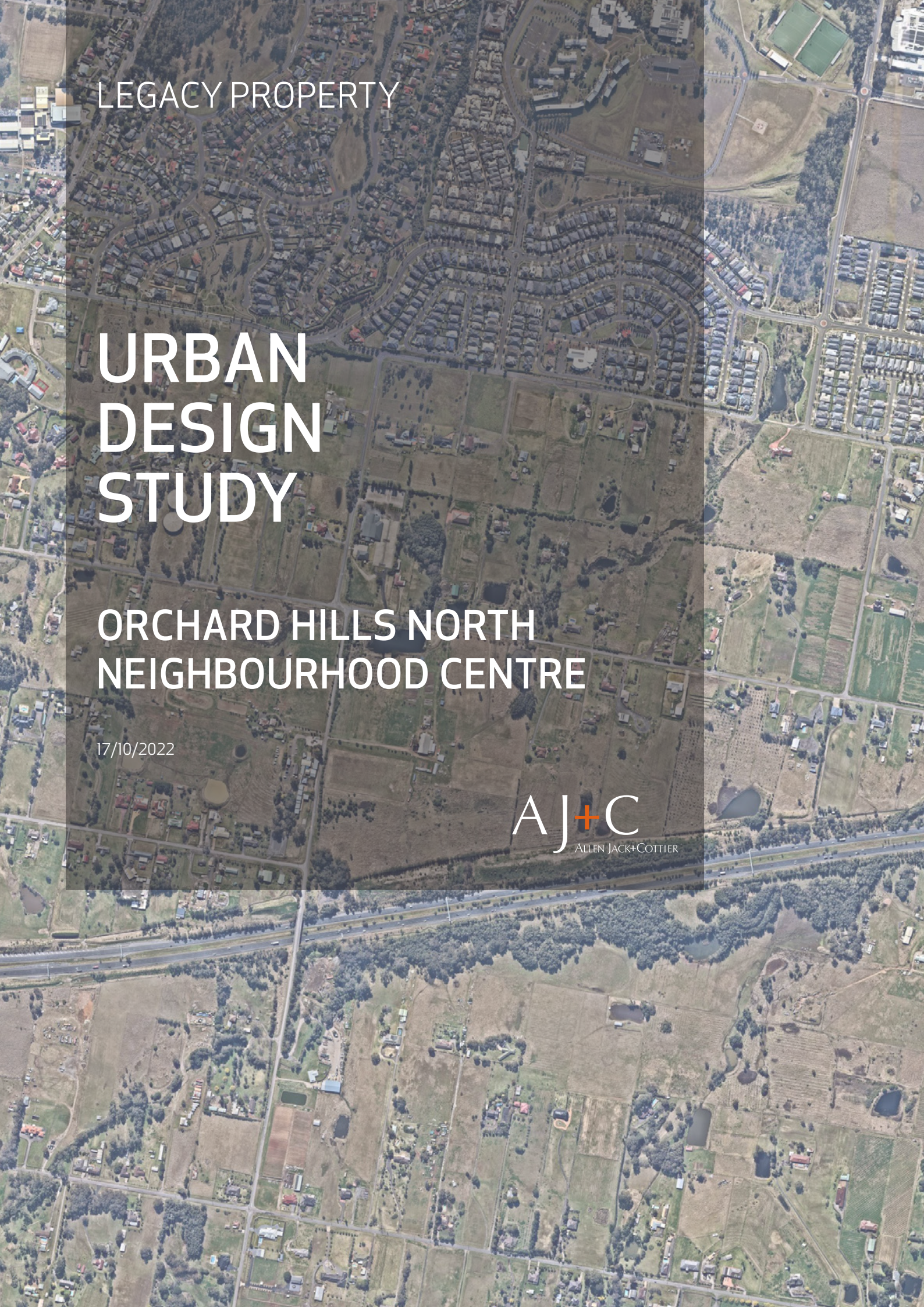

LEGACY PROPERTY

URBAN DESIGN STUDY

ORCHARD HILLS NORTH NEIGHBOURHOOD CENTRE

17/10/2022

AJ+C
ALLEN JACK+COTTIER

AJ+C acknowledges that we operate and function on the lands of the Wangal, Kamaygal and Gadigal people of the Eora Nation.

We pay our respects to Elders past, present and emerging, who have left a legacy of culture, wisdom and knowledge embedded in these lands and waters.

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EXECUTIVE SUMMARY

This report has been prepared by Allen Jack+Cottier Architects (AJ+C) on behalf of Legacy Property to inform future DCP controls for the Orchard Hills North Planning Proposal.

The Neighbourhood Village Centre is located in the rezoning area A of the Orchard Hills North precinct. The purpose of the study is to establish DCP controls for that block that will ensure a quality urban design outcome while acknowledging the significant back-of-house and surface parking requirements of the suburban neighbourhood centre model.

The study highlights the opportunities of the Site that could positively impact the neighbourhood retail development and enhance its integration with the surrounding landscape, as well as the constraints to be aware of.

The analysis is structured in three sections as follows:

Section 1: Urban Design Analysis

An analysis of the future Orchard Hills neighbourhood, as established in the proposed Penrith Council DCP.

Section 2: Proposed DCP Controls

This section sets out proposed DCP objectives and controls for the Neighbourhood centre, with examples of targeted outcomes.

Section 3: Indicative Design / Proof-of-Concept

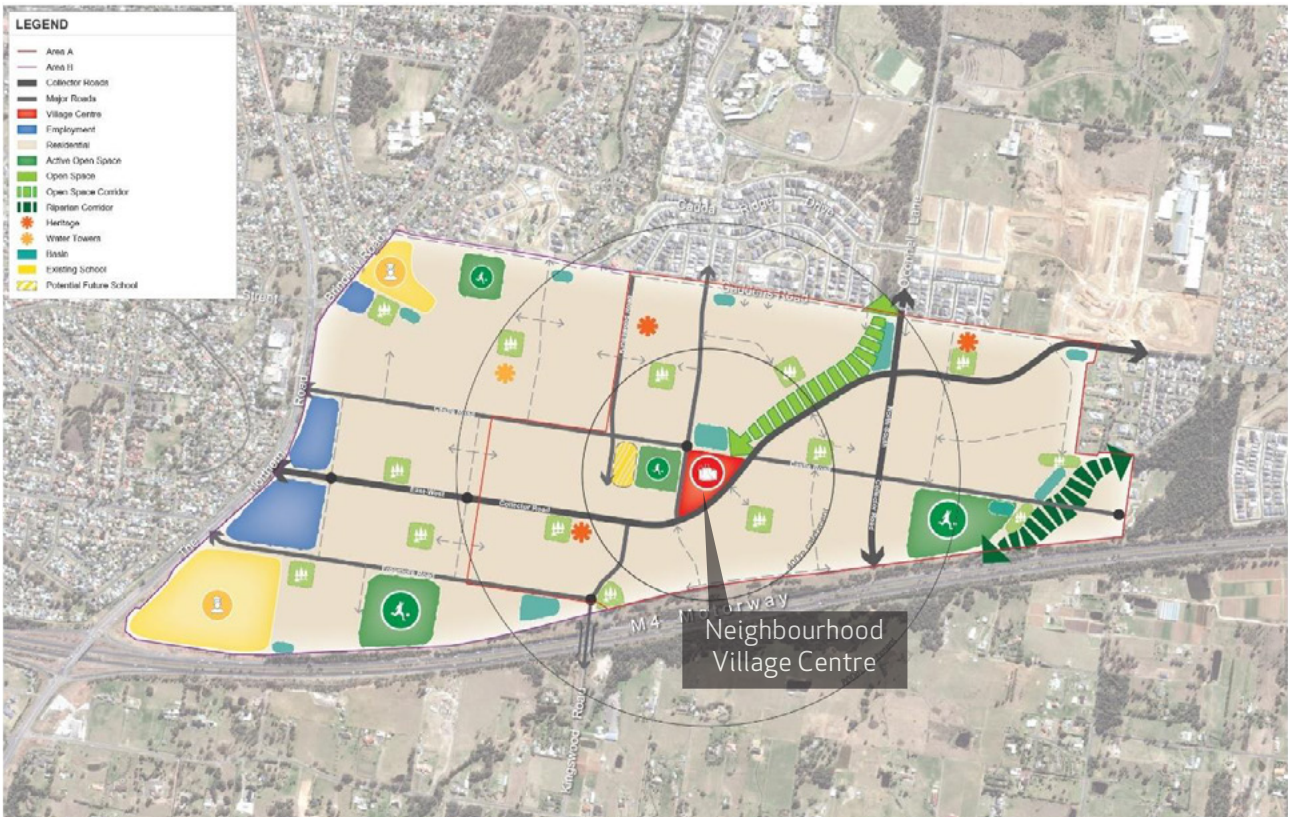
An indicative design proposal prepared as a proof-of-concept to illustrate that the site opportunities and proposed DCP objectives can be realised within the site's constraints and proposed DCP controls. Note that this is not a detailed design intended for approval, and may not reflect the ultimate outcome. It is only submitted as a proof of concept.

The study recommends the following DCP objectives:

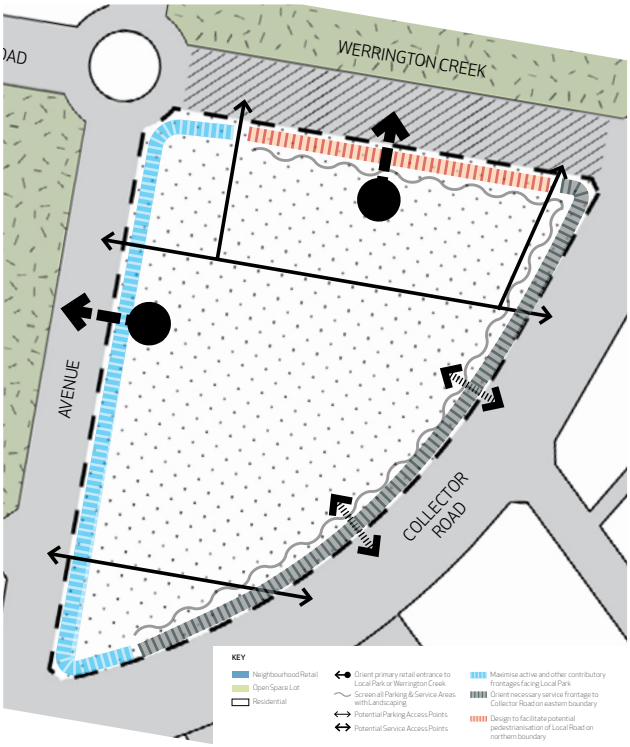
1. To provide an attractive, accessible and lively community focal and gathering point for Orchard Hills North.
2. To provide appropriate interfaces from the centre to surrounding uses.
3. To provide active uses at street level which facilitate safety and passive surveillance.
4. To ensure appropriate safe and efficient vehicular access to the site.
5. To ensure that urban design and landscaping encourages pedestrian amenity and community activity.

A number of DCP controls are proposed, which focus on:

- Responding to the immediate context of future streets and open spaces.
- Orienting uses, entrances and public domain improvements towards the adjacent local park.
- Locating necessary service and loading on the most appropriate frontages.
- Minimising and screening streetfront surface parking, blank walls and service areas.



SITE LOCATION



PROPOSED DCP CONTROLS

INDICATIVE DESIGN (PROOF OF CONCEPT)


Castle
Road

1.0

URBAN DESIGN ANALYSIS

1.1 NEIGHBOURHOOD STRUCTURE

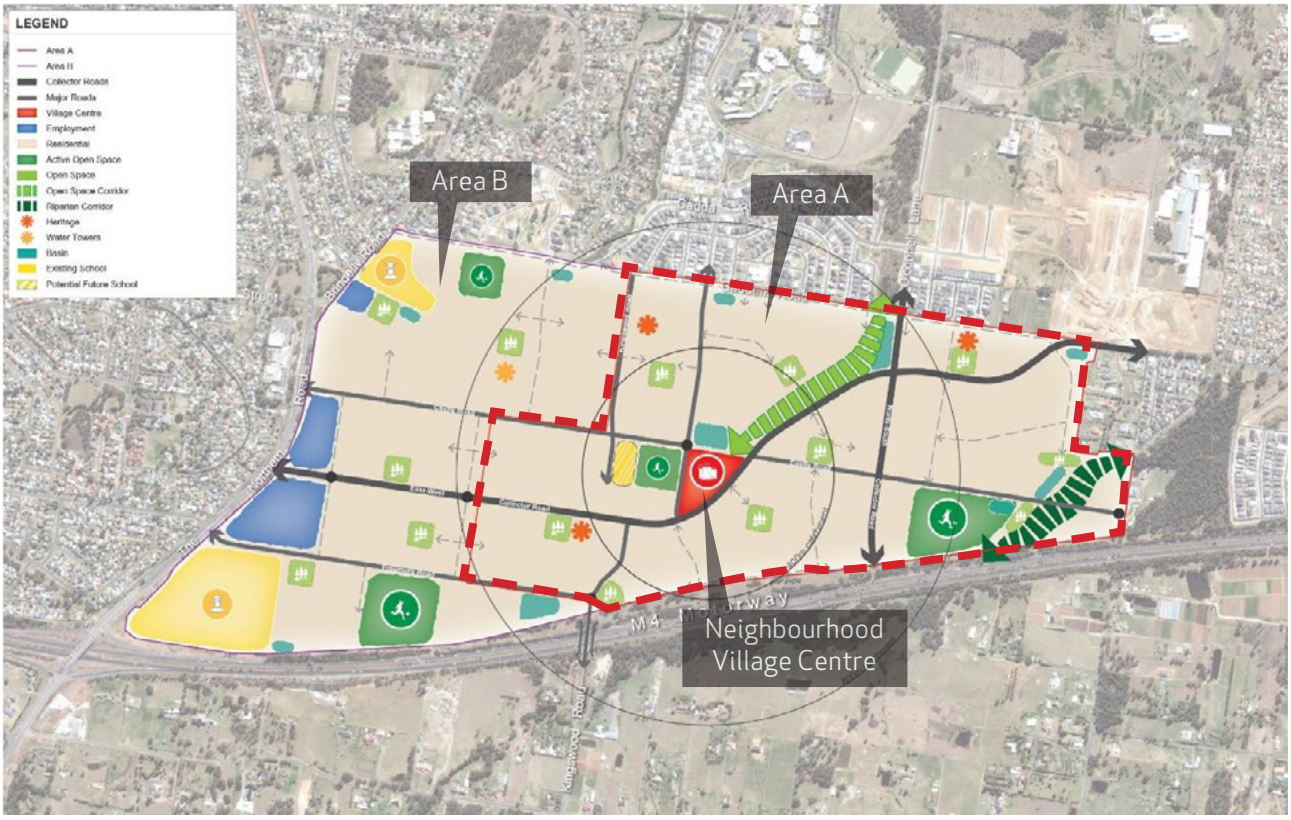


Figure 1. *Indicative structure plan for Orchard Hills North, Penrith Council*

The Orchard Hills North precinct is bounded by Caddens Road to the north, Claremont Meadows residential lots to the east , the M4 Motorway to the south and the Northern Road to the west. The neighbourhood centre is identified within Area A (highlighted with red dashed line above), with 1,729 new residential dwellings integrated with the existing natural landscape.

The neighbourhood centre will be surrounded by compact housing areas, active and passive open spaces and significant natural features, the most significant being the Werrington Creek and its riparian corridor. A pedestrian and cycle network connects the Village centre with the precinct, neighbouring amenities (e.g., public school) and the adjoining Caddens development.

1.2 STREET HIERARCHY

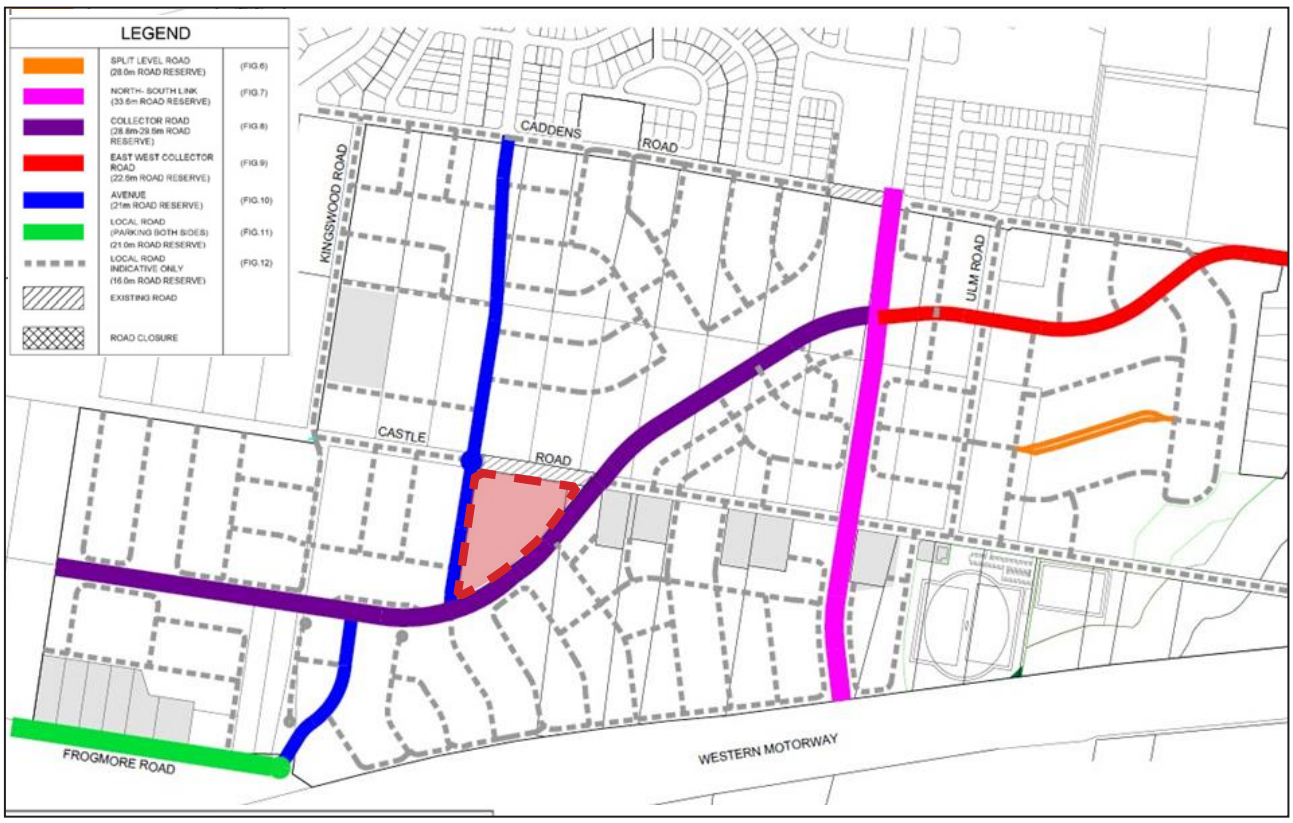


Figure 2. Road hierarchy Plan , Draft Orchard Hills North – Site Specific DCP (WSP, Elton, 2022)

Street network

The hierarchy of streets reflects the function and traffic load of each street and aims to provide safe connections within the precinct and the adjacent areas.

The site is well connected to the surrounding areas with a direct access to a collector road to the east and an avenue to the west. The north side is bounded by the existing Castle Road, a Council road. This section of Castle Road has been identified for possible future closure, to facilitate enhanced connectivity with the adjacent Werrington Creek riparian corridor.

1.3 PEDESTRIAN & CYCLE NETWORK

Figure 3. Pedestrian and cycle way, Draft Orchard Hills North – Site Specific DCP (WSP, Elton, 2022)

Pedestrian and cycle network

The site has direct access to pedestrian and cycle ways which will provide legible, safe, and convenient connections within the precinct. The walking and cycling network links the neighbourhood centre with key points such as open spaces, amenities (e.g., public school), the Werrington Creek Corridor and the wider Caddens development.

The graphic above shows the existing Castle Road as a pedestrian & cycleway.

1.4 OPEN SPACE

Figure 4. *Indicative plan for public open spaces , Draft Orchard Hills North – Site Specific DCP (WSP, Elton, 2022)*

Open space

The site will be adjoined by new open space to the west, which offers a community garden,multi-courts, and market space.

The north side of the site has direct access to the Werrington Creek riparian corridor which serves as an important natural open channel, and is critical to the area's biodiversity and stormwater management system. It provides passive interaction opportunities and connections to other open spaces in the area.

There are three further small parks planned within a 250m (3-minute) walk from the Neighbourhood Centre site.

1.5 TOPOGRAPHY

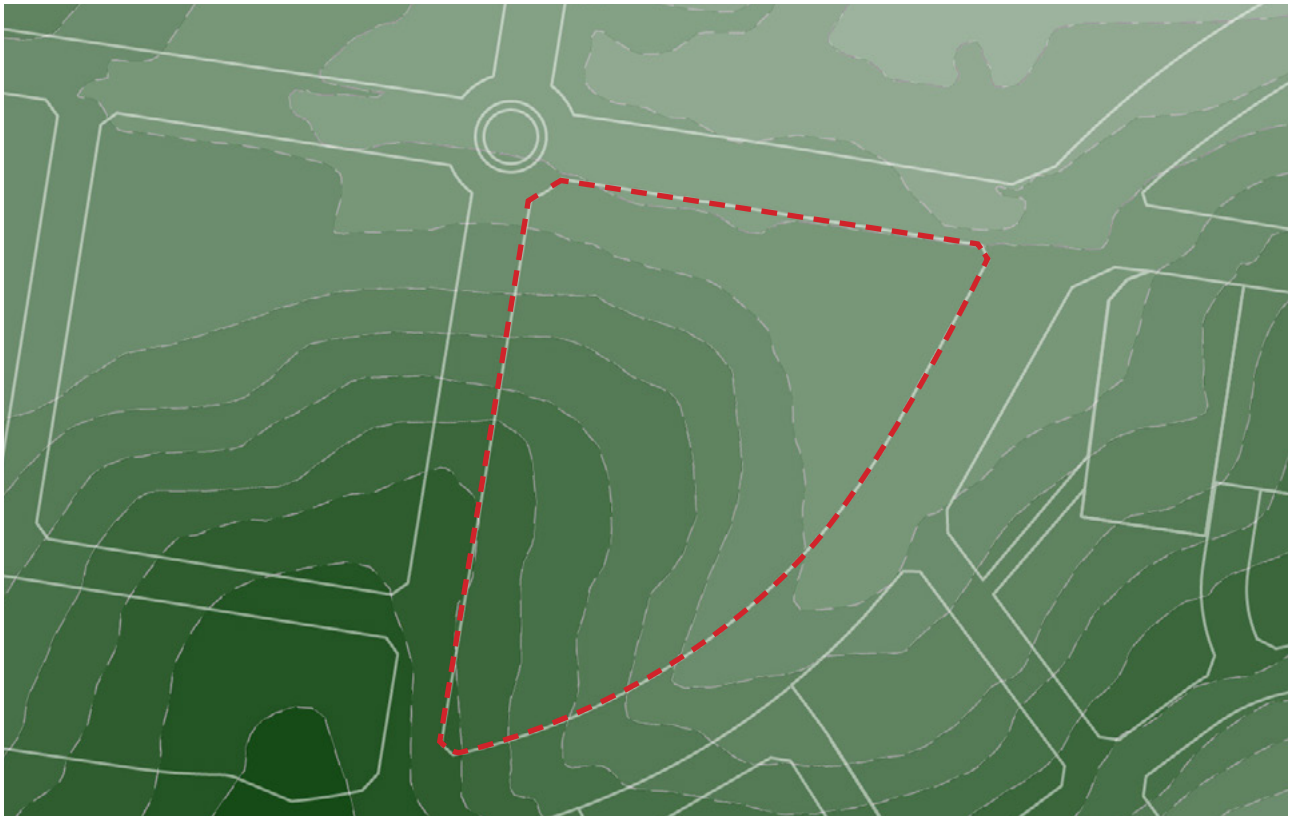


Figure 5. Topography map

KEY

80.00m

60.00m

Site

Topography

Orchard Hills North has a complex topography affected by natural features like the Werrington Creek and local hills. The site has an existing fall of 12m, which will be reduced to approximately 6m following grading of the subject and surrounding land.

1.6 FRONTAGES

KEY

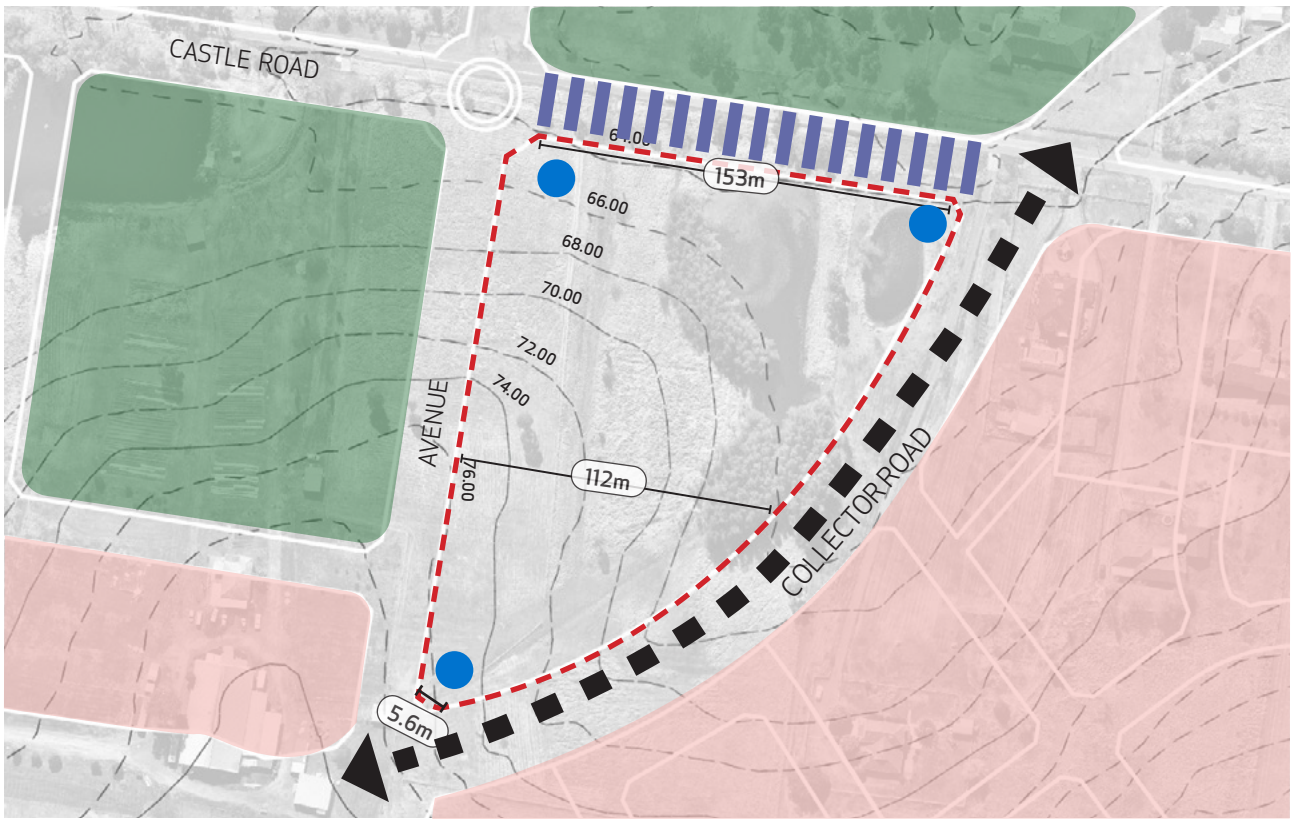
- Open spaces
- Residential lots
- Local Park
- Riparian Corridor
- Collector Road
- Avenue
- Future pedestrianised street
- Side boundaries of residential lots
- Front boundaries of residential lots
- Site

Frontages

The site is adjacent to passive open spaces immediately to the north and west. Residential areas adjoin the site to the northwest, northeast, east, south and southwest.

The site is bounded by three streets, an activated 'Avenue' is propose to the west, a wide 'Collector' serving the main district traffic to the east, and a pedestrian and cycle way proposed to the north.

1.7 OPPORTUNITIES & CONSTRAINTS



KEY

- Collector Road
- Contours
- Residential
- Open spaces
- Pedestrian & cycle way
- Prominent visual corners
- Site

Constraints

- The adjoining street network creates a clear triangular shape, which limits some design flexibility and impacts street frontages, given the rigid layout of retail majors and their parking requirements.
- The site will retain some level change, which will affect sitting of the retail footprint and require careful integration between retail facilities and public domain.
- Proximity to residential areas will require acoustic and visual screening of service/loading areas.

Opportunities

- The site is opposite two major public open spaces, providing the opportunity to orient entrances as well as both benefit and benefiting from recreational users.
- The site has immediate access from the precinct's main Collector road to the east, providing good access for visitors and loading.
- The corners of the site are highly visible from all approaches.

2.0

PROPOSED DCP CONTROLS

2.1 PROPOSED DCP CONTROLS

Objectives

A. To provide an attractive, accessible and lively community focal and gathering point for Orchard Hills North. [2]

B. To provide appropriate interfaces from the centre to surrounding uses.

C. To provide active uses at street level which facilitate safety and passive surveillance. [2]

D. To ensure appropriate safe and efficient vehicular access to the site.[1]

E. To ensure that urban design and landscaping encourages pedestrian amenity and community activity. [2]

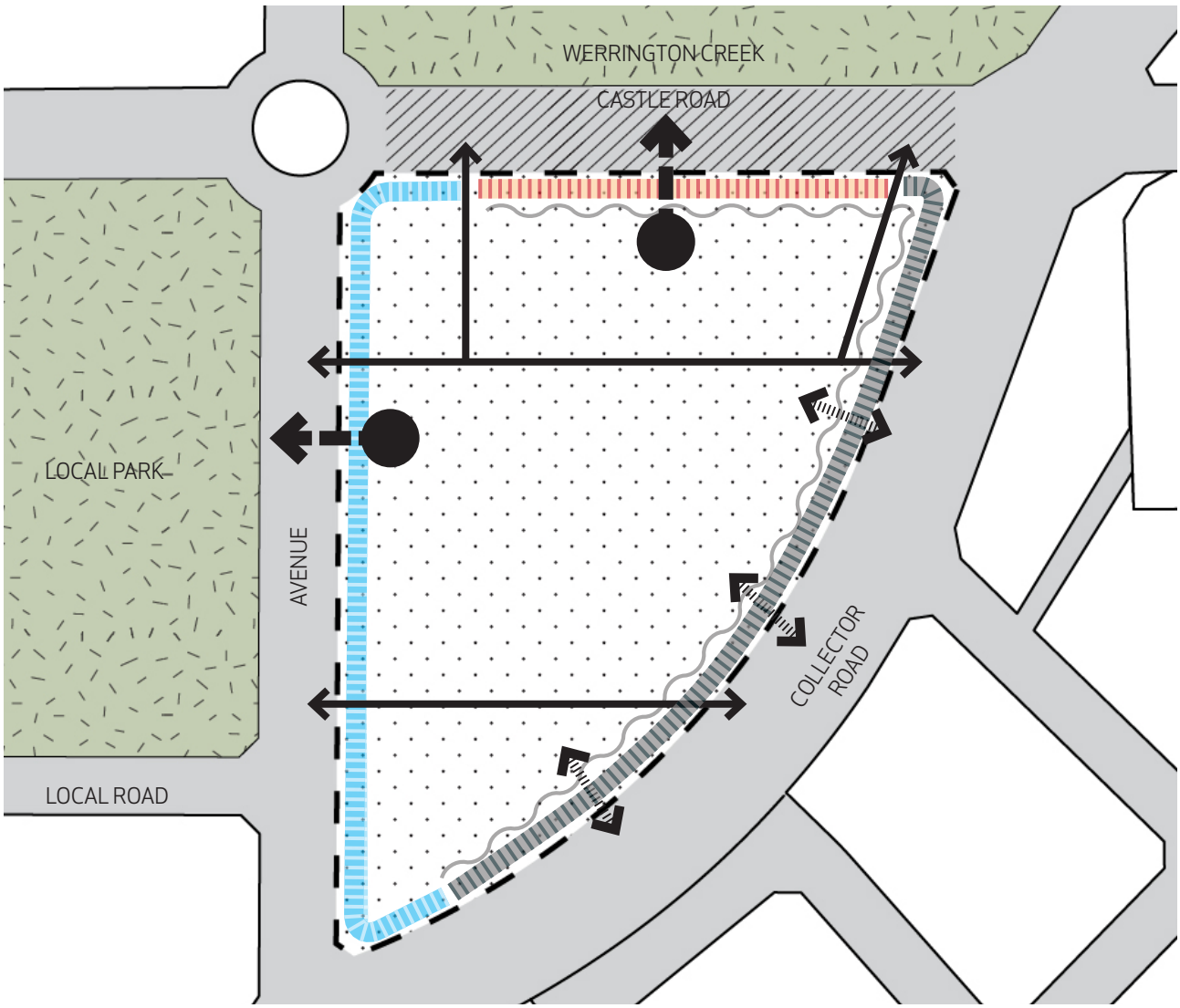
Controls

1. Orient major entrances to surrounding public streets and public open spaces.
2. Provide direct pedestrian access into the main retail centre entrance from an adjoining public street, without needing to cross the car park.
3. Accentuate main entrance with an activated plaza, pavement widening or other pedestrian-oriented open space.
4. The main entrance is to be fully accessible from the street into the centre, without the use of a lift.
5. Minimise surface parking adjoining the 'Avenue'.
6. Maximise active and other contributory frontages facing the 'Avenue' and the Local Park.
7. Where possible, sleeve or screen parking and service areas on other streets with contributory development (such as retail, commercial, community and/or residential uses).
8. Position necessary parking entrances away from the centre of the northern boundary, to facilitate the future pedestrianisation of Castle Road.
9. Provide service access off the Collector Road only. Avoid any circulation strategy that requires large trucks to navigate using the Avenue or surrounding Local Roads.
10. Loading [requirements] associated with the development shall be provided on-site[1], with no reliance on public roads for queuing space or the unloading of goods.
11. Provide acoustic screening to loading and service areas.
12. Screen all street-facing surface parking, blank walls and loading/service areas with architectural design treatments, the use of public art and/or dense perimeter landscaping.
13. Off-street surface parking areas are to provide an adequate amount of shade, either by trees or shade canopies, to provide amenity and minimise micro climate (heat island) impacts.[1]
14. Provide 1 medium tree (minimum 8-metre height at maturity) per 8 car spaces on site, not counting car spaces otherwise covered by canopies, solar arrays, or other fixed shading.
15. Retaining walls must be a maximum of 1.5m in height, located within the lot boundaries, using materials that are appropriate for the public domain.

Source/Based On:

[1] Draft Orchard Hills North – Site Specific DCP (WSP, Elton, 2022)

[2] Penrith Development Control Plan 2014 E1 Caddens (Penrith City Council, 2022)



KEY

- Neighbourhood Centre
- Open Space
- Residential
- Orient primary retail entrance to Local Park or Werrington Creek
- Screen all Parking & Service Areas with Landscaping
- Potential Parking Access Points
- Potential Service Access Points
- Maximise active and other contributory frontages facing Local Park and Avenue
- Locate main service and loading areas to Collector Road
- Design northern boundary to facilitate potential pedestrianisation of Castle Road

2.2 EXAMPLE OUTCOMES OF CONTROLS

This section provides precedents to illustrate the objectives of the proposed DCP Controls.

Accentuate main entrance with an activated plaza, pavement widening or other pedestrian-oriented open space.

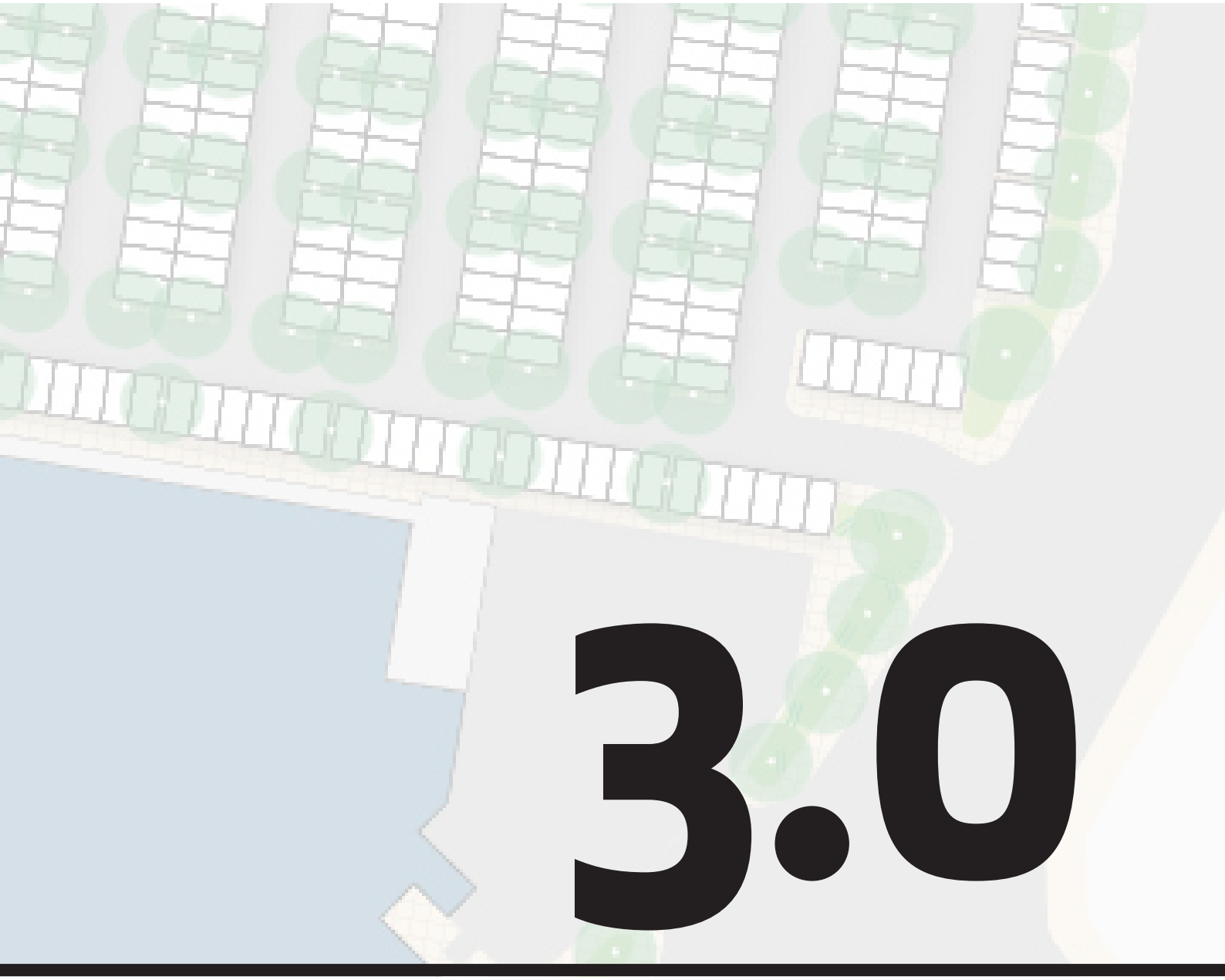
Where possible, sleeve or screen parking and service areas on other streets with contributory development (such as retail, commercial, community and/or residential uses).

Maximise active and other contributory frontages facing the 'Avenue' and the Local Park.

Screen all street-facing surface parking, blank walls and loading/service areas with architectural design treatments, the use of public art and/or dense perimeter landscaping.

Provide 1 medium tree (minimum 8-metre height at maturity) per 8 car spaces on site.

Off-street surface parking areas are to provide an adequate amount of shade, either by trees or shade canopies, to provide amenity and minimise micro climate (heat island) impacts.



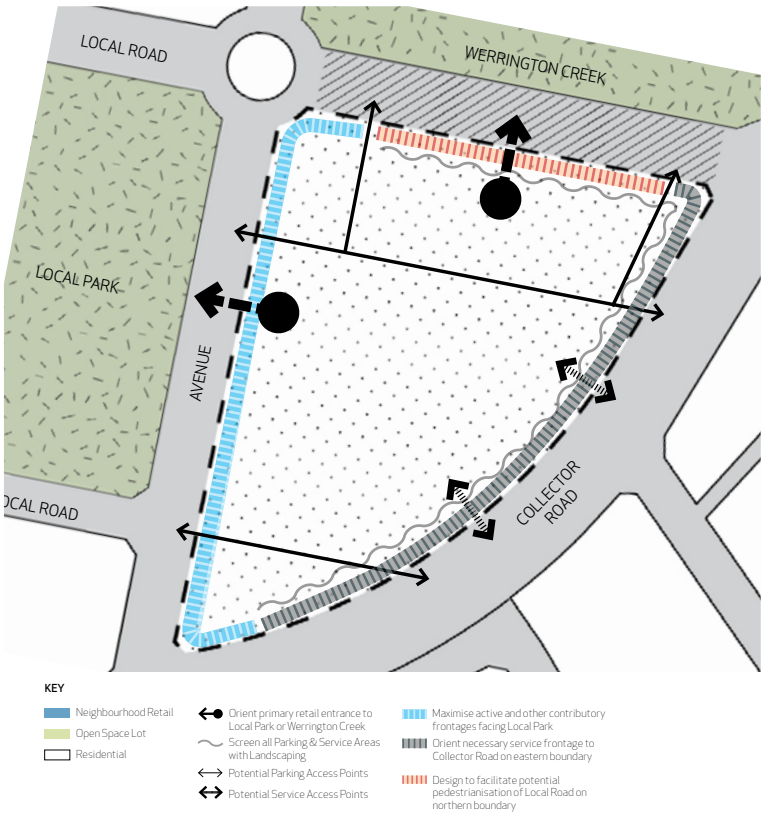
3.0

INDICATIVE DESIGN (PROOF OF CONCEPT)

3.1 PROCESS

This chapter illustrates an indicative design outcome based on the proposed DCP controls. It is issued as a proof of concept only; the final design may differ.

The indicative design has been developed by first establishing design principles, interpreting these into a spatial concept / structure plan, and then developing a retail layout that fits within the structure.



3.2 DESIGN PRINCIPLES

Connectivity

The design will aim to create legible and safe connections both visually and physically with adjacent areas (i.e., open spaces, residential, public amenities). Taking into consideration the future street network, the development of the local centre will facilitate access to amenities in proximity to public streets and open spaces, enhance pedestrian linkages, and locate traffic and service functions appropriately.

Activation

The design aims to create a vibrant local centre offering a variety of uses and amenities to the community. To enhance place activation and connection to the surroundings, the design will maximize frontages to public streets and open spaces and sleeve surface parking and blank walls with contributory uses and vegetation. Mixed uses, night-time activities, and human scale environment will shape a lively local centre and improve surveillance and safety.

Nature

The design of the neighbourhood village centre should take into consideration existing natural characteristics (e.g., topography) and adjacent open spaces (the Werrington Creek Corridor and a Local Park) as key features of the site. Under this principle, it is important to maintain and enhance vegetation and tree canopy as a way to improve the current micro-climate and mitigate the urban heat island effect. The development will aim to provide visual and physical connections to landscape features and neighbouring open spaces.

3.3 STRUCTURE PLAN

The proposed structure plan illustrates how the design principles defined for this project are proposed to be applied to the development of the Orchard Hills North TC.

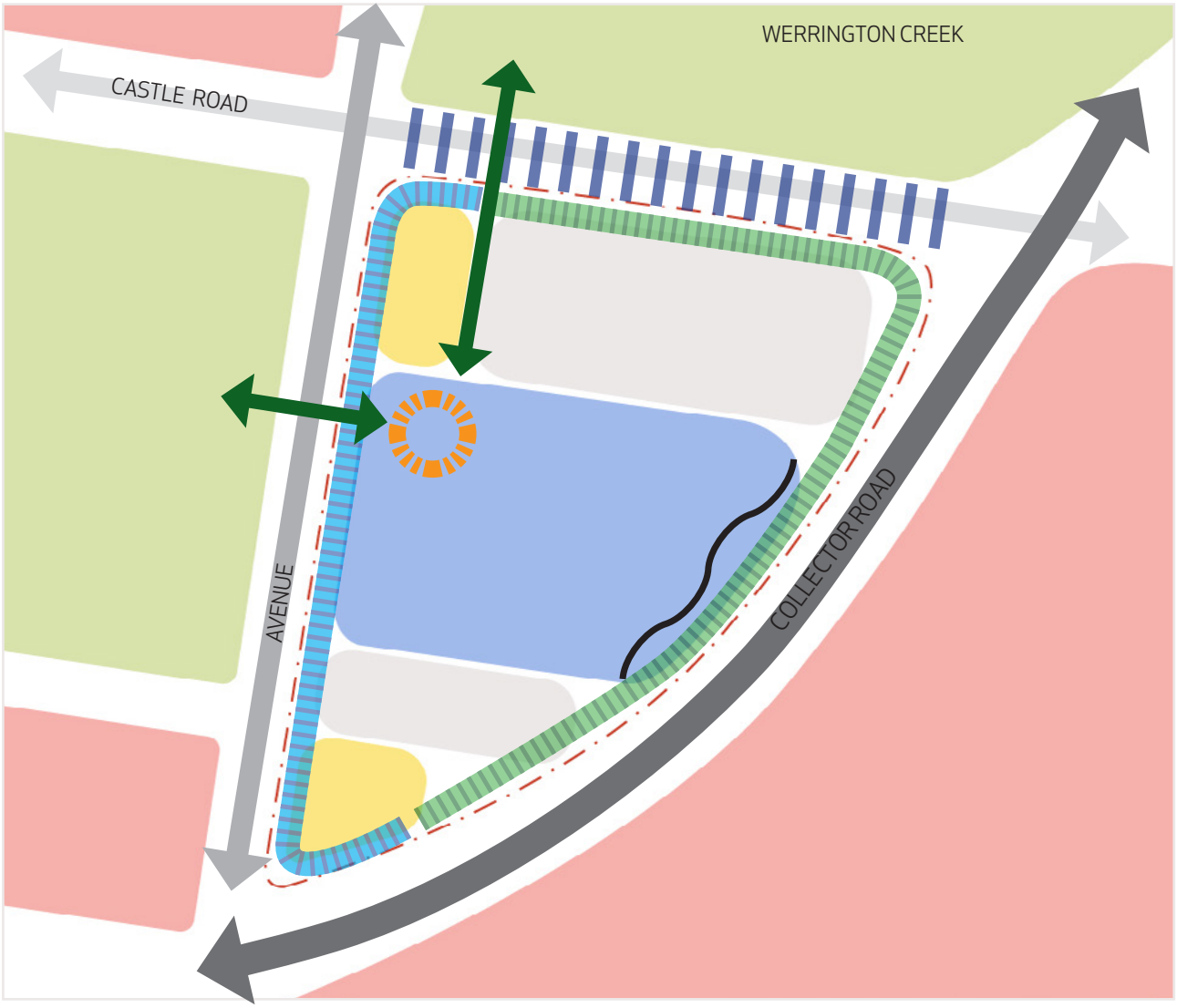
The structure plan includes the following:

- **Activate the Avenue**
  The avenue extending from the collector road to Castle Road should be a destinational street providing outdoor dining, retail frontages facing onto wide footpaths, planting and kerbside 'trophy parking'.

- **New Public Square**
  A public square off the 'Avenue' will provide people with a meeting place and also act as the entry plaza to the retail centre. The public square should have a meaningful connection to the new open space to the west and be a flexible space to allow for a variety of events.

- **Contributory Uses**
  Located on the north western and south western corners of the development these buildings should be of sufficient scale and building design to identify to casual visitors that they are entering a centre that differs from the mostly low-density residential communities that surround it. Child care centres, gym or leisure uses would suit these locations.

- **Future Sleeving**
  At-grade parking & servicing located along Castle Road and the collector road should be sleeved to the greatest degree possible, but we acknowledge that the triangular site makes sleeving of all frontages impossible. However, as transport technology advances it is expected that parking requirements may reduce. Consequently, the primary parking should be consolidated and designed in such a way that future development may replace part of the surface parking to better contribute to street-life and the pedestrian environment.



KEY

- Neighbourhood Retail Centre
- Complementary Uses
- Service Areas
- Surrounding Residential
- Open space
- Contributory frontage
- Landscape Screening
- Loading
- Public square
- Connection to open spaces
- Street hierarchy
- Pedestrian and cycle way
- Site

3.4 INDICATIVE SITE PLAN

The indicative design, developed within the structure plan so defined, includes:

- A public square outside the main retail entrance, connecting the retail uses with the open space to the west.
- Active and contributory frontages along the western boundary of the site to address the Local Park, enhancing surveillance/safety and contributing to the activation of both places.
- A childcare centre at the north west corner of the site with additional open space in proximity to the Werrington Creek Corridor.
- Provision for a gym to the south west corner of the site.
- A retail and commercial core in the middle of the site, adjacent to the public square, to support community needs.
- Surface parking in proximity to uses (north and south side) located in the widest area of the site to maximise its efficiency.
- Provision for loading from the collector road on the east side of the site.
- Additional tree canopy and vegetation to sleeve surface parking and blank walls and minimize their impact to the surroundings.

KEY

1. Neighbourhood Retail Centre
2. Level 1 Commercial Above
3. Contributory Uses (shown as Childcare)
4. Contributory Uses (shown as Gym)
5. Surface Parking
6. Loading & Service Areas
7. DCP-proposed pedestrian and cycleway


WERRINGTON CREEK CORRIDOR
AVENUE
COLLECTOR ROAD
1
2
3
4
5
5
6
6
7

1:1250 @ A4

3.5 INDICATIVE RETAIL PLAN

1:1000 @ A4

KEY

- External Specialty
- Internal Specialty
- Supermarket/Major
- Mini-major
- Service & Loading
- Commercial
- Level 1 Commercial Above
- Contributory uses (shown as Gym)
- Contributory uses (shown as Childcare)

3.6 INDICATIVE DEVELOPMENT YIELD

	GLA m2	Mix	Parking
RETAIL			
Majors	3,800	65%	190
Mini-Majors	600	10%	20
Specialty	1,470	25%	49
Internal	*(1, 135)*	*70%*	
External	*(335)*	*30%*	
TOTAL RETAIL	5,870		
COMMERCIAL	2,520		36
DEVELOPMENT TOTAL	**8,390**		**295**

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