	Design Chk	Appd	Date	Project No.	Drawing No.	Rev
EK	PDW	PI	PI	20/06/25	B00702-MC-SW01		A

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CATCHMENT TABLE

INTERNAL (DEVELOPED)		INTERNAL (UNMITIGATED)		EXTERNAL (DEVELOPED)	
CATCHMENT No.	AREA (Ha)	CATCHMENT NO.	AREA (HA)	CATCHMENT NO.	AREA (HA)
PA1	14.714	PZ1	2.526		
PB1	4.876	PZ2	2.357	PCX1	7.017
PC1	15.424	PZ3	0.199	PCX2	2.607

NOTE: ALL DEVELOPED CATCHMENTS SHALL BE CONVEYED TO A REGIONAL DETENTION BASIN. UNMITIGATED CATCHMENTS SHALL BE CONVEYED TO A DISCHARGE POINT AND NO INCREASE IN POST-DEVELOPMENT PEAK FLOW SHALL BE CONFIRMED.

LEGEND

- EXTERNAL STORMWATER FLOW
- INTERNAL STORMWATER FLOW
- CATCHMENT NUMBER
- INTERNAL STORMWATER CATCHMENT
- EXTERNAL STORMWATER CATCHMENT



Client

URBEX PTY LTD

Project

SOUTHERN THORNLANDS PRECINCT 1

Title

**STORMWATER QUANTITY
POST DEVELOPMENT CATCHMENT PLAN**

Drawn

EK

Design

PDW

Design Chk

PI

Appd

PI

Date

20/06/25

Project No.

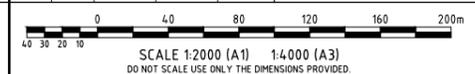
B00702-MC-SW02

Drawing No.

B00702-MC-SW02

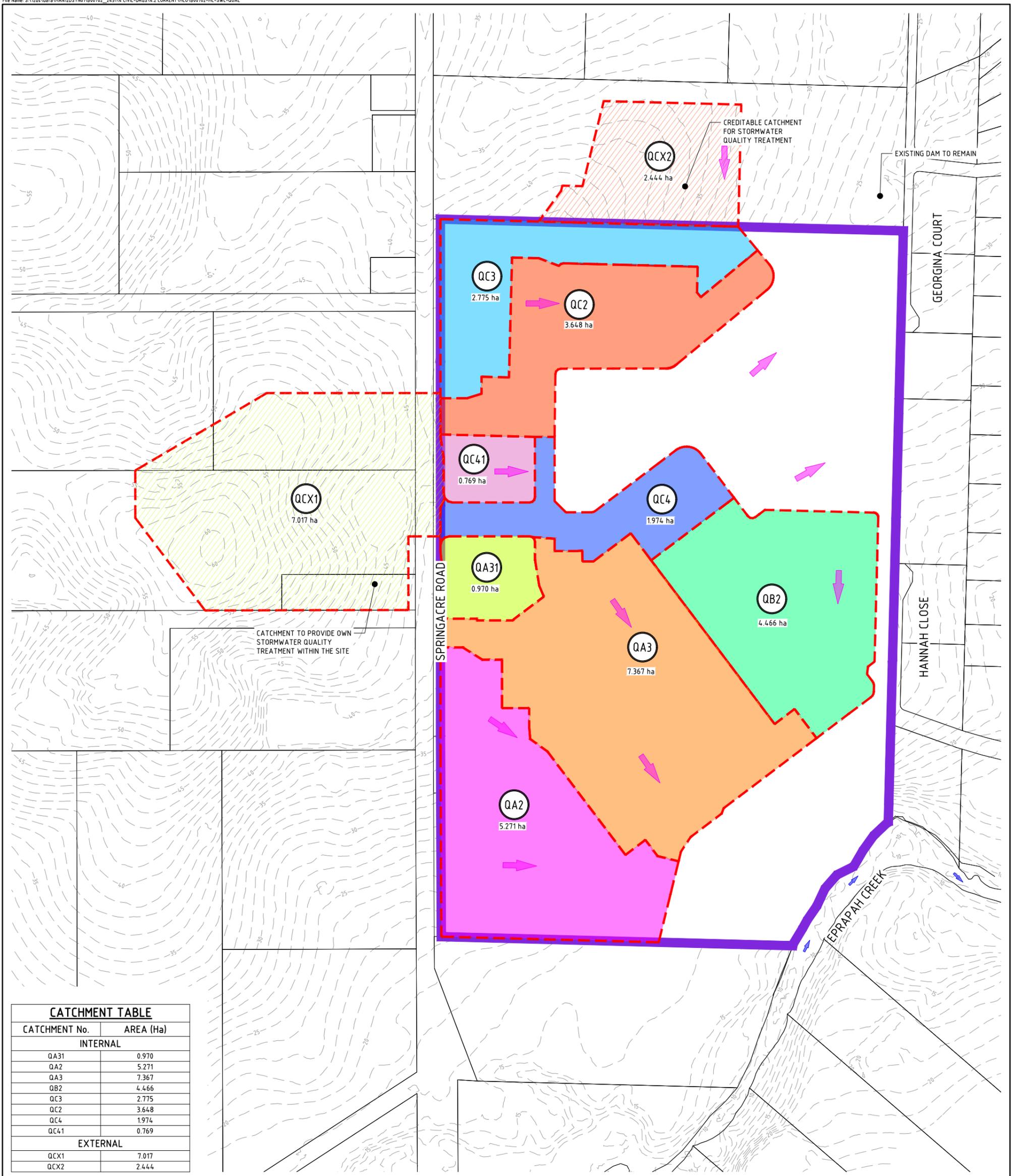
Rev

A



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CATCHMENT TABLE	
CATCHMENT No.	AREA (Ha)
INTERNAL	
QA31	0.970
QA2	5.271
QA3	7.367
QB2	4.466
QC3	2.775
QC2	3.648
QC4	1.974
QC41	0.769
EXTERNAL	
QCX1	7.017
QCX2	2.444

LEGEND

- LOT BOUNDARY
- EXTERNAL STORMWATER CATCHMENT
- INTERNAL STORMWATER CATCHMENT
- CATCHMENT LABEL

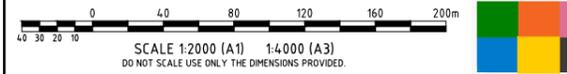


Client
URBEX PTY LTD

Project
SOUTHERN THORNLANDS PRECINCT 1

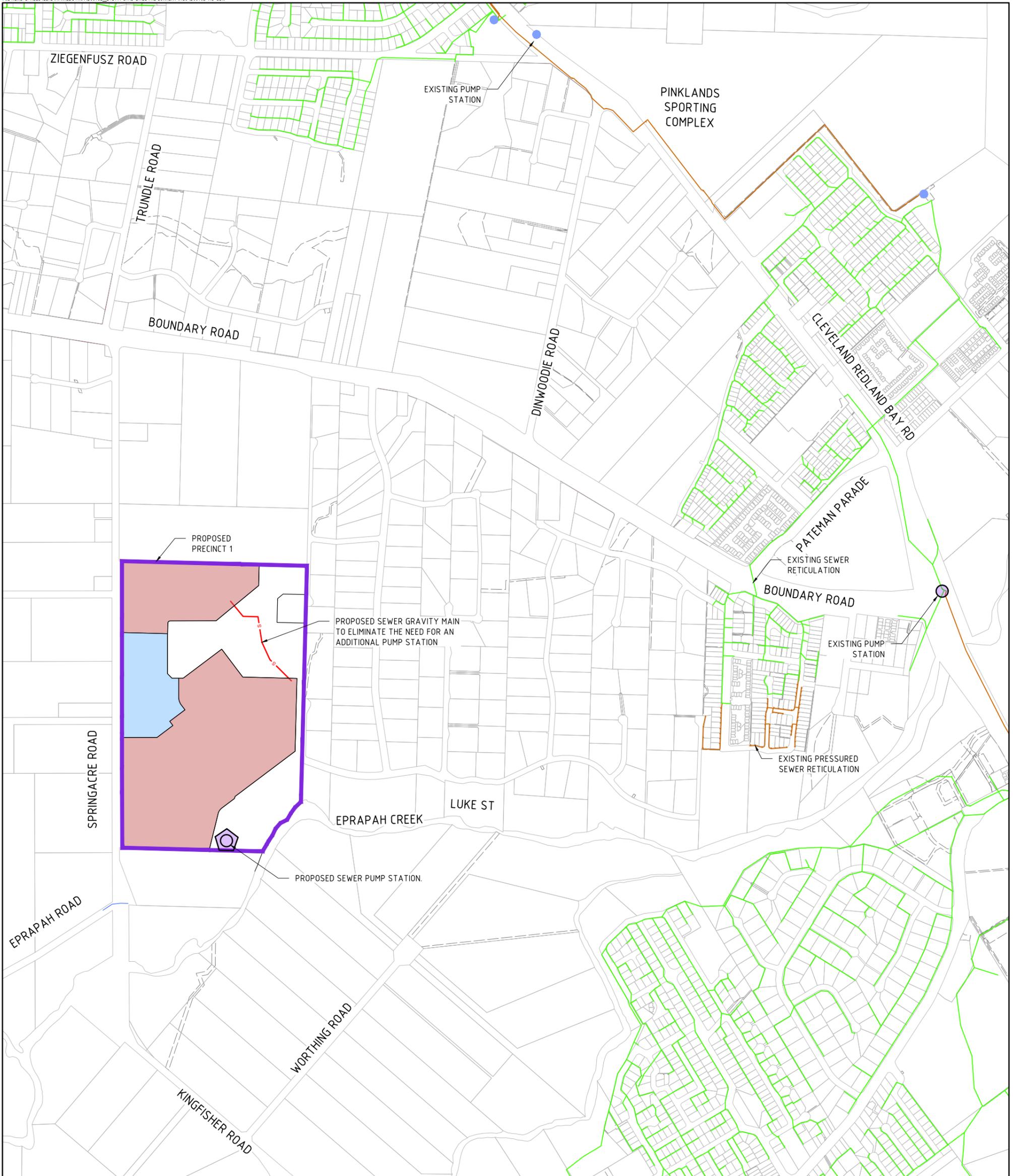
Title
STORMWATER QUALITY CATCHMENT PLAN

Drawn	Design	Design Chk	Appd	Date	Project No.	Drawing No.	Rev
EK	PDW	PI	PI	20/06/25	B00702-MC-SW03		A



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LEGEND

- EXISTING PRESSURED SEWER RETICULATION
- EXISTING SEWER RETICULATION
- ^s PROPOSED SEWER GRAVITY MAIN
- PROPOSED SEWER PUMP STATION
- ^{RM} PROPOSED SEWER RISING MAIN
- ^{RM} PROPOSED SEWER RISING MAIN (ALTERNATE ALIGNMENT)
- EXISTING PROPERTY BOUNDARIES
- 150 150m EPRAPAH CREEK OFFSET
- 100 100m EPRAPAH CREEK OFFSET
- MIXED USE PRECINCT
- INTEGRATED RESIDENTIAL PRECINCT
- PRECINCT 1 BOUNDARY

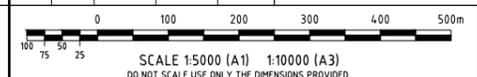


Client
URBEX PTY LTD

Project
SOUTHERN THORNLANDS PRECINCT 1

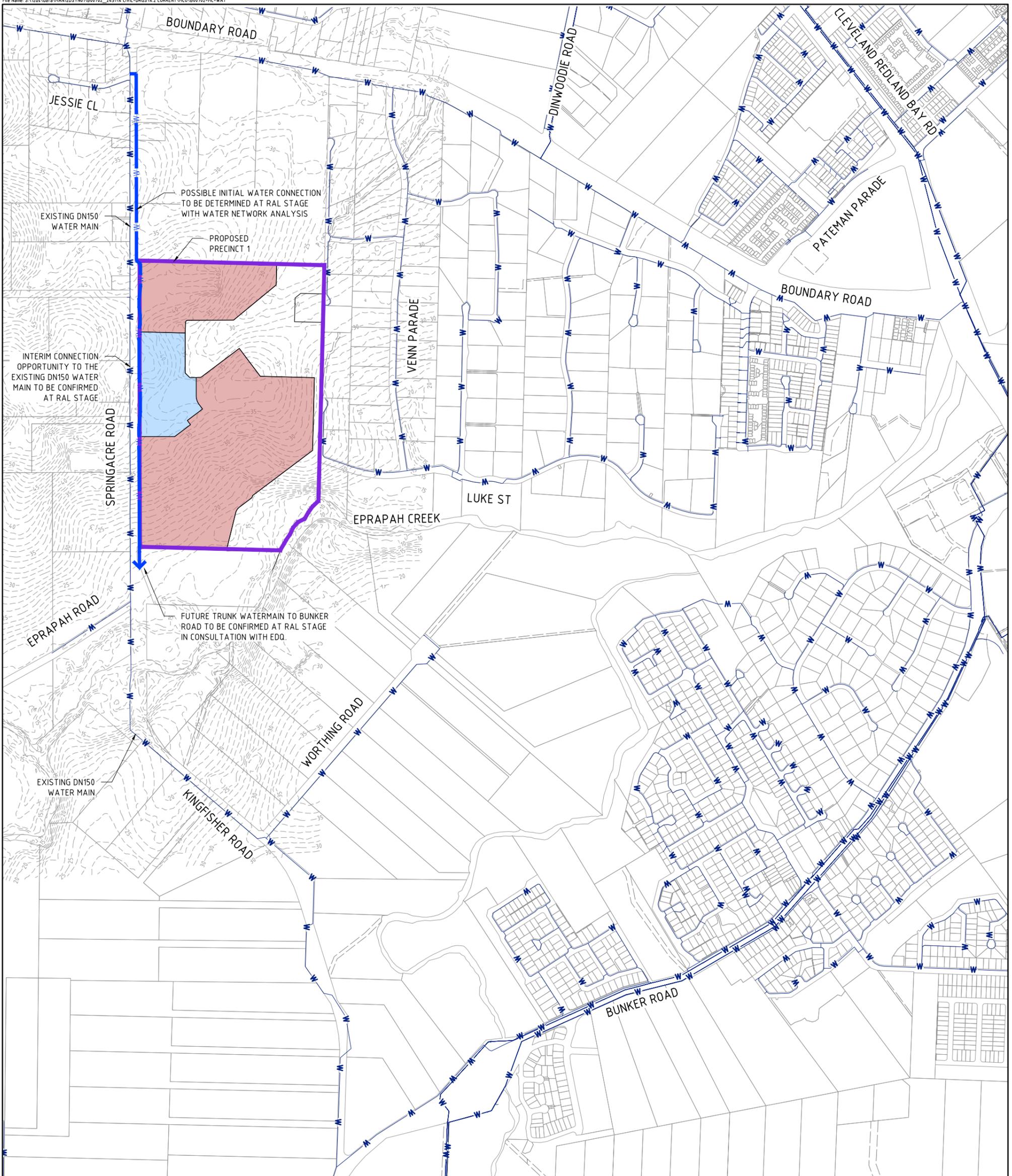
Title
SEWER STRATEGY

Drawn	Design	Design Chk	Appd	Date	Project No.	Drawing No.	Rev
EK	PDW	PI	PI	20/06/25	B00702-MC-SE01	B00702-MC-SE01	A



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LEGEND	
	EXISTING SURFACE CONTOURS (10m INTERVALS)
	LOT BOUNDARY
	PROPOSED WATER MAIN
	EXISTING WATER RETICULATION
	MIXED USE PRECINCT
	INTEGRATED RESIDENTIAL PRECINCT
	PRECINCT 1 BOUNDARY



Client
URBEX PTY LTD

Project
SOUTHERN THORNLANDS PRECINCT 1

Title
WATER STRATEGY

Drawn	Design	Design Chk	Appd	Date	Project No.	Drawing No.	Rev
EK	PDW	PI	PI	20/06/25	B00702-MC-WA01		A

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