Maitland DCP 2025

Appendix D: Canopy Cover Guidelines

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1. Strategic Context

Council's adopted Environmental Sustainability Strategy 2030 includes a target to achieve 30% canopy cover in urban areas. This target supports outcomes related to urban heat mitigation, amenity, health and wellbeing, and biodiversity.

While canopy cover potential varies across different sites—particularly between existing and new release areas—Council's Canopy Cover Guidelines (this Guideline) provide background context for related controls in the Development Control Plan (DCP) and outlines strategies that, when applied collectively, form a practical framework for achieving targeted canopy outcomes.

In brief, this Guideline details potential methods in which to achieve an average of 30% canopy cover across a variety of land uses. For further information around the provision of street trees within the Maitland Local Government Area, please refer to Council's Manual of Engineering Standards (MoES) Technical Guideline – Street Trees.

2. Importance of Public Domain Canopy

Healthy, viable tree canopy in the public domain is fundamental to creating liveable urban environments. It has been demonstrated that public land can contribute significantly to canopy goals. However, public canopy cannot be the sole contributor. Targets for public domain planting work in conjunction with private land requirements to achieve overall canopy goals.

This guidance draws on best-practice principles and references such as the NSW Department of Planning, Industry and Environment (2021) Urban Tree Canopy Targets and Development Controls Report.

3. Canopy Cover Targets by Land Use

The following tables set out recommended canopy cover targets across key land types, including streets, parks, residential lots, and business parks. These targets are designed to guide planning, design, and assessment processes, and should be read alongside the accompanying technical guidance, including planting specifications provided within Council's MoES, including the Technical Guideline – Street Trees and Standard Drawings. Additional reference is to also be made to Council's Tree Species List, which provides details as to canopy areas, sizes, and soil volumes required.

Table 1: Public Land – Roads

STREET CATEGORY	POWER INFRASTRUCTURE	TYPICAL RESERVE WIDTH	CANOPY COVER TARGET
Existing Residential	Overhead	12–30m	40%
	Underground	12–30m	50%
Existing Industrial	Overhead	20–25m	35%
	Underground	20–25m	45%
New Residential	Underground	12–35m	50%
New Industrial	Underground	20–35m	50%

Table 2: Public Open Space (Community Land)

PARK TYPE	DESCRIPTION	CANOPY COVER TARGET
Without Active Use E.g. Reserve	-	≥ 45% of total site area
With Active Use E.g. Playground, Fields, Courts	10–20% of total site area being fields/courts	≥ 45 of total site area
	15-30% of total site area being fields/courts	≥ 40% of total site area
	>30% of total site area being fields/courts	≥ 30% of total site area

Table 3: Residential Lots (Private)

LOT SIZE/TYPE	CANOPY TARGET	DEEP SOIL PROVISION	RECOMMENDED TREE PLANTING REGIME
300–600 m²	20% of site	20% of site, min 3m wide	1 small/medium tree in front yard, 1 small/medium tree in backyard (in accordance with Chapter 6: Residential Uses of the DCP).
>600 m²	30% of site	30% of site, min 3m wide	2 medium or 1 large tree per every 350m²
C3 Environmental Management	50% of site	Up to 400m²	1 50m² predicted canopy area tree per 100m² OR 1 75m² predicted canopy area tree per 150m²

Table 4: E3 Productivity Support and E4 General Industrial

CATEGORY	CANOPY TARGET	DEEP SOIL PROVISION	RECOMMENDED TREE PLANTING REGIME
All Lots	10% of site	10% of site, min 3m wide	2 medium or 1 large tree per 300 m²
Car Parking[1]	–	13.2m²/tree	1 medium tree every 10 spaces

Note 1: Car parking contributes to the canopy target.

4. Achieving 30% Canopy Cover in Urban Areas

While land use distributions vary, the following scenario is typical for new urban residential areas such as Aberglasslyn (Figure 1). Modelling indicates that achieving over 30% canopy cover is possible, as demonstrated in Table 3. This analysis is also consistent with case studies outlined in the NSW Department of Planning, Industry and Environment (2021) *Urban Tree Canopy Targets and Development Controls Report*.

Figure 2 illustrates a typical residential road cross-section designed to achieve 50% canopy cover, highlighting the spatial arrangement and tree planting strategy that may be used to meet this canopy target. Figure 3 depicts a typical canopy cover scenario for a residential lot with an estimated canopy cover of 18-20%, showing the tree planting configuration and space allocation required to achieve this level of cover. In this scenario, it is assumed that a hedge is included along most back fence for dwellings to support the canopy cover.

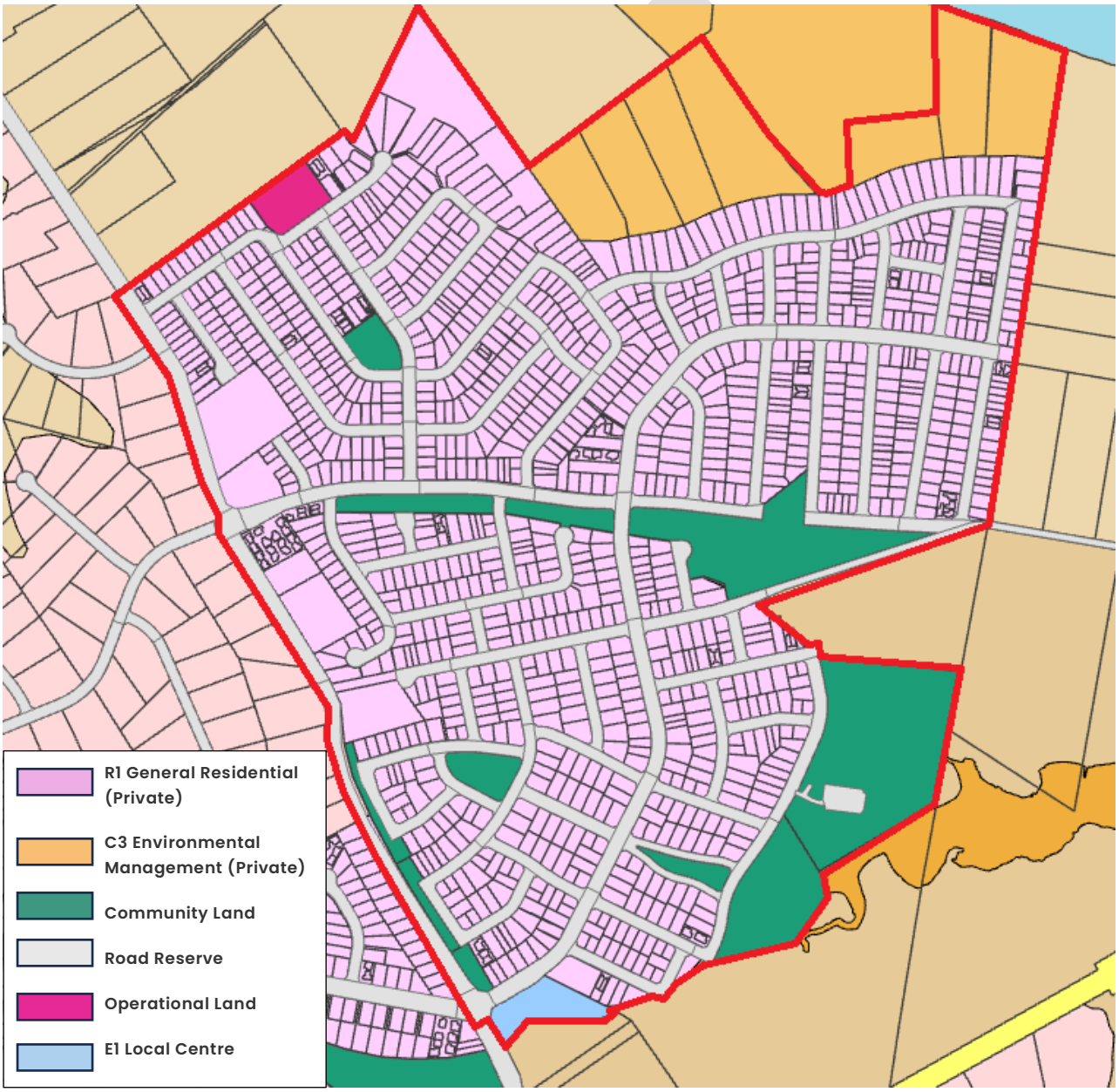

Figure 1: Typical Urban Land Classification – Aberglasslyn

Table 5: Modelled 30% Canopy Cover Scenario for Aberglasslyn

LAND TYPE	AREA (M²)	% OF LAND AREA	TARGET COVER %	CANOPY CONTRIBUTION	REFERENCE
Public Open Space (Community Land)	142,666	10.6%	40%	4.2%	Table 2
E1 Local Centre	8,582	0.6%	0%*, car park plantings required	0%	-
R1 General Residential (Private)	756,437	56.4%	18%	10.2%	Table 3
C3 Environment Management (Private)	119,550	8.9%	50%	4.5%	Table 3
Road Reserve	314,730	23.5%	50%	11.8%	Table 1
Total	1,341,965	100%	-	30.7%	-

Figure 2: Typical Residential Road Scenario Achieving 50% Canopy Cover

Figure 3: Typical Canopy Cover Scenario for Residential Lot (18–20%)

5. Implementation Guidance

To support the achievement of canopy cover targets and ensure resilient, healthy urban landscapes, the following guidance should be integrated into all planning, design, and assessment processes:

5.1 Example Methodology for Estimating Canopy Cover

To estimate canopy cover for a road reserve:

1. Identify tree species and planting locations using Council's Tree Species List.

2. Use the predicted mature canopy radius to generate a circular canopy area for each tree.

3. Calculate the cumulative canopy area over the total road reserve space to determine the projected coverage percentage.

5.2 Soil Volume Requirements

For the purposes of this guideline, 'soil volume' refers to the **unobstructed root zone**—a continuous area of suitable soil that supports healthy root development and is free from physical barriers such as utilities, foundations, or compacted materials. Adequate soil volume is critical for tree establishment, long-term health, and canopy development.

Soil volume should be equivalent to one-third of the projected canopy area, with a minimum soil depth of 1 metre.

Tree size and respective soil volumes are provided for each species in Council's Tree Species List. For street trees, the Technical Guideline – Street Trees associated with Council's MoES provides further details in regards to soil volumes, discount soil rates, and configurations.

5.3 Soil Quality and Amendment

The ultimate size of a tree is influenced by the quality and quantity of growing media available for root growth. Prior to planting, existing soil conditions should be assessed and appropriate remediation should be implemented as required.

Imported soil may be required in areas where in-situ soils are compacted, poorly structured, or chemically unsuitable. For street trees, Council's Manual of Engineering Standards provides imported soil requirements within the Technical Guideline – Street Trees. To improve soil quality and structure, organic amendments such as compost or gypsum may be incorporated into existing site soils where feasible.

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