



PLANNING FOR BETTER OUTCOMES ALTERNATIVE SCENARIOS TO THE TOD PROGRAM

Planning Study

Prepared by:

Ku-ring-gai Council

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Version History

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Acknowledgement of Country

We acknowledge Aboriginal and Torres Strait Islander peoples as the First People and traditional custodians of the land and waters of this place. We express our gratitude in the sharing of this land, our sorrow for the personal, spiritual and cultural costs of that sharing and our hope that we may walk forward together in harmony and in the spirit of healing.

We acknowledge the importance of Aboriginal custodial and cultural connection to place which is embodied in the term 'Country'. We recognise and admire the ecological knowledge of Aboriginal people that has developed from thousands of generations of careful, sustainable land management practices.

We seek to integrate Aboriginal values around Country with scientific and mainstream land management approaches and to learn about complex indigenous knowledge systems and encourage greater understanding of Aboriginal cultural and spiritual connections to Country.





Glossary & Definitions

Glossary:

ADG: Apartment Design Guidelines

DCP: Development Control Plan

HCA: Heritage Conservation Areas

KLEP: Ku-ring-gai Local Environmental Plan 2015

SEPP: State Environmental Planning Policy

TOD: Transport Oriented Development

TOD Stations: Transport hubs integrated with nearby mixed use development. In this report TOD Stations refer to the transport hubs of Gordon, Killara, Lindfield and Roseville centres.

TOD SEPP: NSW State Government's proposed Transit Oriented Development State Environmental Planning Policy

Definitions:

Apartment Design Guidelines: NSW Government publication that provides design criteria and general guidance about how development proposals can achieve the design quality principles identified in Schedule 9 of State Environmental Planning Policy (Housing) 2021 (Housing SEPP).

Biodiversity Corridors: Vegetated pathways connecting habitat areas to facilitate wildlife movement and maintain ecological connectivity.

Bushfire Prone Vegetation: Vegetation types and structures with characteristics that make them susceptible to supporting and spreading bushfire.

Heritage Conservation Areas: a designated precinct that protects groups of buildings, streetscapes and landscapes with collective heritage significance.

Landscape Remnants: Areas of original vegetation and landforms that persist within modified environments, representing historical ecological conditions

Riparian Lands: Land alongside waterways and water bodies, including the banks and adjacent vegetation that influence water quality and habitat.

Urban Tree Canopy Coverage: the percentage of urban land area covered by tree crowns, generally more than 3 metres in height, when viewed from above.

Background

Introduction

The housing crisis has prompted the NSW Government to undertake a series of unprecedented planning reforms. In May 2024 the Transport-Oriented Development SEPP (TOD SEPP) was introduced. The TOD SEPP allows 6-7-storey apartment buildings to be built near selected Sydney railway stations regardless of existing local zoning and height controls. In Ku-ring-gai, land generally within a 400m radius of Roseville, Lindfield, Killara, and Gordon stations is subject to the provisions of the TOD SEPP. The NSW Government has estimated the TOD SEPP will deliver 22,580 new dwellings in Ku-ring-gai over the next 15 years.

Map 1 shows the extent of the TOD SEPP as it applies to Ku-ring-gai.

The Government's ambition to leverage Sydney's existing transport networks to establish more sustainable and connected living environments is, in principle, supported. However, the SEPP's one-size-fits-all nature means it ignores local constraints and opportunities.

The north-shore rail line, opened in 1890 and low scale housing set in generous gardens quickly established around the railway stations allowing Sydney residents to escape the pollution and disease rampant in existing city areas. Thus, a significant proportion of Ku-ring-gai's historic buildings and gardens are concentrated around its railway stations and vulnerable to the provisions of the TOD SEPP. TOD directly impacts 23 of Ku-ring-gai's 46 heritage conservation areas and will enable the demolition of previously protected dwellings. This highlights the inadequacies of the State Government's one-size-fits-all approach.

In response Council has investigated ways to deliver housing while at the same time protecting Ku-ring-gai's heritage and environmental assets. Using evidence-based local data, the communities' aspirations for future Ku-ring-gai, and a series of guiding planning principles, the Council has prepared four alternate housing scenarios.

Each of the scenarios deliver the NSW Government housing targets within walking distance of the subject stations however they represent trade-offs between local character protection and building height. Council's scenarios propose building heights in excess of the TOD on appropriate sites as this enables protection of heritage conservation areas and the associated mature tree canopy.

This report outlines the State Government's TOD provisions (scenario 1) and the four alternate housing scenarios developed by Council (scenarios 2a, 2b, 3a & 3b). Followed by a comparison of the performance of each scenario against the planning principles used by Council to guide placement of additional housing.

The scenarios have been prepared to be consistent with the NSW Government's Transport Oriented Development - Guide to Strategic Planning.

Character of Ku-ring-gai

Located 16 km north of the Sydney CBD, the Ku-ring-gai local government area (LGA) covers 85 square kilometres and is home to an estimated **population of 126,983 people** (ABS ERP, 2023). Traditionally, Ku-ring-gai was the land of the **Durramurragal people** (AHO, 2015) with European settlement beginning in the early 1800s.

Ku-ring-gai's natural landscape is defined by its high rainfall, alluvial soils, deep gullies, prominent ridgelines and 177kms of waterways and creeks that feed into Sydney Harbour and the Hawkesbury River Estuary. The area adjoins three National Parks (Ku-ring-gai Chase, Garigal and Lane Cove) and contains significant urban forests and tracts of local bushland which establish a visually significant tree canopy across both natural and urban areas. The dominance of a diverse natural habitat has led to Ku-ring-gai being known as the green heart of Sydney as it is regarded as **the last remaining area of biodiversity significance** in the metropolitan area.

Preservation of the natural environment is attributed in part to Ku-ring-gai's unique history of urban development. The opening of the north shore railway line in 1890 enabled people to live away from Sydney's crowded and polluted employment zones. Detached dwellings on sizeable lots developed around Ku-ring-gai's railway stations and Ku-ring-gai quickly became a desirable residential area. Low scale commercial uses developed at the rail stations to service the growing population, and this established a series of village environments which have endured. Today **the built heritage of Ku-ring-gai** is notable for the outstanding quantity, quality, depth and range of its late 19th and 20th century architecture. The LGA has a significant number of local and state listed heritage items and **46 heritage conservation areas** clustered around Ku-ring-gai's stations.

The interplay between Ku-ring-gai's historic built environment and its natural environment, remarkable for the conservation of its extensive mature tree canopy, form the foundation of Ku-ring-gai's **local character**.

Ku-ring-gai's Strategic Vision

The following Council documents, developed after extensive community engagement, incorporate the strategic vision for Ku-ring-gai. These vision statements clearly express the value the community assigns to Ku-ring-gai's natural and heritage assets.

KU-RING-GAI LEP 2015's heritage objectives focus on conserving the environmental heritage of Ku-ring-gai through the protection of heritage items, heritage conservation areas, their settings and views, while also preserving archaeological sites and Aboriginal places of heritage significance

COMMUNITY STRATEGIC PLAN 2032

Community Vision:

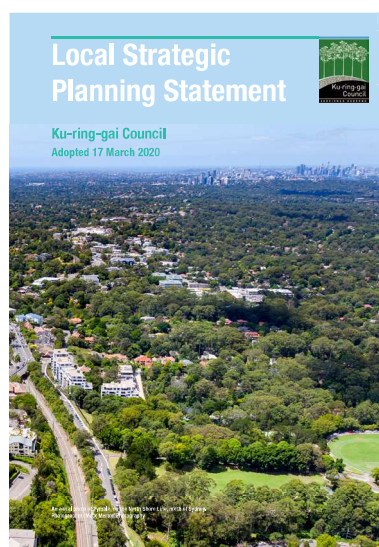
An inclusive and connected community, where our natural environment and heritage are valued, working towards a sustainable future.



LOCAL STRATEGIC PLANNING STATEMENT

Vision Statement:

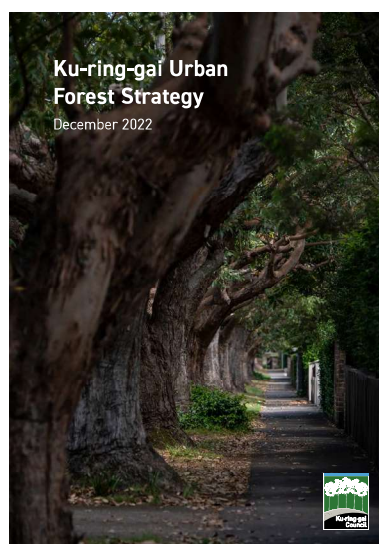
Strategically located in the heart of Sydney's North District, Ku-ring-gai is an area of socially connected, healthy, sustainable communities that support vibrant local centres, live in harmony with the unique natural environment, and conserve our local assets for future generations.



URBAN FOREST STRATEGY

Vision Statement:

To recognise that the Ku-ring-gai urban forest forms an important part of the cultural identity of Ku-ring-gai, where residents value trees and the natural landscape. Council will protect and enhance the urban forest to ensure this unique character and established canopy cover is preserved and improved for future generations.







PLANNING FOR BETTER OUTCOMES

The primary objectives of this planning exercise are to protect Heritage Conservation Areas (HCAs) and improve urban tree canopy outcomes by transferring dwelling numbers to appropriate alternative sites. These alternative locations remain within, or adjacent to, the four designated TOD stations of Gordon, Killara, Lindfield, and Roseville.

The scenarios presented in this report, seek to identify whether the community are prepared to trade off height and density for protection of HCAs and other best-practice planning outcomes such as canopy protection.

This analysis is based on the gazetted TOD SEPP controls, not the previous planning framework.

The primary objectives of this study are:

1. to retain and protect Heritage Conservation Areas (HCAs);
2. to improve urban tree canopy coverage outcomes; and
3. to meet the housing targets set out by the State Government for the TOD program.

To achieve these outcomes potential dwelling yield is shifted or relocated from HCAs currently affected by the TOD SEPP to other areas that have been assessed and found to be suitable for increased densities with a focus on the commercial centres within the town centres.

The protection of HCAs will arguably automatically improve urban canopy outcomes. Additional opportunities for canopy protection are available to Council and are broadly described in this report.

It should be noted that Council's Urban Forest Strategy (2022) aims to increase canopy cover from 45% up to 49% across the LGA. The cumulative impacts of the TOD Program and the yet to be released impacts of the Low and Mid-rise SEPP amendments, mean that these objectives are now likely to be completely unachievable.

The following parameters have assisted the Council staff in preparing detailed alternative scenarios for increased density in the four centres of Gordon, Killara, Lindfield and Roseville:

1. defining a dwelling target;
2. assumptions of TOD SEPP vs. findings from Council's analysis;
3. defining a study area;
4. analysing constraints;
5. determining development feasibility;
6. determining housing potential;
7. defining planning principles;
8. preparing draft scenarios;
9. summary of scenarios; and
10. planning for community infrastructure.

A summary of the findings, and other relevant issues, is set out in the following pages.

1. DEFINING A DWELLING TARGET

The starting point for the study was to estimate the number of dwellings that may be delivered under the TOD SEPP program, acknowledging that Council’s scenarios will need to match or exceed those numbers.

Council has undertaken its own due diligence to determine an estimated dwelling target for the TOD SEPP as it applies specifically to Ku-ring-gai.

Council’s site-by-site analysis estimates 23,200 dwellings as a total dwelling yield from the TOD SEPP precincts of Gordon, Killara, Lindfield and Roseville. This is a net figure where existing dwellings have been subtracted from the total and assuming an average replacement dwelling size is 90sqm.

The TOD SEPP increases heights and densities of all properties, except heritage items, RE1 zones (public recreation areas), and SP2 (infrastructure) zones, generally within a 400m radius of the designated TOD rail stations.

On 30th August 2024 as a result of a Parliamentary Inquiry, the NSW Government’s dwelling estimates for Ku-ring-gai TOD precincts were released. The State Government estimated 22,580 new dwellings could be accommodated in the next 15 years. It is not clear at this stage whether the NSW government figures are gross (i.e., include existing dwellings) or net (i.e., exclude existing dwellings), nor are the government’s assumptions of average unit size available.

TABLE 1 shows a comparison between Council and NSW Government estimates of new dwellings. The difference between the two estimates is 2.7% or 620 dwellings, which indicates a high degree of correlation.

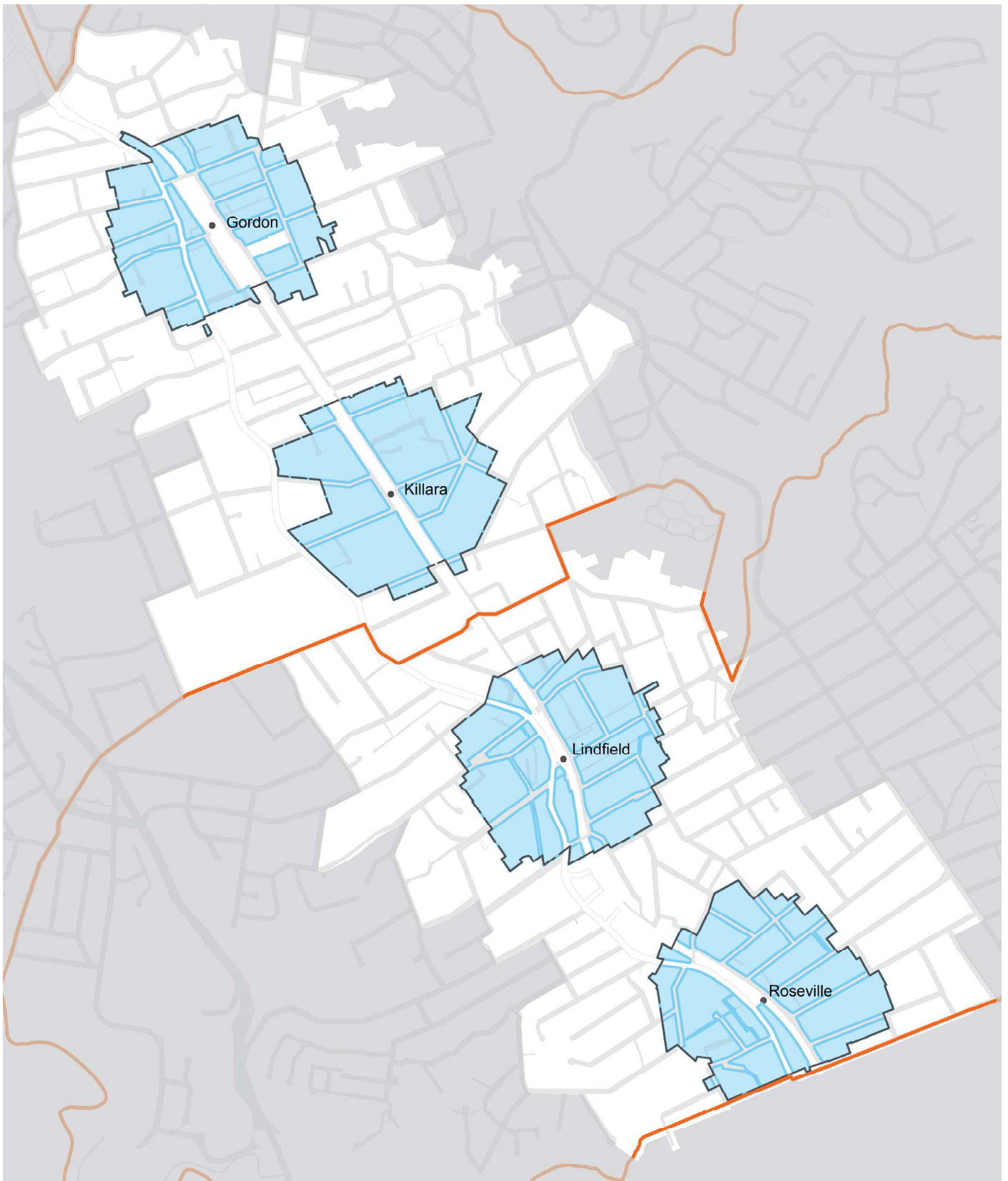
LOCATION	KU-RING-GAI COUNCIL ESTIMATE OF NEW DWELLINGS*	NSW GOVERNMENT ESTIMATE OF NEW DWELLINGS*	DIFFERENCE	DIFFERENCE
GORDON	5,457	5,272	185	
KILLARA	5,943	5,272	671	
LINDFIELD	5,763	5,935	-172	
ROSEVILLE	6,038	6,101	-63	
TOTALS	23,200	22,580	-620	2.7%

* This is a net figure and assumes average unit size of 90sqm

**Based on NSW Government figures released in August 2024 – assumptions not available.

Table 1 – Comparison between Ku-ring-gai Council and NSW Government dwelling estimates

Map 1. TOD SEPP Extent



LEGEND

- Ward Boundary
- The TOD SEPP Extent

TOD SEPP Corridor
TOD SEPP Extent

SCALE: ft @ A4

2. Assumptions of TOD SEPP vs. findings from Council’s analysis

The Ku-ring-gai Council’s analysis indicates that about 40% of the properties within the TOD areas will not redevelop, even over the long term. The reasons for this assessment are provided in the table below.

TOD ASSUMPTIONS	COUNCIL ANALYSIS FINDINGS	COMMENTS
The TOD SEPP applies to all properties including those within heritage conservation areas. The State Government claimed that heritage provisions will still apply.	It will not be possible for the TODs to deliver the dwelling numbers anticipated by the Government without full redevelopment of the HCAs.	Full development has been assumed across all TOD HCAs.
The TOD SEPP applies a FSR of 2.5:1 and building height of 6-storeys to commercial zones (E1 – Local Centre).	Redevelopment of commercial zones as a result of the TOD program is considered unlikely based on recent feasibility analysis (Confidential Attachment A1) which indicates the TOD SEPP FSR provision is well below the ‘tipping point’ required for feasible development.	This fact has been well understood since late 2023.
The TOD SEPP applies a FSR of 2.5:1 and building height of 6-storeys to existing R4 - High Density Residential zones.	The majority of these areas have been redeveloped with strata-titled apartment buildings varying widely in age, size and number of strata lots. Where a building or group of buildings has been divided into more than ten (10) strata lots it is assumed that the property will not be redeveloped.	Based on previous feasibility studies undertaken by Council a FSR provision of 2.5:1 is considered well below the ‘tipping point’ required for feasible redevelopment of these sites. It is also assumed that buildings with strata schemes constructed in the last 15 years, even if <10 dwellings/owners, will not redevelop due to financial viability.
The TOD SEPP applies to a range of non-residential properties including land owned by schools, churches, and hospitals.	It is assumed these will not redevelop as most of these institutions are growing (and acquiring land) in Ku-ring-gai, rather than selling land. This will not necessarily always be the case.	The majority of churches within the TOD area are heritage listed and therefore excluded, non-listed church buildings are also excluded.
The TOD SEPP assumes redevelopment of land when includes service stations.	It is assumed service stations will not redevelop as there is a limited number of these businesses in Ku-ring-gai and they occupy highly visible and valuable locations along the Pacific Highway.	
The TOD program includes sites with approved Development Applications as development potential.	Development Applications approved under the KLEP for apartment buildings and townhouses are excluded. As at the time of writing, costs and risks associated with documenting a fresh DA and gaining development approval, may not be a financially attractive proposition.	This assumption may need to be reviewed over time.
The TOD provisions have a minimum lot width provision of 21m wide at the front building line.	Numerous individual properties are technically “isolated” by this provision, as they could not be incorporated into a larger amalgamated site, often due to proximity to a heritage item or due to anomalies in the Transport Oriented Development Sites Map.	

Table 2 – Comparison between assumptions of TOD SEPP vs. findings from Council’s analysis

3. Defining a study area

The TOD SEPP applies to properties that fall within or intersect with a 400-meter radius measured from train stations. Properties are included in the development area if they are touched by this circular boundary, even partially. This simplified mapping approach creates significant challenges at the edges of these zones, where neighbouring properties can face vastly different development controls despite their similar location and characteristics.

FIGURE 1 illustrates this where the white dashed line is the 400-metre radius from the station, the red coloured properties are those within the TOD area, and the heavy red line shows where houses outside the TOD area are directly adjoining properties that may redevelop to 6 storeys.

To avoid the flaws of the TOD SEPP, Council has defined Local Centre boundaries for the scenarios it is proposing based on Council's Local Strategic Planning Statement (LSPS) which defines a Primary Local Centre by a circle with a radius of 800 metres representing a 10-minute 'walkable' distance to the station.

FIGURE 2 shows how the local centre boundary has been carefully adjusted to reflect real walking distances along streets and paths, taking into account topography and landscape features. The boundary now follows street patterns rather than cutting through properties, which creates a more logical transition between different types of development and uses.

Council's local centre boundaries combine to create an 800 metre wide development corridor that follows the rail line. The corridor runs between Mona Vale Road in the north and, and the Willoughby Council boundary in the south.

MAP 3 illustrates the extent of Council's local centre boundary (in yellow) and the TOD area inset within.

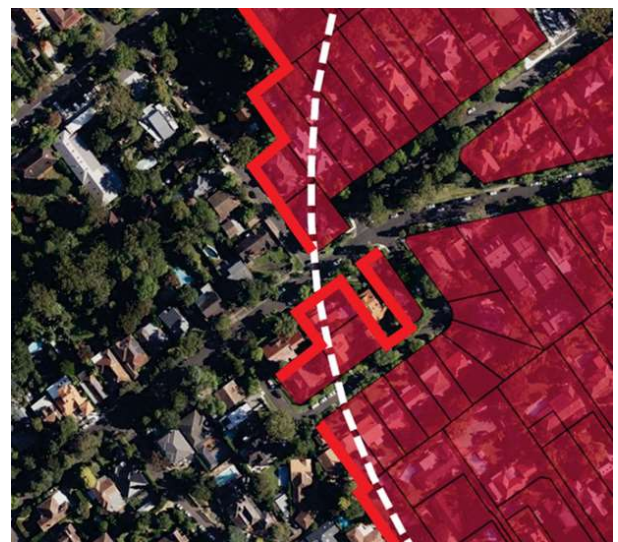
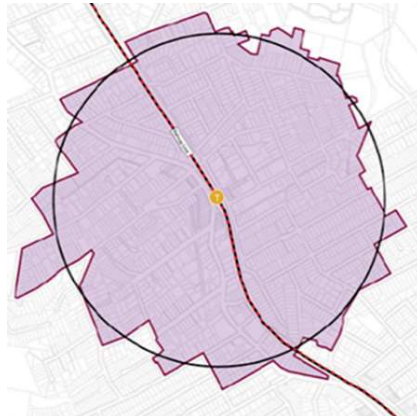


Figure 1 – Avoiding the flaws of the TOD - isolated properties and interface impacts

Step 1: local centre boundary



Step 2: boundary refined to consider walking distances

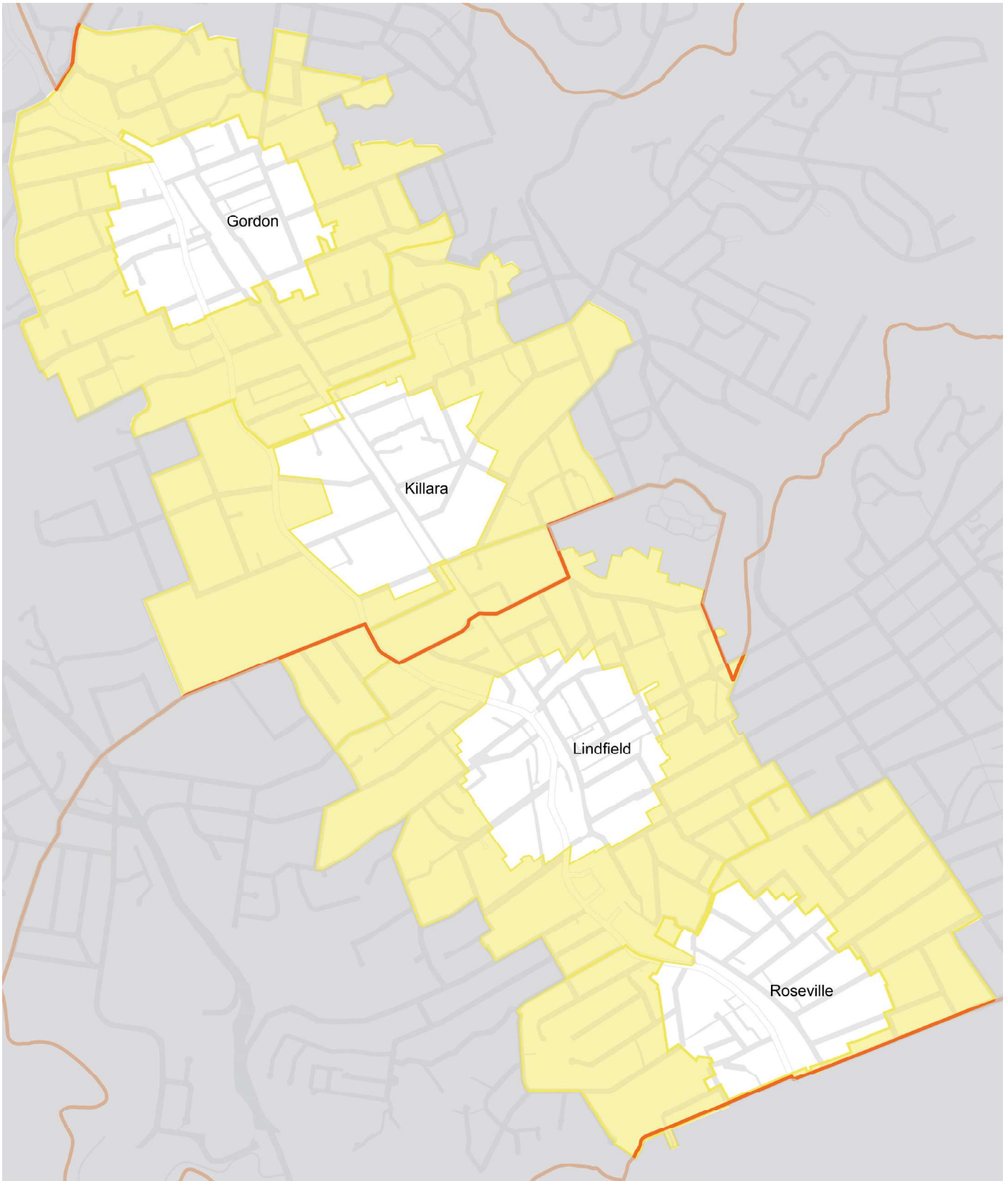


Step 3: boundary refined to follow public roads





Figure 2 – Steps taken in defining the local centre boundaries.

Map 3. Council's local centre boundary



LEGEND

-  Ward Boundary
-  Land within the Local Centre Boundary and outside the 400m radius of the station

TOD SEPP Corridor
Council's Local Centre Boundary

SCALE: ft @ A4





4. Analysing the constraints

To identify realistic development opportunities, Council's study carefully mapped and analysed various constraints that limit housing development potential.

The key constraints are:

- A. Environmental (Biodiversity, slope, bushfire, and riparian lands)
- B. Heritage Buildings;
- C. Heritage Conservation Areas; and
- D. Tree Canopy Cover.

A. ENVIRONMENTAL CONSTRAINTS

The TOD SEPP applies 'blanket' height and density rules across diverse urban areas, failing to consider unique natural features such as soils, topography, vegetation, and fauna habitats supporting areas of high biodiversity significance.

Analysis reveals that the TOD SEPP allows high density housing on environmentally sensitive land, despite ecological significance and development limitations.

FIGURE 3 shows an extract from the environmental constraints map (Map 4. Environmental Constraints). The red circles highlight sensitive areas (in grey) where the TOD SEPP currently applies.

Ku-ring-gai's LEP and DCP provide clear guidance for protecting significant vegetation, wildlife corridors and waterways throughout the LGA. This study references the following:

Ku-ring-gai DCP:

- Part 16 - Bushfire Risk
- Part 17 – Riparian Lands
- Part 18 - Biodiversity and Part 18R - Greenweb Maps

Ku-ring-gai Local Environmental Plan 2015 (KLEP):

- Terrestrial Biodiversity Map & Clause 6.3 Biodiversity Protection
- Riparian Lands & Watercourses Map & Clause 6.4
- Ku-ring-gai Bushfire Risk Evacuation Map

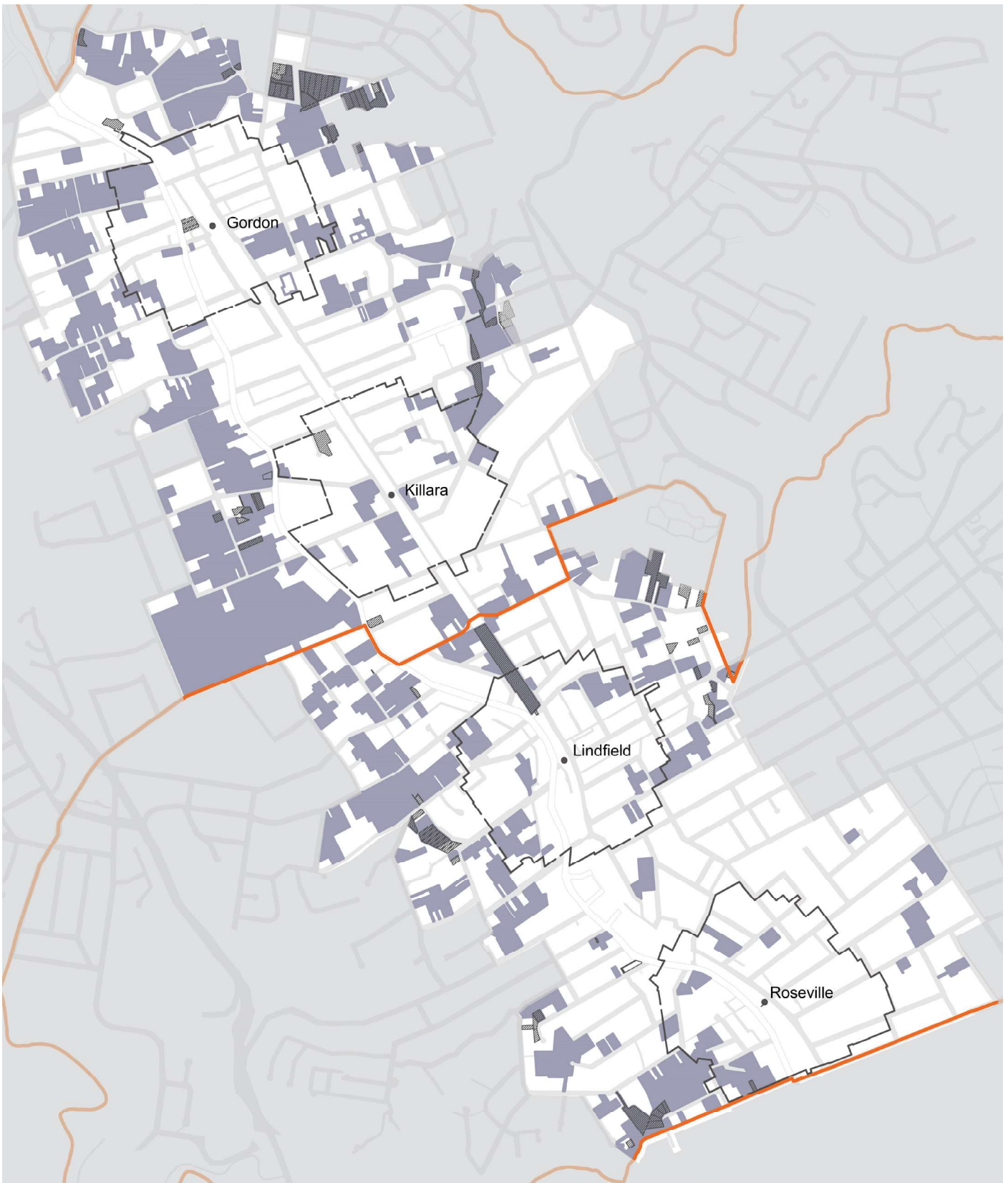
To avoid the flaws of the TOD, this study assumes the following:

- properties with core biodiversity have no potential for additional housing;
- properties with 20% or more of the land area with Support for Core, Landscape Remnants and/or Biodiversity Corridors are constrained with some potential for additional housing subject to detailed analysis and ground-truthing;
- properties with more than 25% of the land area affected by Category 1 or 2 Riparian Lands are heavily constrained with no potential for additional housing;
- properties with more than 25% of the land area with a slope greater than 18% have no potential for additional housing;
- properties mapped as Bushfire Prone Vegetation Category 1 and 2 lands have no potential for additional housing; and
- properties immediately adjoining Bushfire Prone Vegetation Category 1 or 2 lands have no potential for additional housing.



Figure 3 - TOD SEPP designates environmentally sensitive land as suitable for high density housing.

Map 4. Environmental Constraints



LEGEND

- Ward Boundary
- - - TOD Boundary (400m)
- Biodiversity & Riparian Lands
- Sites Impacted by Slope (greater than 18%)

**TOD SEPP Corridor
Environmental and Slope
Constraints**

SCALE: fit @ A4



B. HERITAGE BUILDINGS

The TOD SEPP allows increased heights and densities on all sites, except those with heritage listing, SP2 reservations, and open space zones (RE1 and RE2), within a 400m radius of the TOD station precincts. There are 136 heritage items within the TOD Development Area and an additional 27 heritage items on the edge of TOD precincts.

Heritage listed properties excluded from the TOD SEPP, are effectively isolated within areas of potential 6-storey apartment buildings. This creates a risk that heritage buildings will become 'stranded' - surrounded and impacted by overshadowing, overlooking, and potentially significantly reduced property values.

Heritage buildings located at the edge of the TOD precincts could directly interface with 6-storey apartment buildings on one or multiple sides.

FIGURE 4 shows an extract from the heritage constraints map (Map 5. Heritage Buildings). The red circles highlight isolated heritage buildings (in purple) within the TOD Area.

To avoid the flaws of the TOD SEPP, Council's study carefully mapped and analysed the distribution of heritage buildings within the corridor, focusing on locations with low concentrations of heritage items that may be suitable for new housing. The reference documents are:

Ku-ring-gai DCP:

- Part 19 which applies to Heritage Items (HI); and

KLEP 2015 Heritage Map.

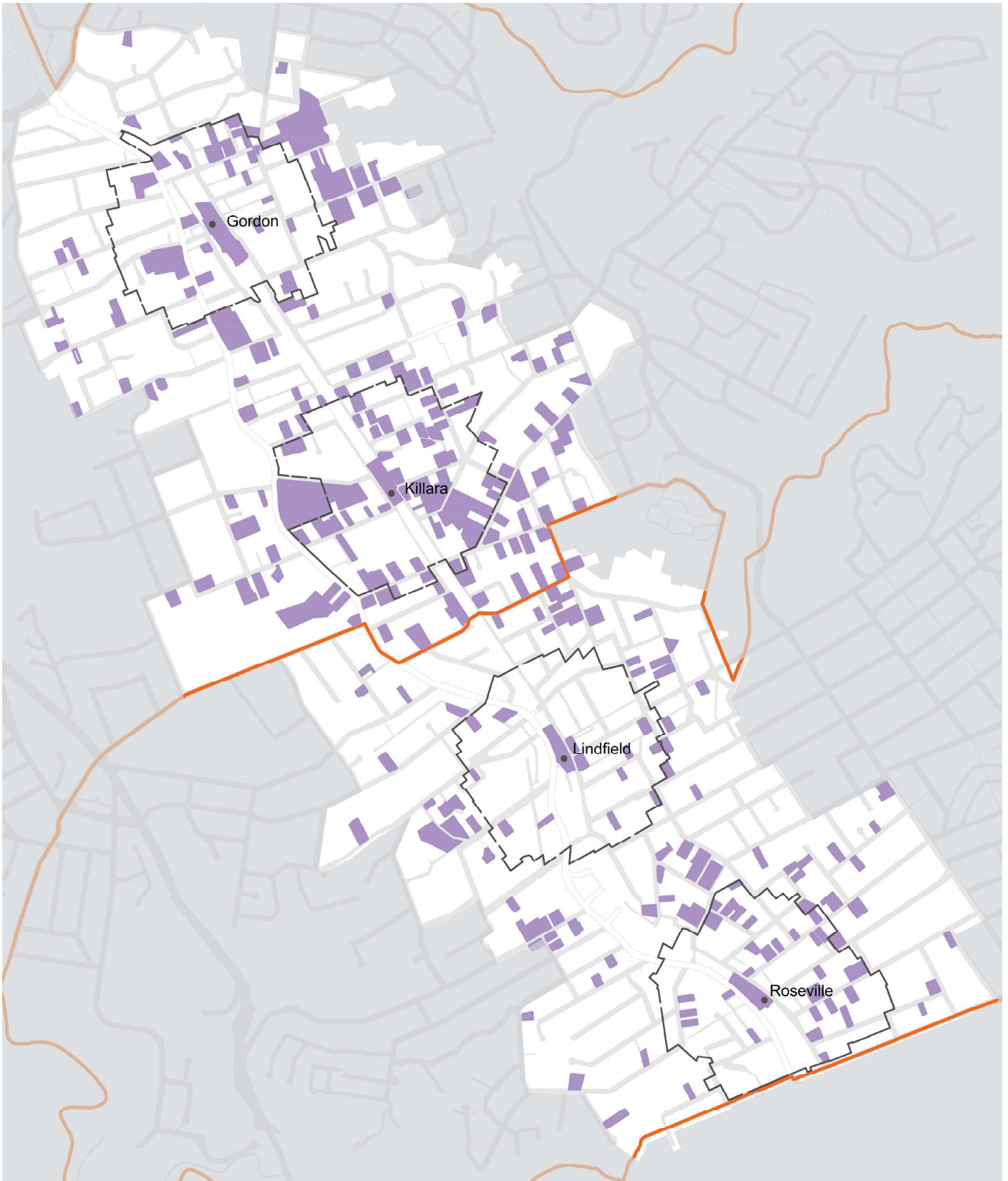
The study found several areas with few or no heritage items, particularly around Lindfield station, with smaller opportunities around Gordon station.

The greatest number of heritage items is concentrated around Killara station, particularly to the east of the rail line. Another significant cluster of heritage buildings exists on the eastern side of Roseville station. Due to heritage constraints, these areas are unsuitable for additional housing.



Figure 4 - Heritage Items within the TOD area are isolated and surrounded by 6-storey apartment buildings.

Map 5. Heritage Buildings



LEGEND

- Ward Boundary
- - - TOD Boundary (400m)
- Heritage Buildings

TOD SEPP Corridor
Heritage Buildings

SCALE: ft @ A4



C. HERITAGE CONSERVATION AREAS

Heritage Conservation Areas (HCAs) are valued not only for individual buildings, but for their collective cultural significance and their ability to demonstrate historical patterns of settlement.

Given the concentration of historic development along the northern railway line, the TOD SEPP amendments disproportionately impact the Ku-ring-gai's cultural heritage.

The TOD SEPP directly impacts 23 listed heritage conservation areas, representing half the total conservation areas of Ku-ring-gai. Approximately 410 properties in conservation areas are identified as TOD sites.

The controls which now apply to HCAs as a consequence of the TOD program are a building height of 22 metres (buildings of up to 6 storeys) and a maximum FSR of 2.5:1. As a result, numerous properties within gazetted Heritage Conservation Areas are susceptible to demolition.

While the State Government has claimed that heritage provisions will still apply to development within HCAs, Council's analysis of dwelling yields indicates that it will not be possible for the TOD SEPP to deliver the dwelling numbers anticipated by the State Government without complete redevelopment of all Heritage Conservation Areas.

FIGURE 5 shows extracts from the heritage constraints map (Map 6. Heritage Conservation Areas). The red areas indicate locations where HCAs are included within the TOD Development Area.

To avoid the flaws of the TOD SEPP, Council's study carefully mapped Heritage Conservation Areas within the corridor to identify locations outside these protected zones that may be suitable for new housing.

Reference documents are:

Ku-ring-gai DCP:

- Part 19 which applies to Heritage Conservation Areas (HCA); and

KLEP 2015 Heritage Map.

In summary:

- HCAs cover virtually the entire eastern side of the corridor (east of the northern railway line). These areas are not suitable for new housing;
- there are broad areas on the western side of the railway line within the 800-metre corridor that are free of HCAs and have potential for new housing; and
- there are small areas around Lindfield Station and to the north of Gordon Station that are not listed HCAs.



Figure 6 - Part of Roseville's Lord Street/Bancroft Avenue heritage conservation area in c.1900-1927, viewed from the train line, now identified as TOD sites (Source: State Library of New South Wales)

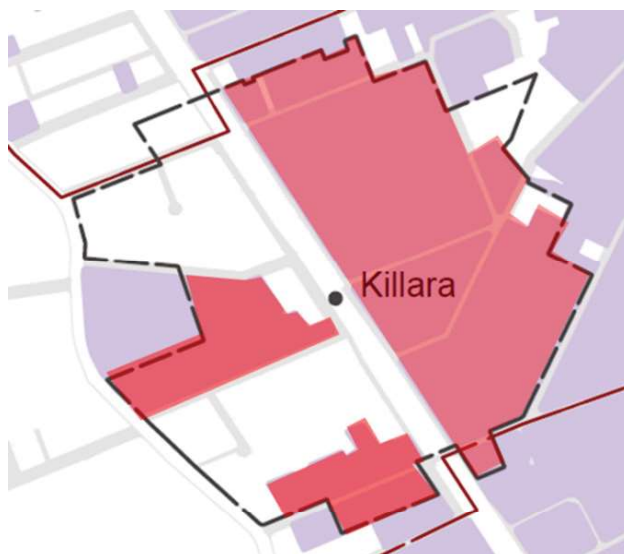
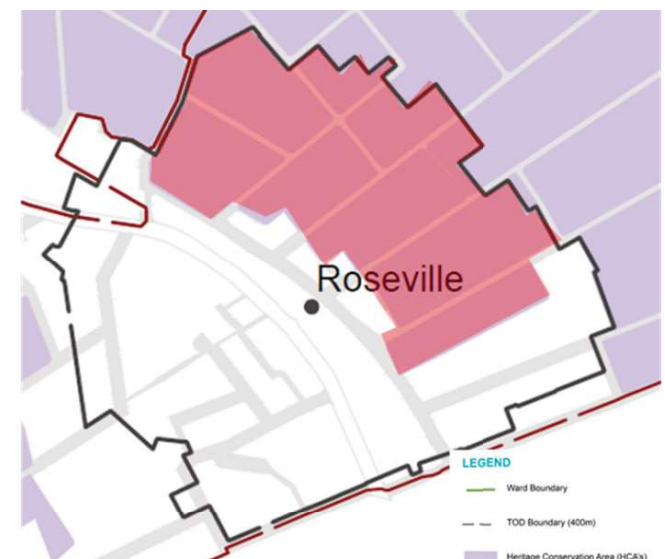
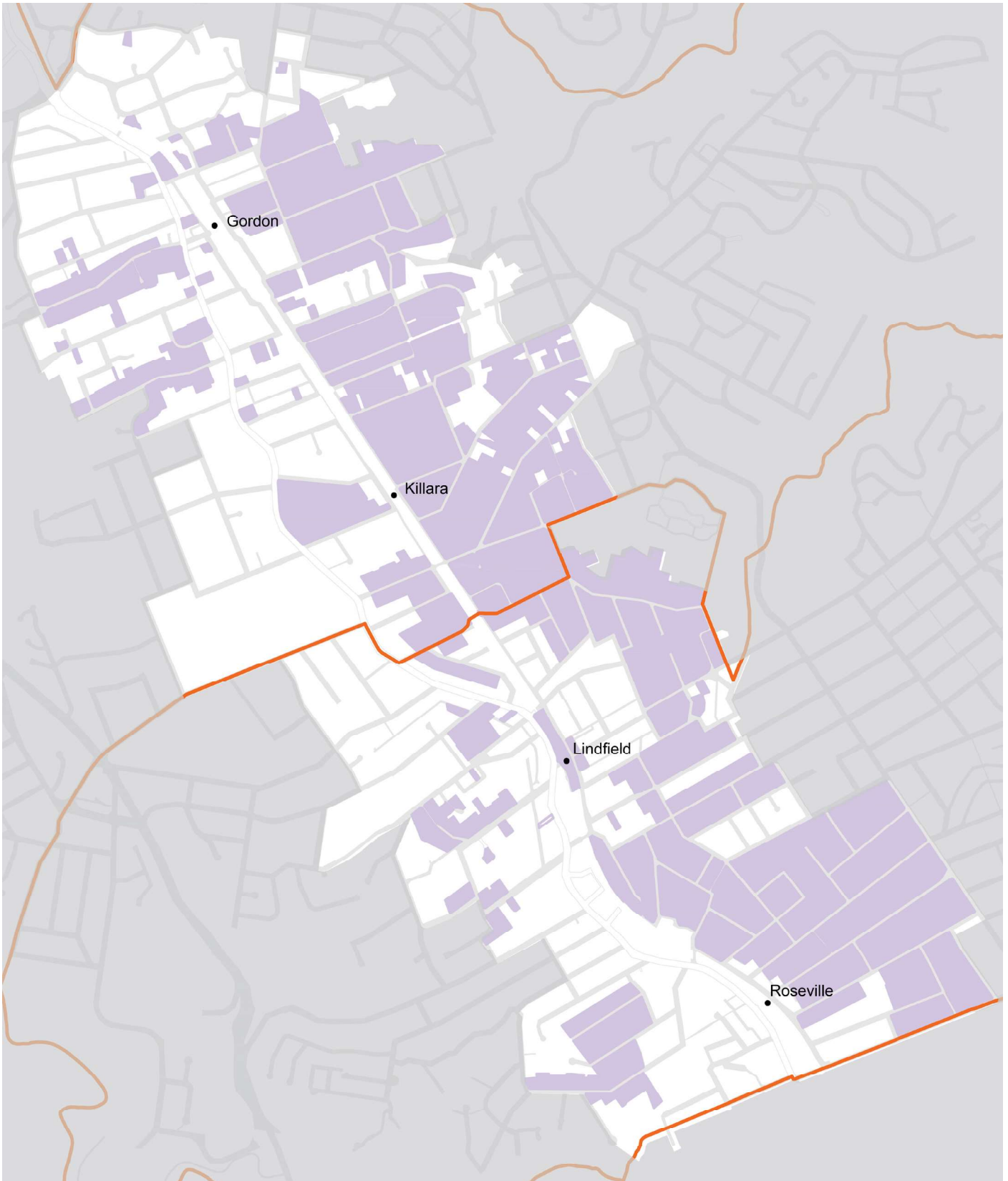


Figure 5 - The TOD has identified HCAs as suitable for high density housing



Map 6. Heritage Conservation Areas



LEGEND

- Ward Boundary
- TOD Boundary (400m)
- Heritage Conservation Area (HCA)

TOD SEPP Corridor
Heritage Conservation Areas

SCALE: 1ft @ A4



D. TREE CANOPY COVERAGE

The TOD SEPP program will have significant impacts on canopy cover as it allows high density housing within areas that currently have an average canopy cover of about 34%. Furthermore, the TOD program provide minimal controls to protect existing trees or to require planting of new tall canopy trees. The result will be a significant loss of canopy cover in areas subject to the TOD provisions.

FIGURE 7 shows an extract from the tree canopy cover map (Map 7. Tree Canopy Cover), the red circles indicate where the TOD applies to areas with canopy cover over 30%.

The Ku-ring-gai DCP Part 7 – Residential Flat Buildings provides strict controls for maintaining and increasing canopy cover. These controls have been in place since 2004 and have demonstrated significant efficacy.

The key controls include:

- Deep soil – a minimum of 40% (site area <1800sqm) or 50% (site area > 1800sqm) of site area is to be provided as landscape areas with minimal hard elements above and below ground.
- Site coverage – a maximum of 30% of a site that can be covered by the building excluding the basement.
- Tree replacement – a requirement to plant tall canopy trees capable of attaining a mature height of at least 15-18m:
 - 1 tree per 400m² (site area <1,200sqm)
 - 1 tree per 350m² (site area 1,200-1,800sqm)
 - 1 tree per 300m² (site area >1,800sqm)

The TOD SEPP does not provide any specific guidance on deep soil but refers to the Apartment Design Guide (ADG) which requires a minimum of 7% of site area as deep soil has no site coverage control.

Council's definition of deep soil is also more specific than the ADG with limits on path widths, walls and other hard elements.

The TOD SEPP also has a significantly reduced requirement for tree planting when compared to Council's DCP.

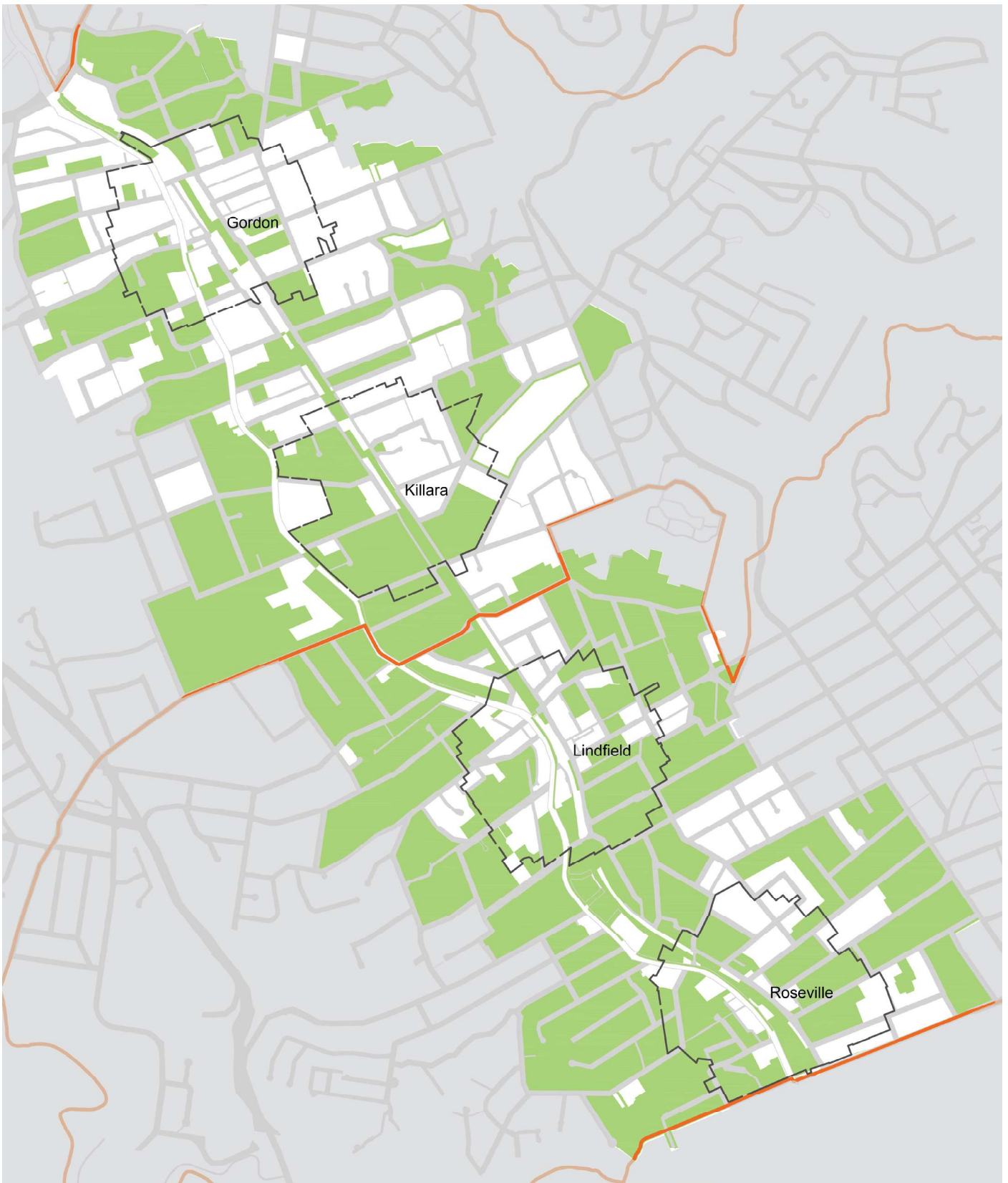
As an example, for a typical development site of 2,000sqm:

- Under the TOD SEPP the minimum deep soil requirement would be 140sqm compared with the KDCP which requires a minimum of 1,000sqm of deep soil; equating to 860sqm less deep soil.
- Under the TOD SEPP, tree planting requirements would be 1-2 large trees compared with the KDCP tree planting requirements of 6-7 large trees.






Figure 7 - The TOD program allows high density housing in areas that currently have high tree canopy cover resulting in minimal canopy protection

Map 7. Tree Canopy Cover



LEGEND

-  Ward Boundary
-  TOD Boundary (400m)
-  Tree Canopy Coverage 30% and Over

TOD SEPP Corridor
Tree Canopy Cover

SCALE: ft @ A4



D. TREE CANOPY COVERAGE (CONTINUED)

An analysis has been undertaken of development sites within R4 high density residential zones in Lindfield and Gordon completed before 2010. These developments generally meet Council's DCP controls for 50% deep soil, maximum 30% site coverage and tree replacement requirements. The analysis shows that developments consistent with Council's DCP will on average result in a canopy cover of 30% after a period of 10-15 years. In contrast the ADG has a minimum deep soil requirement of 7% and an aspirational requirement of 10-15%. Even if all TOD developments were to meet the aspirational target the resultant canopy cover is likely to be reduced to 6-10%



2010 aerial picture



2016 urban vegetation cover



2020 vegetation strata mapping

Figure 8 - comparison of vegetation cover across 2010, 2016 and 2020

	SITE A	SITE B
Canopy cover 2016	20-30%	28%
Canopy cover 2020	10-20%	27%



2010 aerial picture



2016 urban vegetation cover



2020 vegetation strata mapping

Figure 9 - comparison of vegetation cover across 2010, 2016 and 2020

	SITE A	SITE B	SITE C
Canopy cover 2016	30-40%	20-30%	20-30%
Canopy cover 2020	41%	25%	29%



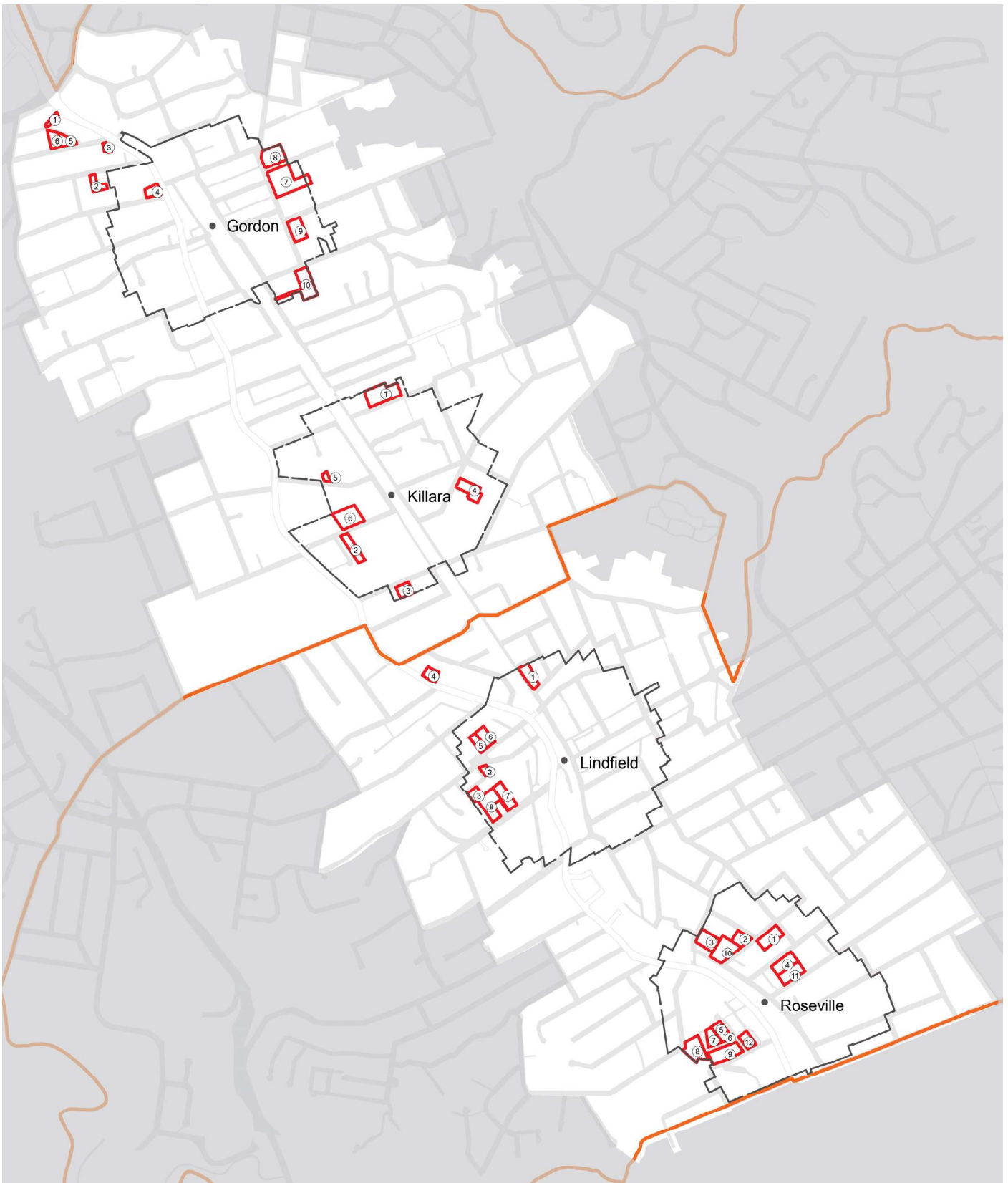
5. Understanding development feasibility

Council engaged Atlas Economics to provide advice on whether the TOD controls are feasible in Ku-ring-gai, and if feasible, what would be the likely take-up of development (annually) that could occur. In summary the study finds:





- Existing single dwellings in the R2 low density zones (including those within HCAs) are the most likely to redevelop under the TOD SEPP controls.
- Feasibility testing of sample sites indicates that the TOD controls are feasible and will offer a large premium (over and above existing use value) for landowners (the testing includes consideration of mandatory 2% Affordable Housing (AH) contributions).
- Given the premium on offer to landowners an average development take-up of 600-1000 new dwellings per year across the 4 centres could be expected. This rate is 3-5 times greater than the development peak in Ku-ring-gai, for the same area, during 2016-2021.
- Sites within the E1 Local Centres zones (e.g., retail strip, low-rise commercial) are unlikely to redevelop under the TOD as for the most part they require higher densities for redevelopment to be feasible.
- Informal discussions with selling agents indicate there is market uncertainty surrounding the implementation of the TOD controls.
- This uncertainty is observed to have dampened market take-up of development site sales thus far. Should the uncertainty be resolved developer interest is expected to be notable.

MAP 8 shows the locations of current properties on the market as development sites (as of October 2024).

**Map 8. Consolidated Development Sites for Sale
(as of October 2024)**



LEGEND

-  Ward Boundary
-  400m Radius
-  Corresponding Site Number and Address
-  Identified TOD Development Parcel

TOD SEPP Corridor
Current Expressions of Interest
(EOI's) October 2024

SCALE: fit @ A4



6. Determining housing potential

By overlaying the various constraint maps, analysis reveals large areas of suitable land within the 800-metre local centre corridor, where housing could be transferred, so that HCAs may be protected.

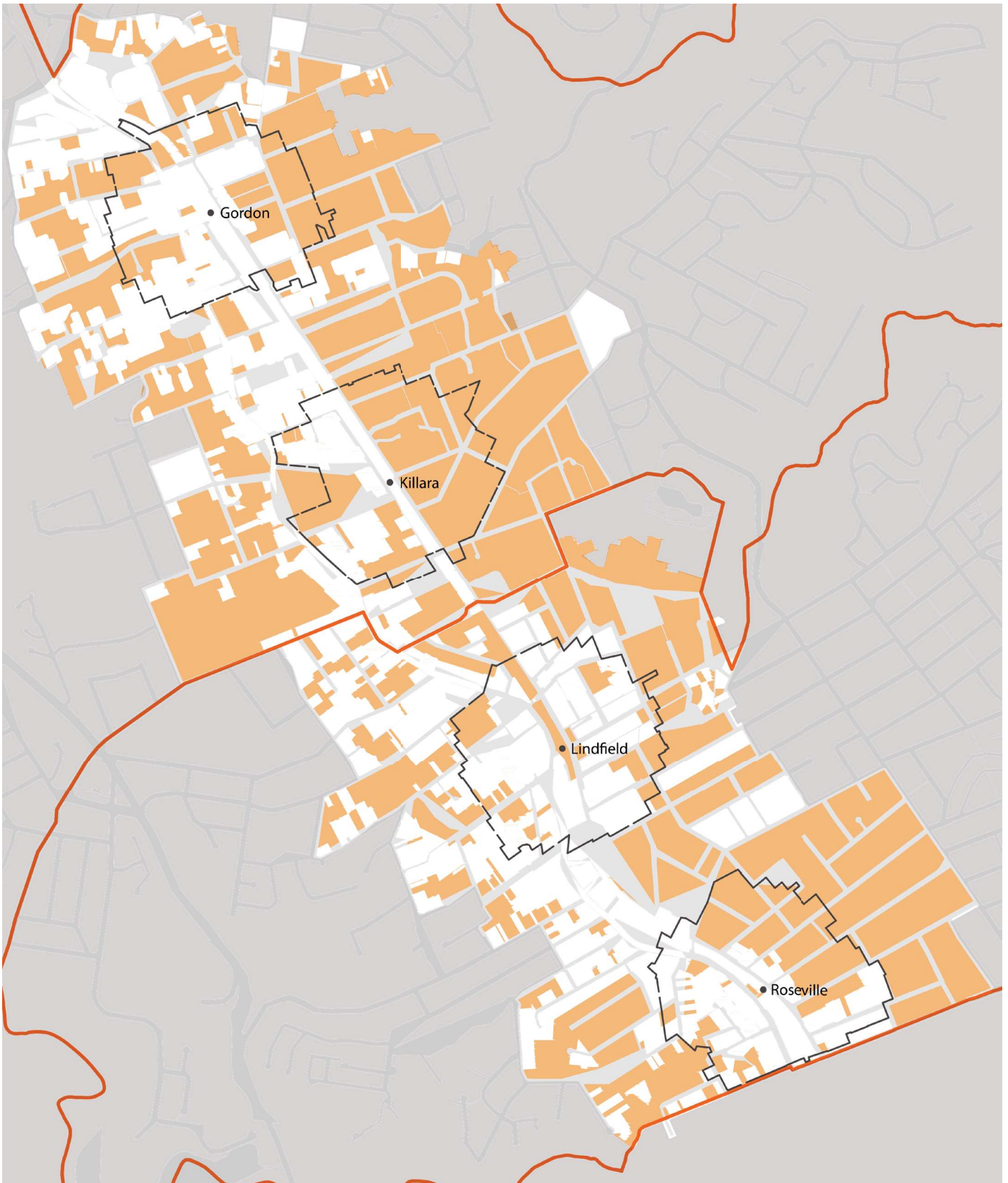
MAP 9 illustrates a combined map of all development constraints and identifies areas within the corridor that offer housing potential.

In summary the areas with the greatest housing potential are:

- to the west of the railway within the broader 800m corridor;
- the commercial areas close to the rail stations (noting that these locations will require increased building height to accommodate additional dwellings); and
- small pockets on the eastern and western sides of the railway within the 400m area around Lindfield, Roseville and Gordon.

Overall Lindfield and Gordon have the greatest potential to accommodate additional housing while Killara then Roseville have the least potential. Council's LSPS and various iterations of a housing strategy also recognise these facts.

Map 9. Housing Potential



LEGEND

- Ward Boundary
- - - TOD Boundary (400m)
- No Housing Potential
- Housing Potential

TOD SEPP Corridor
Council Analysis - Housing Potential

SCALE: ft @ A4



7. Defining planning principles

The following set of principles were adopted based on the Ku-ring-gai Strategic vision and local policies outlined on page 7 of this document. These principles have guided the preparation of alternative housing scenarios, which avoid the flaws of the NSW Government's TOD program.

PRINCIPLE 1 - Avoid environmentally sensitive areas

PRINCIPLE 2 - Minimise impacts on Heritage Items

PRINCIPLE 3 - Preserve Heritage Conservation Areas

PRINCIPLE 4 - Minimise impacts on the tree canopy

PRINCIPLE 5 - Manage transition impacts

PRINCIPLE 6 - Ensure appropriate building heights

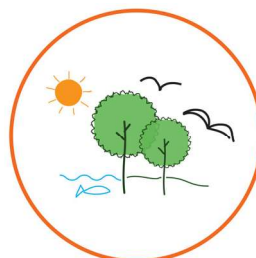
PRINCIPLE 7 - Support Local Centre Revitalisation

PRINCIPLE 1 - AVOID ENVIRONMENTALLY SENSITIVE AREAS

The Ku-ring-gai Council alternative housing scenarios avoid locating high density residential in the following environmentally sensitive areas:

Biodiversity lands

- properties with core biodiversity have no potential for additional housing;
- properties with 20% or more of the land area with Support for Core, Landscape Remnants and/or Biodiversity Corridors are constrained with some potential for additional housing subject to detailed analysis and ground-truthing



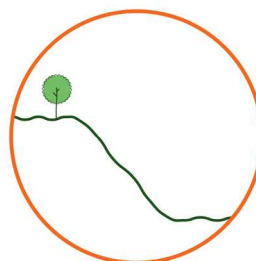
Riparian lands

- properties with more than 25% of the land area affected by Category 1 or 2 Riparian Lands are heavily constrained with no potential for additional housing;
- properties with less than 25% of the land area affected by Category 1 or 2 Riparian Lands are constrained with some potential for additional housing subject to detailed analysis and ground-truthing;



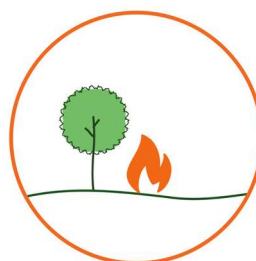
Steeply sloping lands

- properties with more than 25% of the land area with a slope greater than 18% have no potential for additional housing;



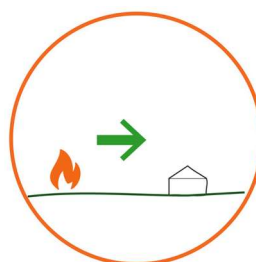
Bushfire prone lands

- properties mapped as Bushfire Prone Vegetation Category 1 and 2 lands have no potential for additional housing;



Bushfire risk evacuation lands

- properties immediately adjoining Bushfire Prone Vegetation Category 1 or 2 lands have no potential for additional housing.



PRINCIPLE 2 - MINIMISE IMPACTS ON HERITAGE ITEMS

The Ku-ring-gai Council alternative housing scenarios seek to:

- Avoid locating new high density residential in areas with high concentrations of heritage items (HIs).
- Where HIs are within TOD high density residential areas they are to be integrated within future development by being:
 - allocated the same or similar development rights as adjoining properties;
 - required to be amalgamated with adjoining development sites such that they do not become “isolated” and
 - further protected by mandatory masterplans for affected areas.

FIGURE 10 illustrates how the TOD isolates heritage items marked with a red cross contrasted with Council’s approach which will ensure heritage items will be integrated into future development.

FIGURES 11 and **12** below describe in detail Council’s approach to heritage items. Under the TOD (Figure 11), heritage items (shown in blue) are isolated with an estimated dwelling yield for the residential block of 589 dwellings.

FIGURE 12 shows heritage items retained and given development rights equal to other properties within the block, and in this way are integrated into future development. The residential block is given reduced densities (1.3:1 to 1.8:1) and a flexible building height range (5-8 storeys). This will allow suitable setbacks to heritage items and stepping of building heights. The estimated dwelling yield for the block is reduced to about 342 dwellings. The loss of 247 dwellings (Figure 10) is then transferred to other suitable non-heritage areas.

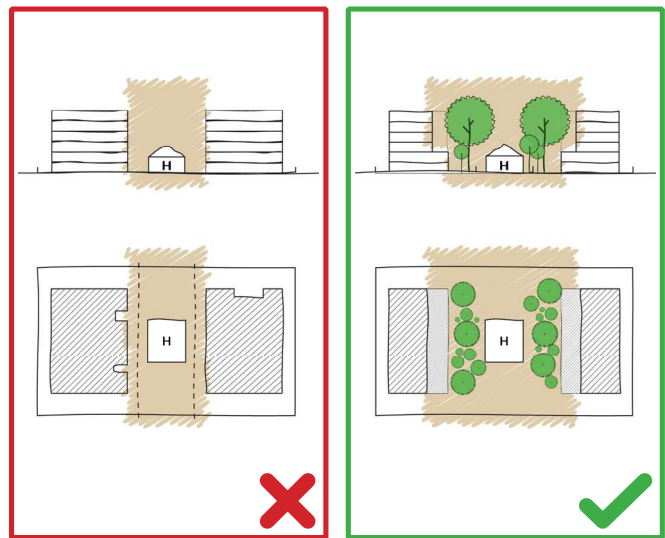
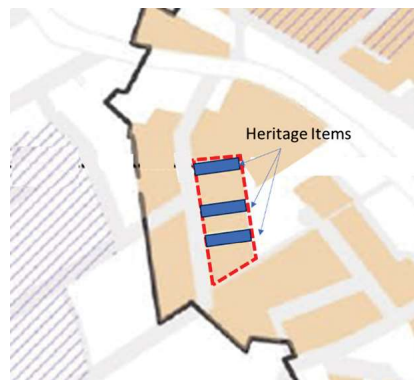


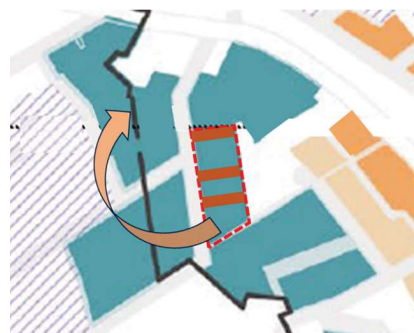
Figure 10 – TOD isolates heritage buildings



Scenario 1 TOD SEPP

- High density Residential Area (shown with red dashed line) with three heritage items
- TOD controls - FSR 2.5:1 and building height 6 storeys
- Estimated dwelling yield 207
- Heritage items (shown in blue) isolated and potentially surrounded by 6-storey apartment buildings

Figure 11 – TOD isolates heritage buildings



Scenario 3b

- High density Residential Area retained with three heritage items
- Proposed controls - FSR 1.5:1 height 5-8 storeys, 50% deep soil
- Estimated dwelling yield – 121
- Heritage Items integrated into future development by allocation of the same development rights as neighbours as per principle X
- Results in loss of 86 dwellings (compared to TOD) which are transferred to other suitable nearby locations

Figure 12 – Council’s approach to integrating heritage buildings

PRINCIPLE 3 - PRESERVE HERITAGE CONSERVATION AREAS

The overall principle is to prioritise the protection of HCAs by transferring the potential dwelling yield to suitable non-heritage areas.

Council's resolution of 8 May required consideration of scenarios where some or all HCAs were to be protected.

Council commissioned an independent review of 28 existing heritage conservation areas to confirm the listings and boundaries under the NSW heritage standards for local listing. This review by TKD Architects found these areas have an overall moderate or high integrity and that all satisfy the NSW Heritage Council threshold of local heritage significance for listing as a conservation area. Some boundary revisions were recommended for either merger, increase, or decrease. The more significant boundary adjustments recommended include:

- Extend the boundaries of the Robert Street/Khartoum Avenue HCA (C39) to include the properties on the northern side of Khartoum Avenue; and
- Reduce the boundaries of the Garden of Roseville Estate HCA (C37) to remove the properties on the southern side of Bromborough Road.

Council also prepared a comparative study to review the relative merit of these areas in a wider Sydney context for information. While this study makes no change to the local listing, it found that Ku-ring-gai's HCAs have no equal for demonstrating the development of Sydney's suburbs during the twentieth century, in terms of the cohesive and intact Federation and inter-war housing, the singular pattern of development along the rail line spine, and high proportion of architect designed dwellings.

It should be noted that no changes to the heritage listing of the conservation areas are currently adopted or proposed by Council as a result of these studies. Council's exhibited housing scenarios are based on the existing conservation areas, which were established through the required consultant assessment, community consultation and council review at the time of listing.

Considering the above information Council relied on planning principles rather than heritage analysis to develop the housing scenarios that protect only portions of the HCAs. The principles prioritised protection of the HCAs:

- with high concentration of heritage items;
- that are located more than 200m from the rail station; and
- that are contiguous with adjoining HCAs outside the 800-metre study boundary.

FIGURE 13 demonstrates the contrast between the development under TOD provisions and Council's approach to protecting HCAs by transferring potential dwellings to commercial areas.

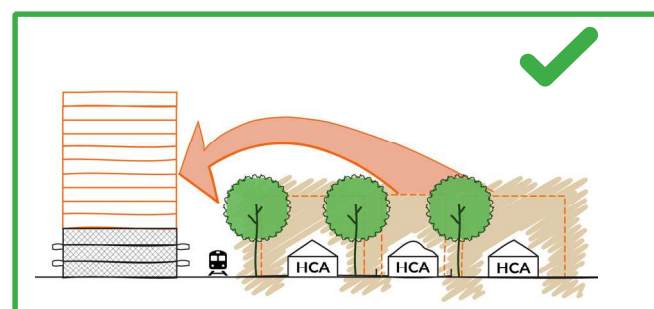


Figure 13 – HCAs preserved by transferring potential dwellings to commercial areas

PRINCIPLE 4 - MINIMISE IMPACTS ON THE TREE CANOPY

The key principle is to improve canopy protection and replenishment in new high-density residential areas by reducing densities of apartment buildings (when compared to the TOD SEPP) and including similar controls to Council's DCP relating to deep soil (40-50%), site coverage (maximum 30%), and tree replacement.

New high density residential areas will have a range of allowable heights from 5-8 storeys and density range of 1.3:1 to 1.8:1 to allow flexibility to accommodate heritage items, existing trees, and riparian lands.

It is noted that reducing densities of apartment buildings will require more building height or more spread to accommodate the same number of dwellings.

FIGURE 14 contrasts the loss of canopy under the TOD program with Council's existing approach to protecting canopy by allowing more flexible development controls and introducing deep soil and site coverage controls.

By way of example, the current KLEP has a maximum FSR of 1.3:1 for apartment buildings which is about 50% lower than the TOD SEPP which has an FSR of 2.5:1.

In the first case, twice the area would need to be allocated for new housing in Council's scenarios to match the TOD. The spread could be reduced by increasing the FSR to a range of 1.5:1-1.8:1 with increased building height to between 5-8 storeys and retaining minimum requirements for deep soil, site coverage, building setbacks and tree replacement. The intention is not to achieve the same dwelling yield within a block as the TOD SEPP as this would result in excessive heights.

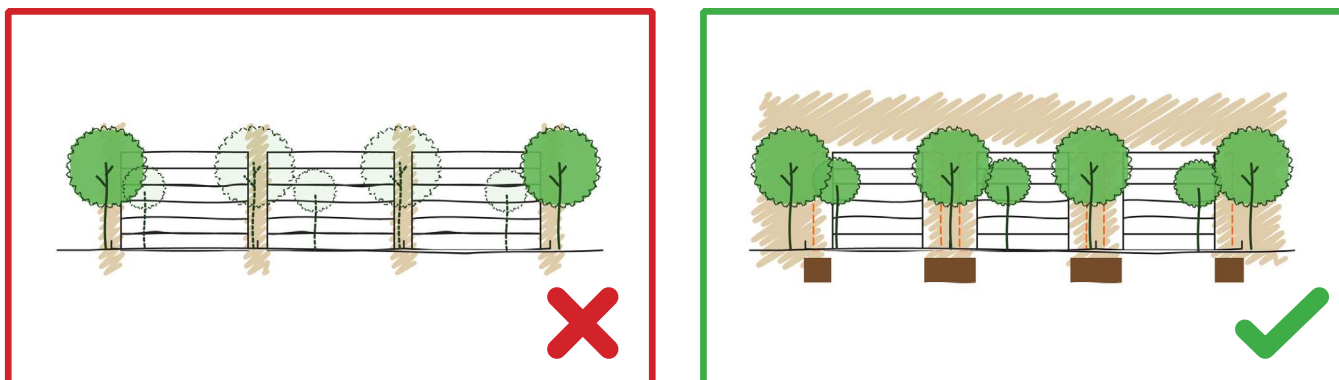


Figure 14 – Council's approach to integrating heritage items

PRINCIPLE 5 - MANAGE TRANSITION IMPACTS

The key principles are:

- to ensure any future changes to planning controls allow for an acceptable interface between areas of different density or use;
- to avoid changes that are ‘mid-block’ or along property boundaries;
- to utilise existing roads, lanes or open space as the transition from high density to low density; and
- if required to create a new road, lane, walkway or open space as a transition boundary.

FIGURE 15 illustrates this principle on the left where TOD sites (shown in red) abut single houses (shown in blue). The diagram on the right shows how these transition impacts can be managed by extending the development area and/or adding new roads as transitions.

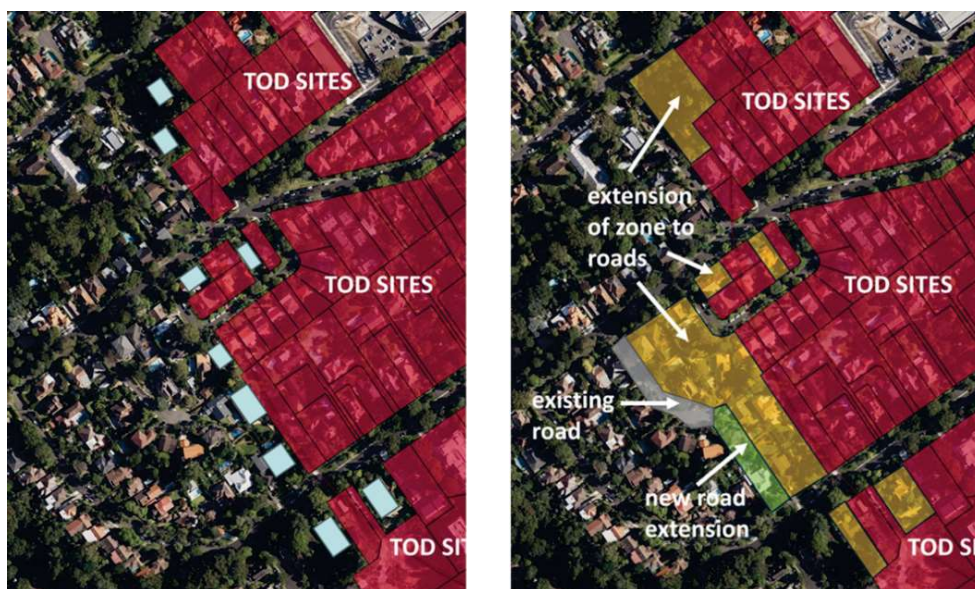


Figure 15 – Managing transition impacts

PRINCIPLE 6 - ENSURE APPROPRIATE BUILDING HEIGHTS

The TOD program will result in uniform building heights across the centres at the cost of tree canopy and heritage. Principle 6 is based on Council's understanding that increasing building heights in the centres is necessary for both the protection of HCAs and tree canopy.

Building height will be managed by:

- ensuring building heights are appropriate to the regional, district and local context:

FIGURE 16 shows the four TOD precincts in Ku-ring-gai sit between a number of strategic centres with building heights ranging from 250m (approx. 70-75 storeys) in Chatswood, 110m (30-35 storeys) in Hornsby and Macquarie Park, 45m (12-14 storeys) in Frenchs Forest, and 70m (20-22 storeys) in Epping and Dee Why.

- Utilising building heights to reflect the hierarchy between the centres where Gordon is the largest centre with the greatest heights; Lindfield is the second largest centre; Roseville third largest and Killara is the smallest centre with the lowest heights.
- Locating the tallest buildings on centrally located mixed use sites close to the rail station including the Gordon Centre and Council's Community Hub Sites in Lindfield and Gordon.
- Transitioning building heights from tallest in the centre closest to the station to lowest on the edges to provide a transition to surrounding low density areas.

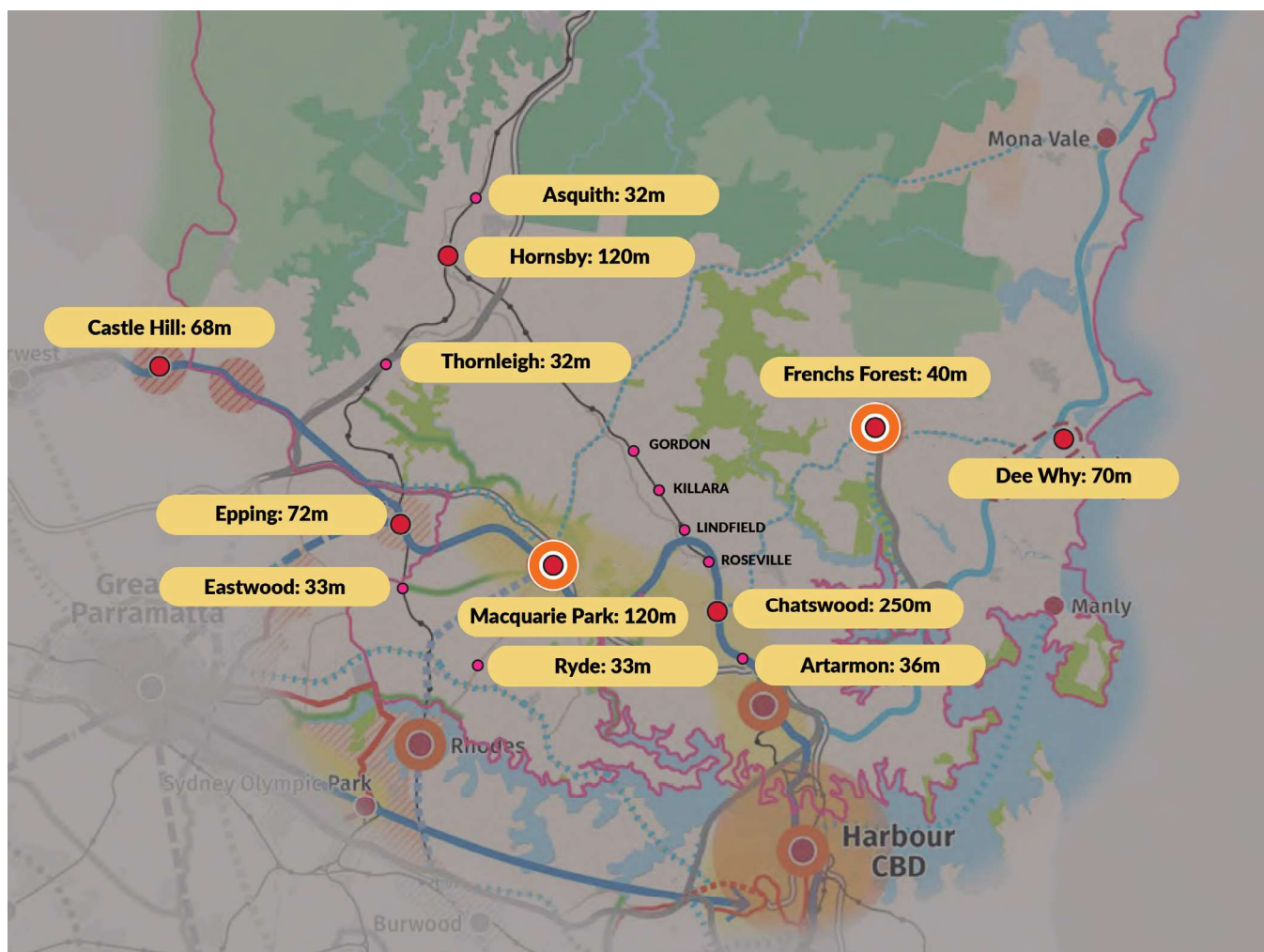


Figure 16 - LEP building heights across the northern region

PRINCIPLE 7 – SUPPORT LOCAL CENTRE REVITALISATION

The TOD program is not a centres policy, it is just a housing policy. It includes no incentives or initiatives to expand or augment commercial and community facilities or services within TOD station precincts. The program perversely disincentivises the provision of non-residential uses in nominated centres.

A Council commissioned study on development feasibility found that the sites within the E1 Local Centres zones, typically the two storey buildings along the retail strip and low-rise commercial buildings, are unlikely to redevelop under the TOD program as for the most part they require higher densities for redevelopment to be feasible. Evidence of this is shown by example below:

► Example 1

- Owners of the Gordon Centre in Gordon have submitted a formal planning proposal pre-lodgement meeting request for redevelopment of the centre with building heights between 15-26 storeys and an FSR of 8.0:1.

► Example 2

- A planning proposal submitted by the owners of a two-storey commercial building at 345 Pacific Highway, Lindfield seeks building heights of 15 storeys and an FSR over 4.0:1

What these examples show is that the TOD amendments will likely to create a 'donut' effect whereby high-density residential development will occur around the commercial centre while the centre remains unchanged. This will result in a lack of amenities for a growing population. Furthermore, if the TOD amendments remain in place Council, will likely continue to receive planning proposals from landowners within the E1 zone for new developments with significant building heights, see [FIGURE 17](#).

Council will support revitalisation of the centres by:

- promoting mixed use development that incorporates speciality retail and supermarkets to address the undersupply of retail across the LGA;
- supporting redevelopment of key sites in the centres including the Gordon Civic Hub, Lindfield Village Hub, and the Gordon Centre through provision of appropriate building height and FSR (subject to feasibility modelling); and
- utilising Council land as a catalyst for revitalisation and delivery of community infrastructure such as new libraries, open space and community centres.

E1 commercial zones should have:

- building height for sites in the commercial zones of greater than 8 storeys; and
- a maximum FSR for sites in the E1 commercial zones of greater than 3.0:1, subject to detailed feasibility analysis, see [FIGURE 18](#).

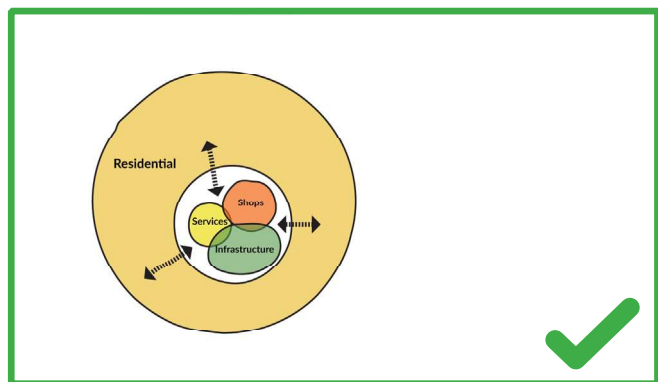
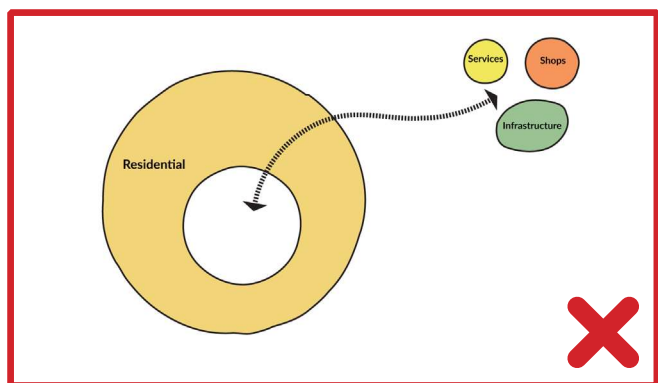


Figure 17 – Managing transition impacts

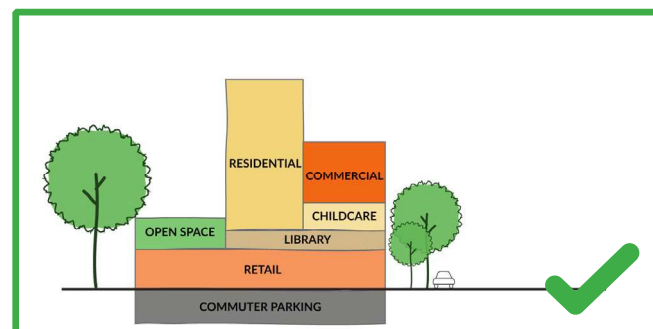
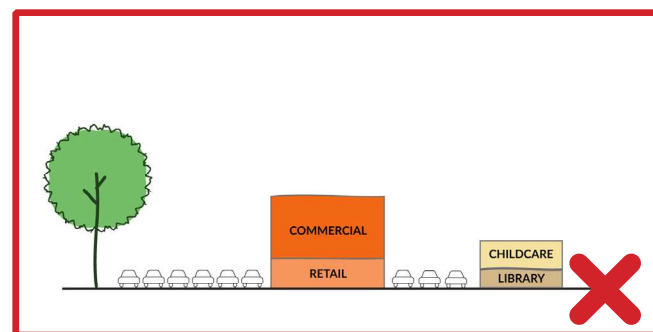


Figure 18 – Managing transition impacts



8. Preparing draft scenarios

Using the in-depth analysis summarised in the previous sections, Council prepared five housing scenarios including a scenario which retains the TOD program's existing controls. This section outlines the provisions for each of the five scenarios listed below:

Scenario 1 - Existing NSW Government Controls Retained

Scenario 2a - Safeguard and Intensify

Scenario 2b - Minor Amendments to Existing NSW Government Controls

Scenario 3a - Preserve and Intensify

Scenario 3b - Preserve, Intensify and Expand

SCENARIO 1 - EXISTING NSW GOVERNMENT CONTROLS

RETAINED

Scenario 1 is the TOD program and controls which came into effect in May 2024.

Scenario 1 is better described as Council's interpretation of what development might look like as a result of the TOD program.

While the assumptions are described in detail in this report the following is noted:

- About 40% of the lands affected by the TOD program are considered unlikely to redevelop. The previous sections in this document provide a detailed analysis of these constraints and limitations.
- Scenario 1 shows land that Council anticipates will develop because of the TOD SEPP, these are shown coloured and the areas where no change is assumed are left blank (land considered unlikely to redevelop) in the diagram.
- While the TOD SEPP allows 6-storey apartment buildings and 7-storey shop-top housing buildings, scenario 1 does not show 7-storey buildings because as noted previously in this report redevelopment of shop-top housing within the E1 zone (local centres) is considered unlikely due to feasibility under TOD controls.

► Key Features

- Provides no protection for Heritage Items– not consistent with Principle 2
- Provides no protection for HCAs – not consistent with Principle 3
- Provides minimal protection for tree canopy – not consistent with Principle 4
- Creates transition impacts – not consistent with Principle 5
- Uniform building heights and density – not consistent with Principle 6
- TOD controls not feasible in E1 commercial zones – not consistent with Principle 7

► Summary of Key Statistics

Building heights: 6 storeys (22 metres)

Density: FSR 2.5:1

Number of dwellings: 23,200 (based on Council estimates)

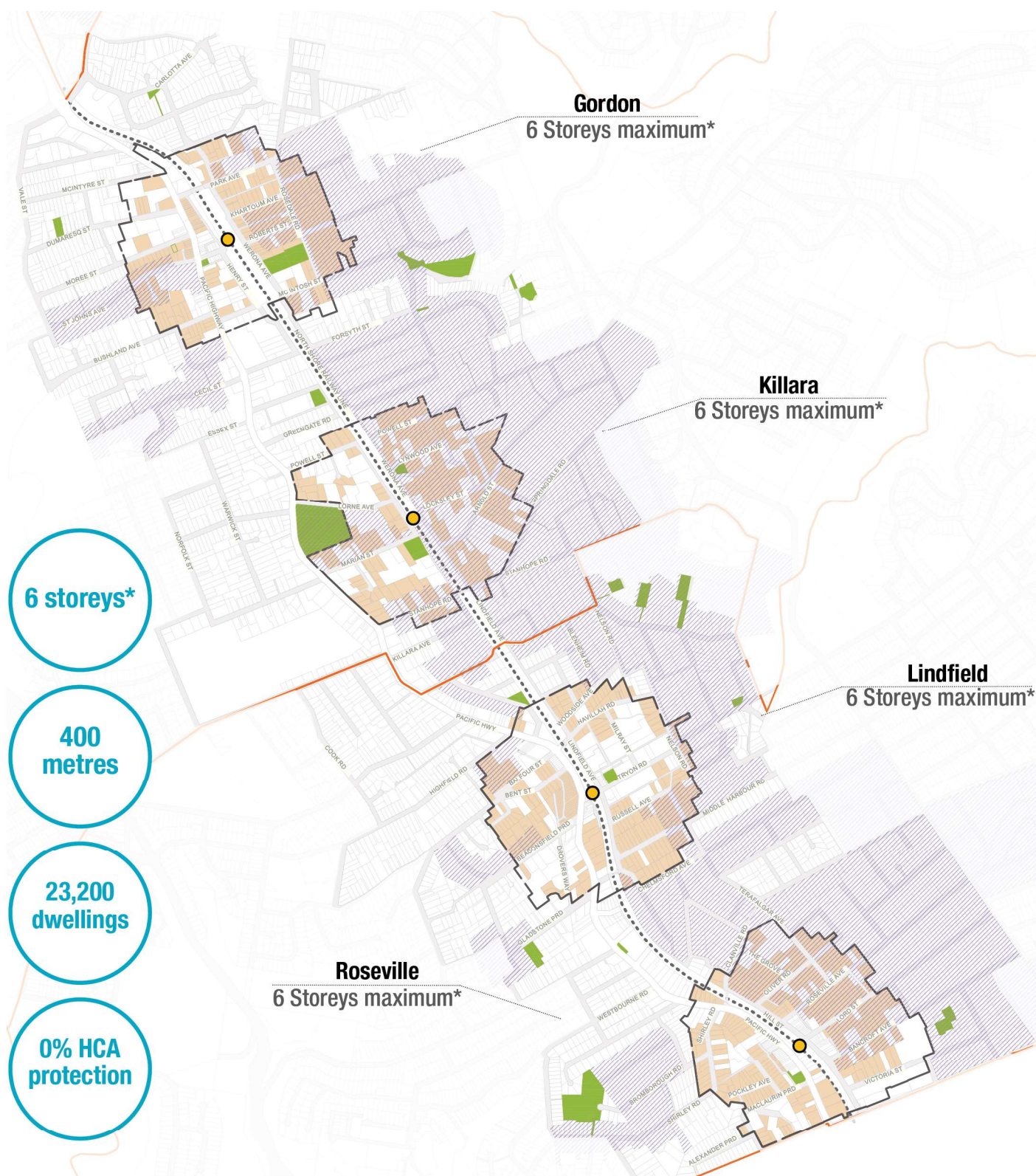
Extent: wholly within TOD boundary (generally 400 metres from station)

HCAs protected: 0%

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 1
Principle 1: Avoid environmentally sensitive areas	✗
Principle 2: Minimise impact on heritage items	✗
Principle 3: Preserve heritage conservation areas	✗
Principle 4: Minimise impacts on the tree canopy	✗
Principle 5: Manage transition impacts	✗
Principle 6: Ensure appropriate building heights	✗
Principle 7: Support local centre revitalisation	✗

Table 3 – performance of scenario 1 against the Council's planning principles

Map 10. Scenario 1 - Existing NSW Government Controls Retained



Disclaimer: This map has been prepared as part of draft TOD alternative scenarios only and no reliance is to be placed upon this plan as it is not and does not purport to be a planning instrument, Ku-ring-gai Council accepts no liability for the accuracy or otherwise of this map.

* Note 1: Building heights do not include height and FSR bonuses available under Housing SEPP. A height and FSR bonus of up to 30% bonus may be applied to developments that provide 15% affordable housing for 15 years.

Note 2: Floor space ratio (FSR) represents the total floor area which may be built compared to the total area of the block. For example, a FSR of 2:1 would potentially allow a building with a floor space of 800 sq/m to be built on a block of 400 sq/m.

Note 3: The NSW Government's low- and mid-rise housing policy may apply outside the TOD areas.

LEGEND

- Train Station
- Railway Line
- TOD Boundary (400m)
- Ward Boundary
- TOD Controls - Building height 6 storeys and FSR 2.5:1
- Land within TOD boundary - considered unlikely to redevelop
- Heritage Conservation Areas
- Existing Green Assets

TOD SEPP Corridor Scenario 1

SCALE: fit @ A4

SCENARIO 2a - SAFEGUARD AND INTENSIFY

Council's scenario 2a stays largely within the TOD boundary (400 metres) but instead of maintaining uniform building heights like the TOD it increases building heights in the commercial centres to protect 78% of the impacted HCAs.

► Key Features

- By transferring dwellings to the E1 commercial zones this option safeguards a large proportion of HCAs (78%) across the TOD areas.
- Improvements in canopy protection are achieved by transferring dwellings from HCAs to the commercial areas and by changing TOD controls including reduced densities, flexibility in height and deep soil controls as per Principle 4.
- Heritage items are protected by removing TOD controls from surrounding areas or allocating development rights as per Principle 2.
- Transition impacts are managed by expanding or contracting development boundary as per Principle 5.
- Increased building heights and density in commercial zones will support revitalisation as per Principle 7.
- Maximum building heights - Gordon 25 storeys, Killara 10 storeys, Lindfield 15 storeys & Roseville 12 storeys.

► Summary of Key Statistics

Building height range: 5-25 storeys

Density range: FSR 1.5:1 to 8.0:1

Number of dwellings: 23,200 (= TOD SEPP)

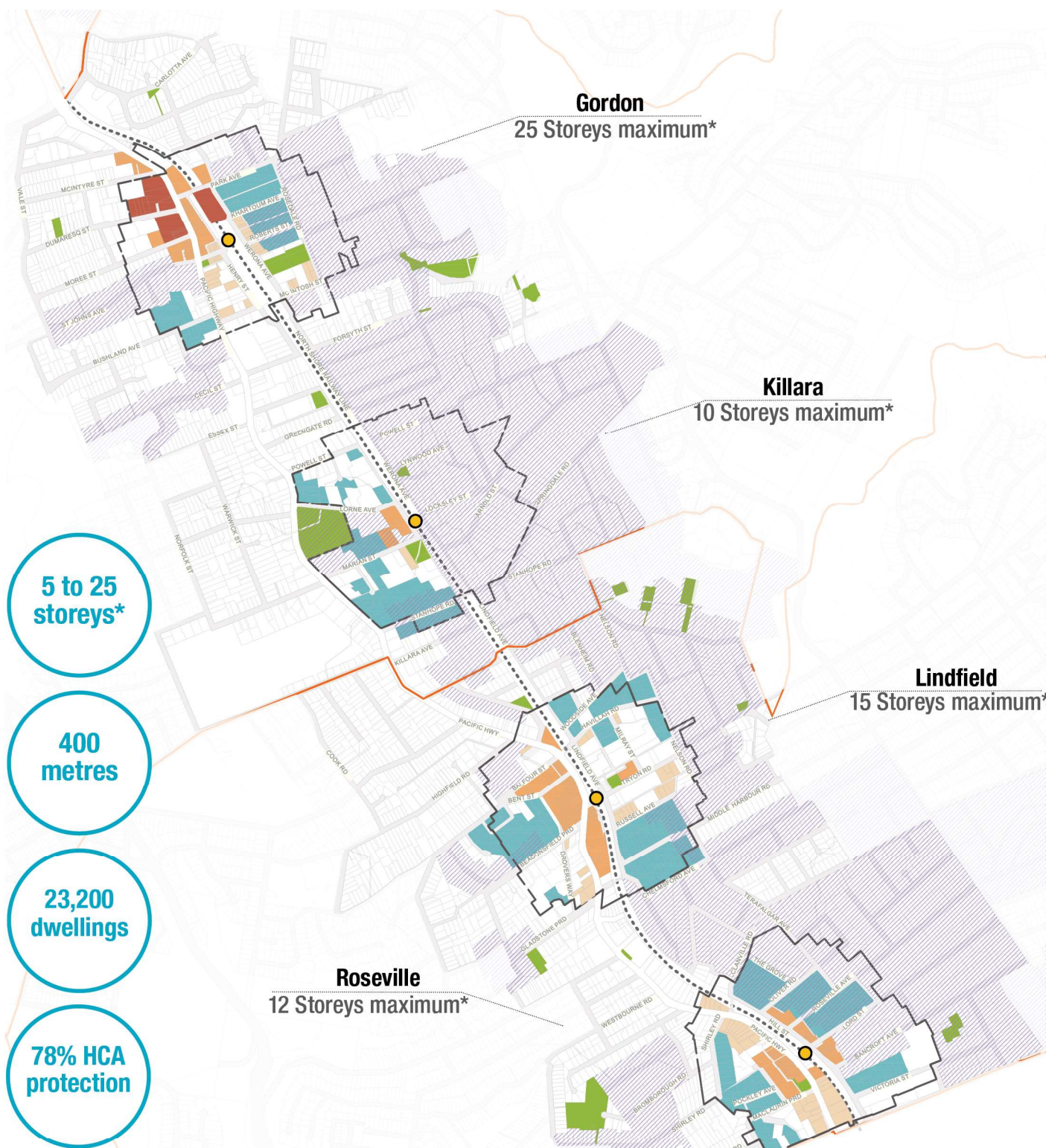
Extent: largely within TOD boundary (generally 400m from rail station)

HCAs protected: 78%

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 2a
Principle 1: Avoid environmentally sensitive areas	✓
Principle 2: Minimise impact on heritage items	✓
Principle 3: Preserve heritage conservation areas	○
Principle 4: Minimise impacts on the tree canopy	✓
Principle 5: Manage transition impacts	✓
Principle 6: Ensure appropriate building heights	✓
Principle 7: Support local centre revitalisation	✓

Table 4 – performance of scenario 2a against the Council's planning principles

Map 11. Scenario 2a - Safeguard and Intensify



Disclaimer: This map has been prepared as part of draft TOD alternative scenarios only and no reliance is to be placed upon this plan as it is not and does not purport to be a planning instrument, Ku-ring-gai Council accepts no liability for the accuracy or otherwise of this map.

* Note 1: Building heights represent residential storeys only - additional 1-2 storeys required for retail and commercial uses in E1 zone.

* Note 2: Building heights do not include height and FSR bonuses available under Housing SEPP. A height and FSR bonus of up to 30% bonus may be applied to developments that provide 15% affordable housing for 15 years.

Note 3: Floor space ratio (FSR) represents the total floor area which may be built compared to the total area of the block. For example, a FSR of 2:1 would potentially allow a building with a floor space of 800 sq/m to be built on a block of 400 sq/m.

Note 4: The NSW Government's low- and mid-rise housing policy may apply outside the TOD areas.

LEGEND

- Train Station
- Railway Line
- TOD Boundary (400m)
- Ward Boundary
- TOD Controls - Building height 6 storeys and FSR 2.5:1
- Building height 8-15 storeys and FSR range 3.0:1 to 6.1:1
- Building height 16-25 storeys and FSR range 5.0:1 to 8.1:1
- Building height 5 to 8 storeys and FSR range 1.3:1 to 1.8:1 + 50% Deep Soil
- Land within TOD boundary - considered unlikely to redevelop
- Heritage Conservation Areas
- Existing Green Assets

TOD SEPP Corridor Scenario 2a

SCALE: fit @ A4



SCENARIO 2b - MINOR AMENDMENTS TO EXISTING NSW

GOVERNMENT CONTROLS

Scenario 2b represents a minor amendment to Scenario 1 by selectively sparing some Heritage Conservation Areas on the edges of the TOD precincts. The TOD controls are otherwise retained across the corridor.

About 31% of the HCAs are protected by transferring development to the commercial centres. This results in increases in height mainly around key sites in the town centres of Gordon, Lindfield and Roseville.

► Key Features

- Provides no protection for Heritage Items – not consistent with Principle 2
- Provides limited protection for HCAs (31% protection) – not consistent with Principle 3
- Provides minimal protection for tree canopy – not consistent with Principle 4
- Creates transition impacts – not consistent with Principle 5
- Provides some variation in building heights and density – partly consistent with Principle 6
- Increased building heights and density in commercial zones will support some revitalisation as per Principle 7.
- Maximum building heights - Gordon 15 storeys, Killara 6 storeys, Lindfield 15 storeys & Roseville 8 storeys.

► Summary of Key Statistics

Building height range: 6-15 storeys

Density range: FSR 2.5:1 to 6.0:1

Number of dwellings: 23,200 (= TOD SEPP)

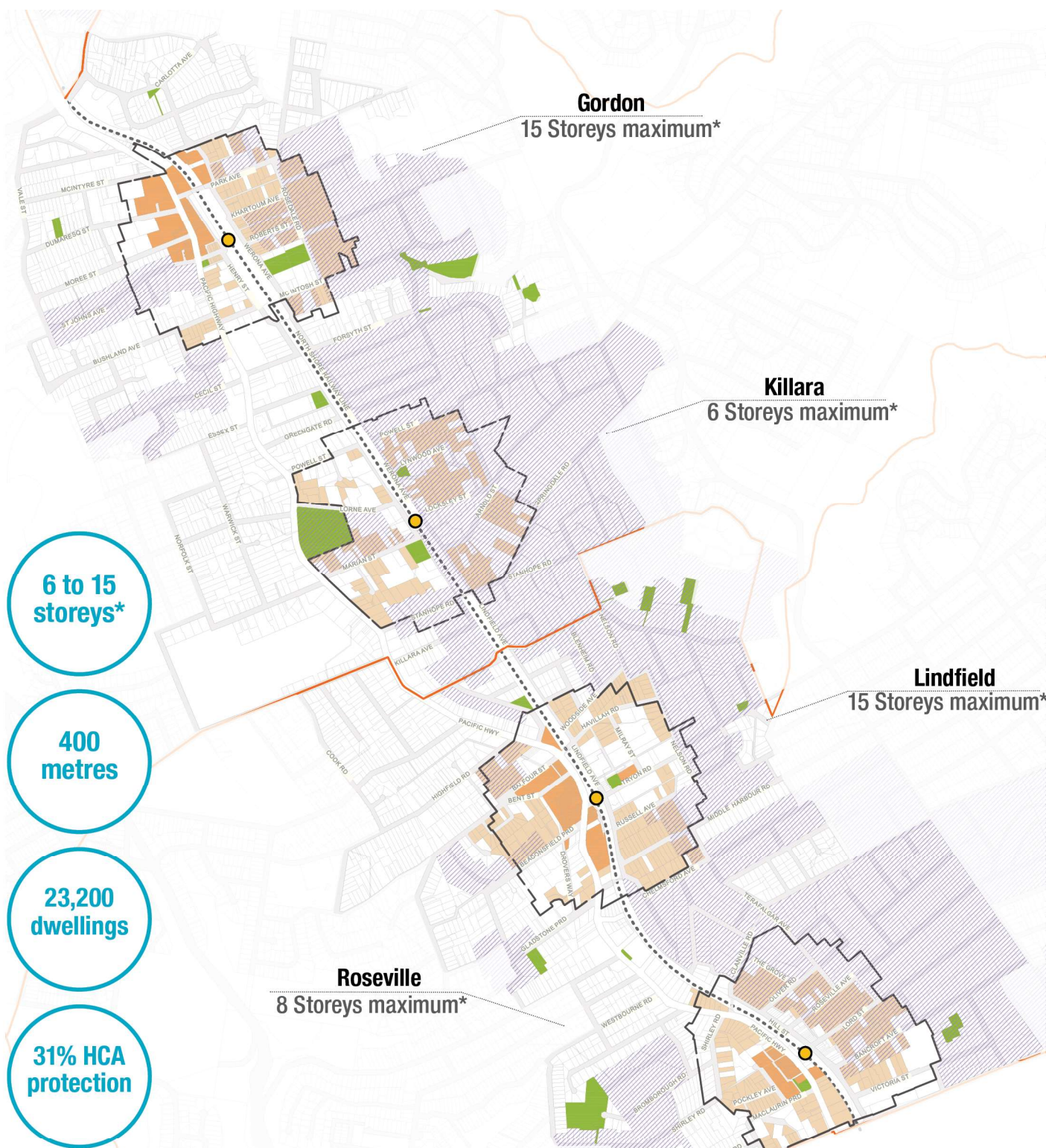
Extent: largely within TOD boundary (generally 400m from rail station)

HCAs protected: 31%

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 2b
Principle 1: Avoid environmentally sensitive areas	✗
Principle 2: Minimise impact on heritage items	✗
Principle 3: Preserve heritage conservation areas	✗
Principle 4: Minimise impacts on the tree canopy	✗
Principle 5: Manage transition impacts	✗
Principle 6: Ensure appropriate building heights	✓
Principle 7: Support local centre revitalisation	○

Table 5 – performance of scenario 2b against the Council's planning principles

Map 12. Scenario 2b - Minor Amendments to Existing NSW Government Controls



Disclaimer: This map has been prepared as part of draft TOD alternative scenarios only and no reliance is to be placed upon this plan as it is not and does not purport to be a planning instrument, Ku-ring-gai Council accepts no liability for the accuracy or otherwise of this map.

* Note 1: Building heights represent residential storeys only - additional 1-2 storeys required for retail and commercial uses in E1 zone.

* Note 2: Building heights do not include height and FSR bonuses available under Housing SEPP. A height and FSR bonus of up to 30% bonus may be applied to developments that provide 15% affordable housing for 15 years.

Note 3: Floor space ratio (FSR) represents the total floor area which may be built compared to the total area of the block. For example, a FSR of 2:1 would potentially allow a building with a floor space of 800 sq/m to be built on a block of 400 sq/m.

Note 4: The NSW Government's low- and mid-rise housing policy may apply outside the TOD areas.

LEGEND

- Train Station
- Railway Line
- TOD Boundary (400m)
- Ward Boundary
- TOD Controls - Building height 6 storeys and FSR 2.5:1
- Building height 8-15 storeys and FSR range 3.0:1 to 6.1:1
- Land within TOD boundary - considered unlikely to redevelop
- Heritage Conservation Areas
- Existing Green Assets

TOD SEPP Corridor Scenario 2b

SCALE: fit @ A4



SCENARIO 3a - PRESERVE AND INTENSIFY

Scenario 3a works largely within the TOD boundary and in the same way as Scenario 2a transfers dwellings primarily to the E1 commercial zones. The building heights are significantly taller, when compared to scenario 2a, because:

- dwellings are transferred from the smaller centres of Roseville and Killara to the larger centres of Gordon and Lindfield; and
- this option protects all heritage conservation areas.

► Key Features

- Preserves 100% of existing HCAs in the TOD areas by transferring dwellings to areas within 400m of the rail stations – primarily to the commercial zones.
- Provides added protection to the smaller centres of Killara and Roseville by transferring dwellings to the larger centres.
- Improvements in canopy protection are achieved by transferring dwellings from HCAs to the commercial areas and by changing TOD controls including reduced densities, flexibility in height and deep soil controls as per Principle 4.
- heritage items are protected by removing TOD controls from surrounding areas or allocating development rights as per Principle 2.
- Transition impacts are managed by expanding or contracting development boundary as per Principle 5.
- Building heights exceed heights in larger centres like Hornsby – not consistent with Principle 6
- Increased building heights and density in commercial zones will support revitalisation as per Principle 7.
- Maximum building heights - Gordon 45 storeys, Killara 15 storeys, Lindfield 35 storeys & Roseville 25 storeys.

► Summary of Key Statistics

Building height range: 5 to 45 storeys

Density range: FSR 1.5:1 to 10.0:1

Number of dwellings: 23,200 (based on Council estimates)

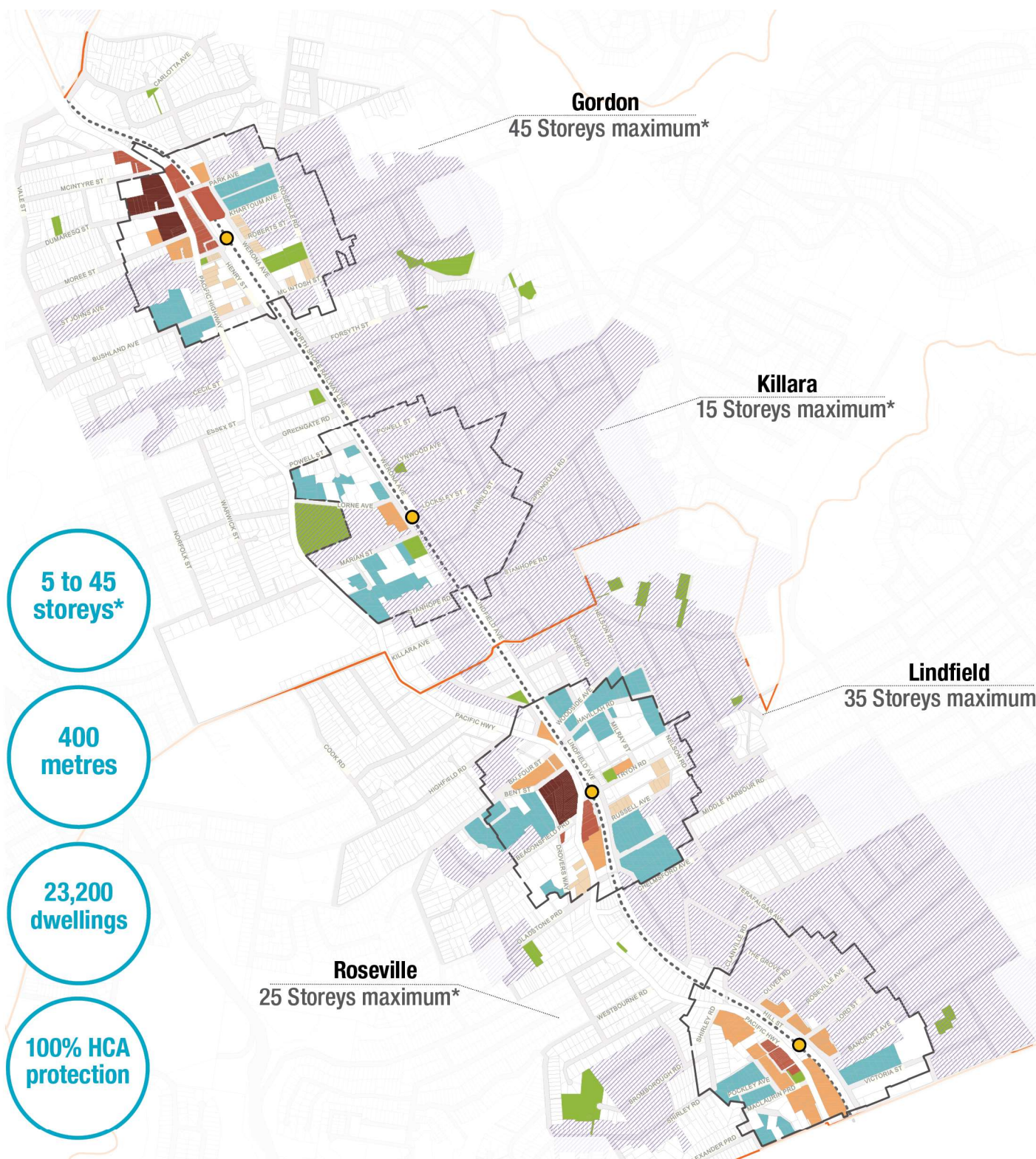
Extent: mostly within TOD boundary (generally 400 metres from station)

HCAs protected: 100%

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 3a
Principle 1: Avoid environmentally sensitive areas	✓
Principle 2: Minimise impact on heritage items	✓
Principle 3: Preserve heritage conservation areas	✓
Principle 4: Minimise impacts on the tree canopy	✓
Principle 5: Manage transition impacts	✓
Principle 6: Ensure appropriate building heights	✗
Principle 7: Support local centre revitalisation	✓

Table 6 – performance of scenario 3a against the Council's planning principles

Map 13. Scenario 3a - Preserve and Intensify



Disclaimer: This map has been prepared as part of draft TOD alternative scenarios only and no reliance is to be placed upon this plan as it is not and does not purport to be a planning instrument, Ku-ring-gai Council accepts no liability for the accuracy or otherwise of this map.

* Note 1: Building heights represent residential storeys only - additional 1-2 storeys required for retail and commercial uses in E1 zone.

* Note 2: Building heights do not include height and FSR bonuses available under Housing SEPP. A height and FSR bonus of up to 30% bonus may be applied to developments that provide 15% affordable housing for 15 years.

Note 3: Floor space ratio (FSR) represents the total floor area which may be built compared to the total area of the block. For example, a FSR of 2:1 would potentially allow a building with a floor space of 800 sq/m to be built on a block of 400 sq/m.

Note 4: The NSW Government's low- and mid-rise housing policy may apply outside the TOD areas.

LEGEND

- Train Station
- Railway Line
- TOD Boundary (400m)
- Ward Boundary
- TOD Controls - Building height 6 storeys and FSR 2.5:1
- Building height 8-15 storeys and FSR range 3.0:1 to 6.1:1
- Building height 16-25 storeys and FSR range 5.0:1 to 8.1:1
- Building height 26+ storeys and FSR range 7.1:1 to 10.0:1
- Building height 5 to 8 storeys and FSR range 1.3:1 to 1.8:1 + 50% Deep Soil
- Land within TOD boundary - considered unlikely to redevelop
- Heritage Conservation Areas
- Existing Green Assets

TOD SEPP Corridor Scenario 3a

SCALE: fit @ A4



ALTERNATIVE SCENARIO 3b - PRESERVE, INTENSIFY & EXPAND

Scenario 3b extends the planning boundary to 800 metres from the rail stations and in the same way as Scenario 2a and 3a transfers dwellings to the E1 commercial zones to protect HCAs. This option also transfers dwellings, as per scenario 3a, from the smaller centres of Roseville and Killara to the larger centres of Gordon and Lindfield. Building heights are lower in Scenario 3b when compared to Scenario 3a, because new development areas are added on the periphery.

► Key Features

- Preserves 100% of HCAs in the TOD Areas by transferring dwellings to areas within the 400m & 800m of the rail stations as per Principle 3.
- In addition, an area in Gordon has also been protected as it is recommended as an extension to the Robert Street/ Khartoum Avenue Heritage Conservation Area (C39) by the Draft Ku-ring-gai Southern Heritage Conservation Area Review, October 2024.
- Provides added protection to the smaller centres of Killara and Roseville by transferring dwellings to Gordon and Lindfield.
- Heritage items are protected by removing TOD controls from surrounding areas or allocating development rights as per Principle 2.
- Improvements in canopy protection are achieved by transferring dwellings from HCAs to the commercial areas and by changing TOD controls including reduced densities, flexibility in height and deep soil controls as per Principle 4.
- Transition impacts are managed by expanding or contracting development boundary as per Principle 5.
- Building heights are managed appropriately consistent with Principle 6
- Increased building heights and density in commercial zones will support revitalisation as per Principle 7.
- Maximum building heights - Gordon 20 storeys, Killara 6 storeys, Lindfield 15 storeys & Roseville 8 storeys.

► Summary of Key Statistics

Building height range: 5-20 storeys

Density range: FSR 1.5:1 to 8.0:1

Number of dwellings: 23,200 (= TOD SEPP)

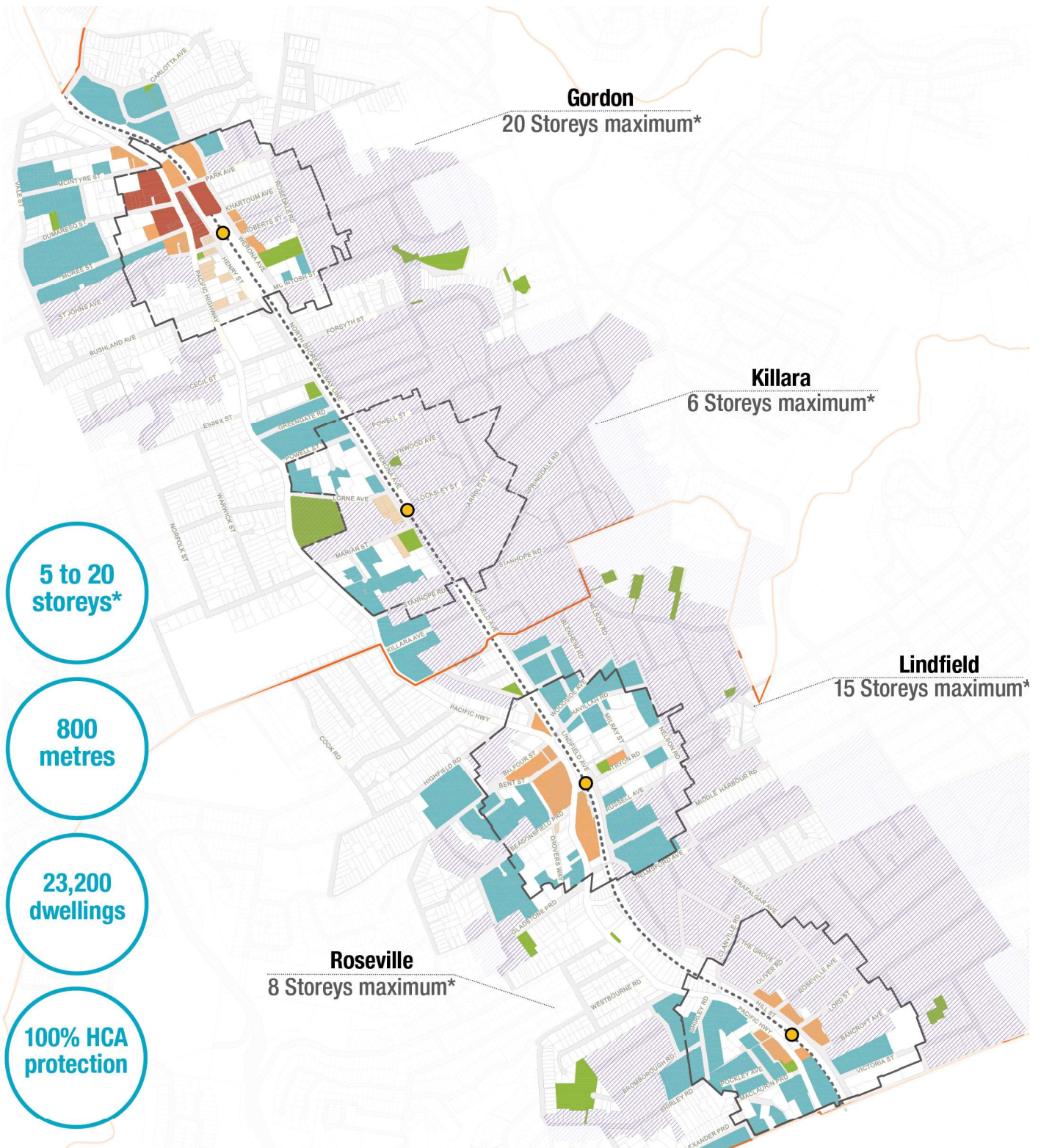
Extent: Local Centre boundary (generally 800 metres from rail station)

HCAs protected: 100%

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 3a
Principle 1: Avoid environmentally sensitive areas	✓
Principle 2: Minimise impact on heritage items	✓
Principle 3: Preserve heritage conservation areas	✓
Principle 4: Minimise impacts on the tree canopy	✓
Principle 5: Manage transition impacts	✓
Principle 6: Ensure appropriate building heights	✓
Principle 7: Support local centre revitalisation	✓

Table 7 – performance of scenario 3b against the Council's planning principles

Map 14. Scenario 3b - Preserve, Intensify & Expand



Disclaimer: This map has been prepared as part of draft TOD alternative scenarios only and no reliance is to be placed upon this plan as it is not and does not purport to be a planning instrument, Ku-ring-gai Council accepts no liability for the accuracy or otherwise of this map.

* Note 1: Building heights represent residential storeys only - additional 1-2 storeys required for retail and commercial uses in E1 zone.

* Note 2: Building heights do not include height and FSR bonuses available under Housing SEPP. A height and FSR bonus of up to 30% bonus may be applied to developments that provide 15% affordable housing for 15 years.

Note 3: Floor space ratio (FSR) represents the total floor area which may be built compared to the total area of the block. For example, a FSR of 2:1 would potentially allow a building with a floor space of 800 sq/m to be built on a block of 400 sq/m.

Note 4: The NSW Government's low- and mid-rise housing policy may apply outside the TOD areas.

LEGEND

- Train Station
- Railway Line
- TOD Boundary (400m)
- Ward Boundary
- TOD Controls - Building height 6 storeys and FSR 2.5:1
- Building height 8-15 storeys and FSR range 3.0:1 to 6.1:1
- Building height 16-25 storeys and FSR range 5.0:1 to 8.1:1
- Land within TOD boundary - considered unlikely to redevelop
- Heritage Conservation Areas
- Existing Green Assets

TOD SEPP Corridor Scenario 3b

SCALE: fit @ A4



9. Summary of Scenarios

Scenario 1 is the base case scenario. If the Kuring-gai community decides not to proceed with one of the alternative scenarios of 2a, 2b, 3a or 3b, then scenario 1 will stay in place and the impacts described in this report will likely eventuate over time.

Scenario 2a achieves good outcomes in relation to most of Council's planning principles, the main disadvantage is that it does not protect all Heritage Conservation Areas;

Scenario 2b applies limited amendments to Scenario 1. It spares small sections of the Heritage Conservation Areas and improves urban canopy outcomes by shifting dwellings towards key sites in the town centre;

Scenario 3a achieves good planning outcomes in relation to most of Council's principles however building heights are not consistent with Principle 6; and

Scenario 3b achieves good planning outcomes and is consistent with all the Council's principles described in this report.

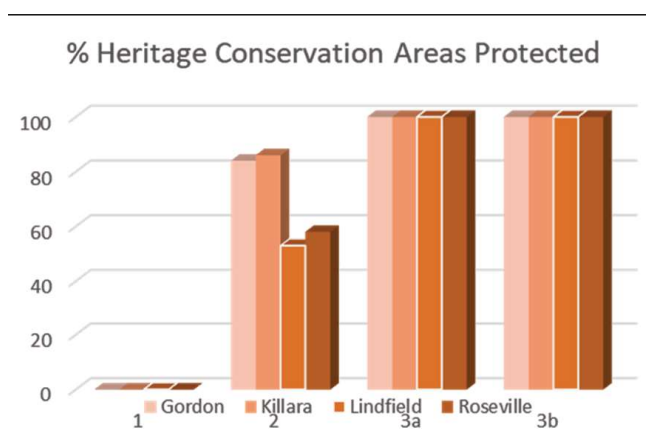


Figure 19 - Percentage of HCAs protected – comparison of scenarios

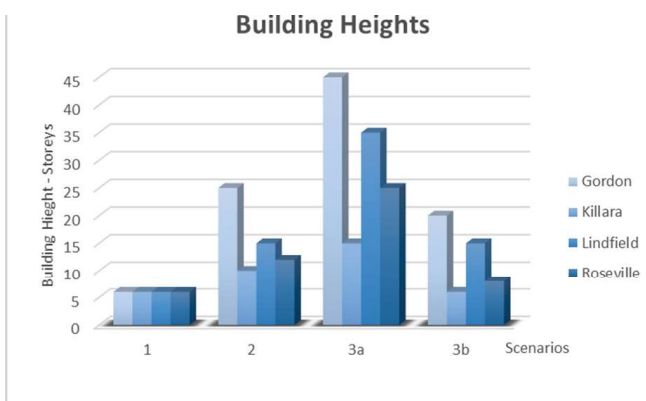


Figure 20 – Building heights – comparison of scenarios

COUNCIL'S GUIDING PLANNING PRINCIPLES	SCENARIO 1	SCENARIO 2a	SCENARIO 2b	SCENARIO 3a	SCENARIO 3b
Principle 1: Avoid environmentally sensitive areas	✗	✓	✗	✓	✓
Principle 2: Minimise impact on heritage items	✗	✓	✗	✓	✓
Principle 3: Preserve heritage conservation areas	✗	○	✗	✓	✓
Principle 4: Minimise impacts on the tree canopy	✗	✓	✗	✓	✓
Principle 5: Manage transition impacts	✗	✓	✗	✓	✓
Principle 6: Ensure appropriate building heights	✗	✓	✓	✗	✓
Principle 7: Support local centre revitalisation	✗	✓	○	✓	✓

Table 8 – performance of all scenarios against the Council's planning principles

10. Planning for Community Infrastructure

Development that increases the total number of dwellings within the TOD areas are subject to s7.11 contributions under Ku-ring-gai Contributions Plan 2010 for the provision of local infrastructure such as new parks, upgrades to existing park and some sporting facilities courts, community floorspace, public domain works, traffic and intersection upgrades, and new streets.

The local centres catchments along the railway lines currently continue to benefit from an exemption from the contributions cap that was first applied by Ministerial Direction in 2009 limiting total contributions to \$20,000 for each dwelling. The current average rate per dwelling collected by Council is just under \$35,000 per two-bedroom dwelling.

However, that exemption does apply to the areas of higher density which are now included in the defined areas of the TOD in Ku-ring-gai.

With the introduction of the TOD SEPP in May 2024 the Ku-ring-gai Contributions Plan 2010 requires formal review so that Council can capture the maximum number of contributions. A review will run concurrent with the TOD scenarios strategic planning processes, whether or not in the form of a Council initiated alternative as advocated in this report, or the TOD Program as gazetted.

For Council to maintain comparable contribution rates going forward, the revised contributions plan will also need to be reviewed by the NSW Independent Pricing and Regulatory Tribunal (IPART). This limits the types of infrastructure that Council can levy for a defined 'Essential Works list'.

The Essential Works List is specified by IPART and is limited to the following public amenities or public services:

- land for open space
- land for community facilities
- land and facilities for transport
- land and facilities for stormwater management
- the costs of contributions plan preparation and management.

The essential works list is relevant only to those contributions plans that propose a contribution level above the relevant cap of \$20,000 per dwelling.

Separate reporting on Local Infrastructure planning can go into this in more detail as the review progresses, however core detail as it relates to the TOD scenarios in this report are provided below.

► New parks

Ku-ring-gai is characterised by natural areas and bounded by National Parks. However, historical development patterns around the local railway stations provided for relatively fewer local parks in the areas where densification has already been occurring and will be significantly increased under the TOD SEPP.

The current contributions plan levies at a rate of 2.75 sqm per capita for local parklands and playgrounds (excluding sports fields and bushland area) . Over the life of this contributions plan, Council is on track to meet its delivery programme with the delivery so far of a number of new parks:

- Balcombe Park,
- Curtilage Park,
- Cameron Park,
- Boyds Orchard Park,
- Lapwing Reserve
- Greengate Park, create
- Lindfield Village Green, and
- Bedes Forest (in progress).
- Lindfield Village Hub park (in progress)

Additional acquisition of land for new parks in is underway in Roseville and Pymble.

The current rate of provision is unlikely to be sustainable in the TOD areas.

The increase in land values generally over the last decade and especially in the upzoned areas, as well as the unavailability of suitable land even on the periphery of the upzoned areas, means that it is cost-prohibitive to maintain this rate and also levy for public domain works and traffic & transport works, as well as any new infrastructure arising from the TOD Program (stormwater in particular).

A revised plan will need to consider reducing the rate of provision per capita but maintaining a comparable total land acquisition rate as Council has historically provided.

Over the life of the current s7.11 contributions plan, Ku-ring-gai Council has acquired 25,154sqm of land for new parks across Ku-ring-gai, focused in and around the local centres in areas of identified under-provision in the Open Space Acquisition Strategy, which represents approximately 78% to date of the original target at 2.75sqm per capita.

To maintain this rate would require acquisitions ranging from 71,104sqm to 166,667sqm in the TOD areas alone, at rates ranging upwards from an average of \$5,400/sqm to date (in 2024 \$) to approaching five figures in the up-zoned TOD areas - which simply is not feasible in terms of the total cost,

the quantum of land available to acquire, and a resulting contribution rate that would crowd out funding of other infrastructure programs.

Reducing the per capita rate of provision to reflect similar rates of total acquisition and delivery as the current delivery programme, would result in a target delivery of two to three new parks per TOD area. However, this provision would be challenging, as the parks need to be strategically placed and well-designed to accommodate intensive demand.

Further analysis and refinements will proceed around any preferred scenario and involve future reporting to council.

An analysis has been undertaken to determine which areas are poorly provided with a quality park within the industry standard of an 800-metre walking distance. All of the TOD areas are within priority catchments, notwithstanding some existing and recently provided parks, there is still work to be done, especially as redevelopment pressure increases.

Multi-unit housing places even greater demands on local parks because of the limited amount of private open space that can feasibly be provided to residents. Access to informal recreation is essential for the health and liveability of high-density areas, as well as providing a space that builds community connections.

► Sporting Facilities

The recently completed Ku-ring-gai Open Space and Recreation Needs Study will guide delivery of Ku-ring-gai's open space and recreation needs and support a review of the s7.11 Contribution Plan, however, the growth predictions may now be significantly under-estimated as the implications of the TOD SEPP could be a potential increase in the resident population of up to 30% as compared to 5.1% between 2016 and 2021.

The open space and recreation needs study identified key priorities for Ku-ring-gai's open space network to meet the future needs of the community including:

Sports are still in high demand, but non-traditional sports are emerging. Local sporting clubs and peak bodies indicated that participation in organised sport remains popular in the Ku-ring-gai LGA, reporting a 41% increase in participation in the past five years. There is also increasing demand for spaces for informal social team sports, emerging games such as Padel and pickleball, as well as demands for more spaces for women's sports. This means sportsfields and sports spaces can no longer be single purpose or single code.

The final report in 2023 for the Review of Supply and Demand for Sports Facilities in the NSROC region identified there is a significant shortfall in the provision of sporting facilities across the entire region and specifically areas impacted by the increase urban density around the transport corridors. As this report was completed in August of 2023

the impacts of the potential TOD sites were not considered however this significant population increase by up to 30% would put further pressures on the current provision levels.

Based on the modelling undertaken for the review, there is a need to increase the current supply capacity of the NSROC sports facilities by around 40% to 2026 (equivalent to 181Ha of total space) and to 49% to 2036 (equivalent to 222Ha of total space) prior to the impacts of the TOD. For Ku-ring-gai with the current supply of 104.95Ha with a Demand of 128.32Ha by 2026, a shortfall of 23.37Ha. By 2036 the demand equates to 133.22Ha a shortfall of 28.27Ha. This would be equivalent to the entire Gordon Golf Course playing surfaces.

Preliminary analysis suggests that maintaining current rates of provision of courts (including both tennis and netball courts) range from 30 to 40 new courts. Costs would depend on council's capacity to utilise existing land. The cost of land acquisition for new sports ovals has always been cost prohibitive, including under the current contributions plan. As such, continuing to investigate ways of extending the usability of current fields by lighting and more robust surfaces needs to continue.

► Community floorspace

The future capacity for Ku-ring-gai to levy for community floorspace is most at risk in the Government's most recent review of development contributions. The Essential Works List does not permit levying for the construction of community facilities – only for the acquisition of land. The previous NSW Government was giving some consideration to the definition of strata floorspace (without fit-out) as land, but the views of the present administration are not clear.

Just to maintain current rates of per capita provision of community facilities would require targets ranging from an additional 680sqm to 1,600sqm of library floorspace and 1,200sqm to 2,850sqm of community floorspace. To place that demand in context, Council currently supports library floorspace totalling 3,321sqm across four facilities.

Regardless of whether or not the capacity to levy for strata floorspace (without fit out) is legally constrained, Council will still need to target more innovative approaches including leveraging its own land holdings and value capture.

Key Council sites include Turramurra Village, the Lindfield Community Hub site, the Turramurra Hub site and the land holdings around the St Ives local centre as well as some of its larger car parks.

► Public Domain Works

Public Domain works are not explicitly defined in the Essential Works List but they are inherently part of the road environment. The Essential Works List arguably reflects a draft for a greenfield development scenario and is a poor fit

for the highly pedestrianised densely redeveloping central areas around transport hubs. Public domain works also have a dual role as the provision of civic spaces blurs the role between traditional parks and wide footpaths serving dual transport and recreation roles. This is efficient but poorly clarified in the Essential Works List.

Civic/urban spaces play an important role in providing a gathering place for people of all ages and backgrounds in urban settings. They serve a variety of functions, including hosting events, festivals, and markets, as well as providing a space for people to socialise, relax, and enjoy the outdoors.

Despite the Ku-ring-gai's increasing density, there is only one new civic/urban space, Lindfield Village Green – its success indicates a need to provide more of these spaces in the future, particularly to support intensive redevelopment of the type to result from the current TOD Program or alternatives that Council may consider. The program to develop civic & urban spaces under the Ku-ring-gai Public Domain Plan 2022 (which replaced the 2010 version) will continue to address this need. These public domain plans will need to be revisited in the context of any preferred scenario(s) or the TOD as gazette, with particular reference to increased pedestrian traffic accessing the stations and also in consideration of the dual role to complement to reduced rate of increased provision of local parks. Cost estimates will need to be commissioned relatively late in the process as these will date quickly. Preliminary discussions to justify the nexus of including these works will need to commence with IPART as soon as feasible.

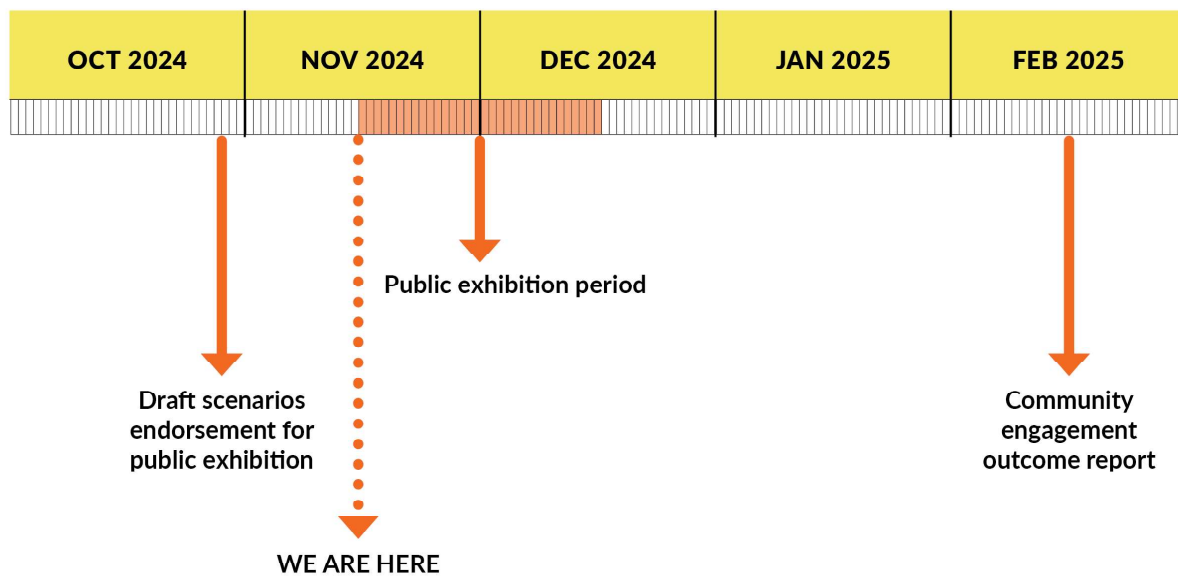
► New Streets, Public Transport and Intersection treatments

This type of infrastructure is supported by the Essential Works List and, as described in traffic studies which will examine the impact of increased traffic generation arising from the TOD Program, identify mitigating works required. Council will commission cost estimates and include them in a draft works programme for the contributions plan together with their supporting nexus case. Unlike other contributions, these contributions are not levied pro rata per capita but by defined rates of traffic generation.

11. Next Steps

The five scenarios presented in this report are being presented for public exhibition for the duration of one month from mid-November to mid-December 2024. Following public exhibition, a report will be prepared that considers the outcomes of community engagement and recommends a preferred option. This report will be considered by Council in February 2025.

The recommended preferred scenario if adopted by Council will form the basis for negotiations with State Government and guide changes to Council's planning controls.





Appendix

Assumptions & Limitations

Preparation of the scenarios has involved making a range of assumptions and limitations, these are set out below.

► Scenarios

- The options presented in this report represent high-level scenario planning only.
- Built form modelling has not been undertaken, this will commence post-February 2025 if Council adopts a preferred scenario for further development into a planning proposal.
- The primary objectives of the scenarios presented is to test whether it is possible to protect all HCAs and a greater percentage of tree canopy by transferring dwellings to alternative suitable locations.
- The scenarios are designed to assist Council and the community in deciding whether they are willing to trade building height for protection of HCAs as well as achieve other best-practice planning outcomes such as canopy protection.

► Limitations

- All scenarios are indicative only and are subject to further detailed modelling and to further refinement and investigations.
- Detailed feasibility analysis has not been undertaken at this stage. This will be undertaken once Council has selected a preferred option, at the same time as built form modelling is underway, assumptions may change as a result.

► Dwelling Numbers

- Council's estimate of 23,200 dwellings has been adopted as the target yield across the 4 centres.
- This does not include additional dwellings that may be delivered under the in-fill affordable housing provisions in the Housing SEPP which provides a floor space ratio (FSR) bonus of 20–30% and a height bonus of 20–30% for projects that include at least 10-15% of gross floor area (GFA) as affordable housing. This may result in significant additional dwellings and building height and density.

► Built Form

- The scenarios are high-level conceptual diagrams, they are not zoning plans.
- The scenarios are not an accurate representation of height or FSR on any given site.
- Height and FSR are applied based on broad principles and are subject to detailed feasibility analysis.

- E1 commercial zones have heights between 6 storeys and 45 storeys and an FSR range of 2.5:1 to 10:1.
- Heights in E1 Commercial zones do not include retail and commercial GFA and actual building heights maybe 1-2 storeys greater to accommodate this GFA.
- New high density residential areas have heights of 5-8 storeys with a FSR range of 1.3:1-1.8:1 to allow for minimum 50% deep soil and maximum 30% site coverage.
- Where TOD controls are retained, they have heights of 6 storeys, FSR of 2.5:1, 7% deep soil, and no maximum site coverage control.
- Where new high density residential areas are outside the TOD Development Area, the prospective Low and Mid-Rise SEPP, which has baseline FSR of 0.8:1, has been taken into account and the potential dwelling yield from the LMR SEPP has been discounted from the total dwelling yield of the scenario.
- Building heights do not take into account the 20-30% bonus height and FSR available under the In-Fill Affordable Housing Provisions in the Housing SEPP.