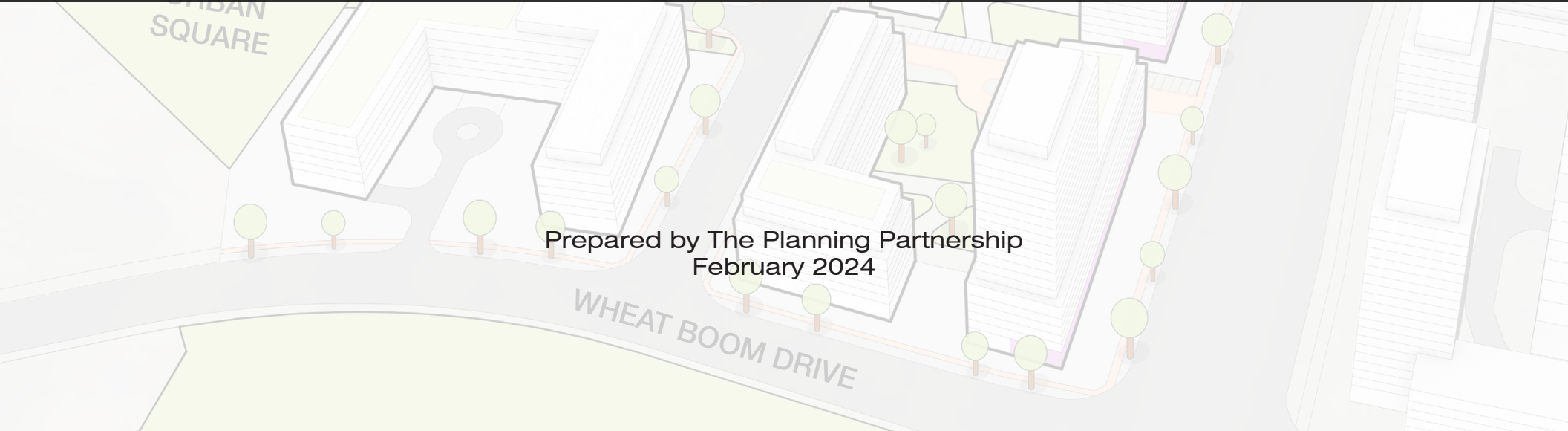


Green Ginger Phase 2

Tree Canopy Plan

Prepared for Green Ginger Developments Inc. & Clear Day Investments Inc.



Prepared by The Planning Partnership
February 2024

Tree Canopy Plan

Tree Canopy Coverage

Introduction

The Green Ginger Phase 2 Tree Canopy Coverage Analysis represents a general assessment of the projected tree canopy coverage for these lands within Oakville. The Green Ginger Phase 2 lands are located along Trafalgar Road, north of the intersection of Trafalgar Road and Dundas Street East. It is predominantly designated as part of the Trafalgar Urban Core Area, but also includes a portion designated as Natural Heritage System Area. A storm water management facility, two urban squares, and a portion of land reserved for a secondary school are also part of the Phase 2 plan.

This analysis quantifies, at a conceptual level, how these lands may contribute to the tree canopy coverage. It will estimate the projected coverage for streets and parks based on standard calculation methods outlined in the North Oakville Urban Forest Strategic Management Plan (NOUFSMP). It will also address potential measures within the Green Ginger Phase 2 lands that will help meet the criteria established within the NOUFSMP for achieving the Town of Oakville's long term objective of a 40% tree canopy cover, including criteria related to soil volume, tree health and tree spacing. This analysis will be informed by the current conceptual block plan, with future driveway and utility constraints considered as an average based on similarly developed residential streetscapes.



Above: enhanced tree lined streetscape / Below: double-row of trees complement the open space block

Study Area

The Green Ginger Phase 2 lands constitute an area of approximately 39.44 hectares. It is bounded on the east by Trafalgar Road and to the south and west by lands designated as a Natural Heritage System that runs in a north-westerly direction from the junction of Trafalgar Road and Dundas Street West. On the north the lands are bounded by future residential development lands.

North Oakville Urban Forest Strategic Management Plan (NOUFSMP)

The North Oakville Urban Forest Strategic Management Plan is a high level strategy and planning study prepared to provide the Town of Oakville with recommendations and guidelines for achieving a sustainable, healthy urban forest for the North Oakville lands. This strategy is an extension of the Town's long term vision to achieve tree canopy coverage of 40%.

North Oakville comprises approximately 4,000 hectares of land, with roughly 1,600 hectares of tree canopy coverage required to achieve the 40% target. The designated Natural Heritage System (NHS) accounts for approximately 1,200 hectares of North Oakville's land area, making it a significant contributor to achieving the 40% target. The remaining approximately 400 hectares of coverage is expected to be achieved through land development that includes streetscapes, parks, buffers, cemeteries, storm water management facilities, etc.

The NOUFSMP describes targets, measuring criteria and recommendations in order to standardize canopy cover calculation for future development lands.

Tree Classification and Sizing

The canopy coverage plan shall comply with the following guidelines showing total projected canopy coverage as follows:

- Small Stature Tree = 7 metre diameter/spread - 7 square metres.
- Medium Stature Tree = 10 metre diameter/spread - 78.5 square metres.
- Large Stature Tree (14+m spread) = 14 metre diameter/spread - 154 square metres.

A canopy coverage bonus area of 1.5 times the existing canopy can be credited for preserved existing trees of the subject site (not included in this analysis).

Projected Street Tree Canopy Coverage

As a general proposed standard, the NOUFSMP recommends achieving a 20% street tree canopy coverage for residential developments. Opportunities for streetscape planting may be affected by the objective of achieving a more dense, compact and transit-oriented neighbourhood. Even so, the NOUFSMP recommends a ratio of at least 1 tree per lot as a standard rule.

Projected Parkland Canopy Coverage

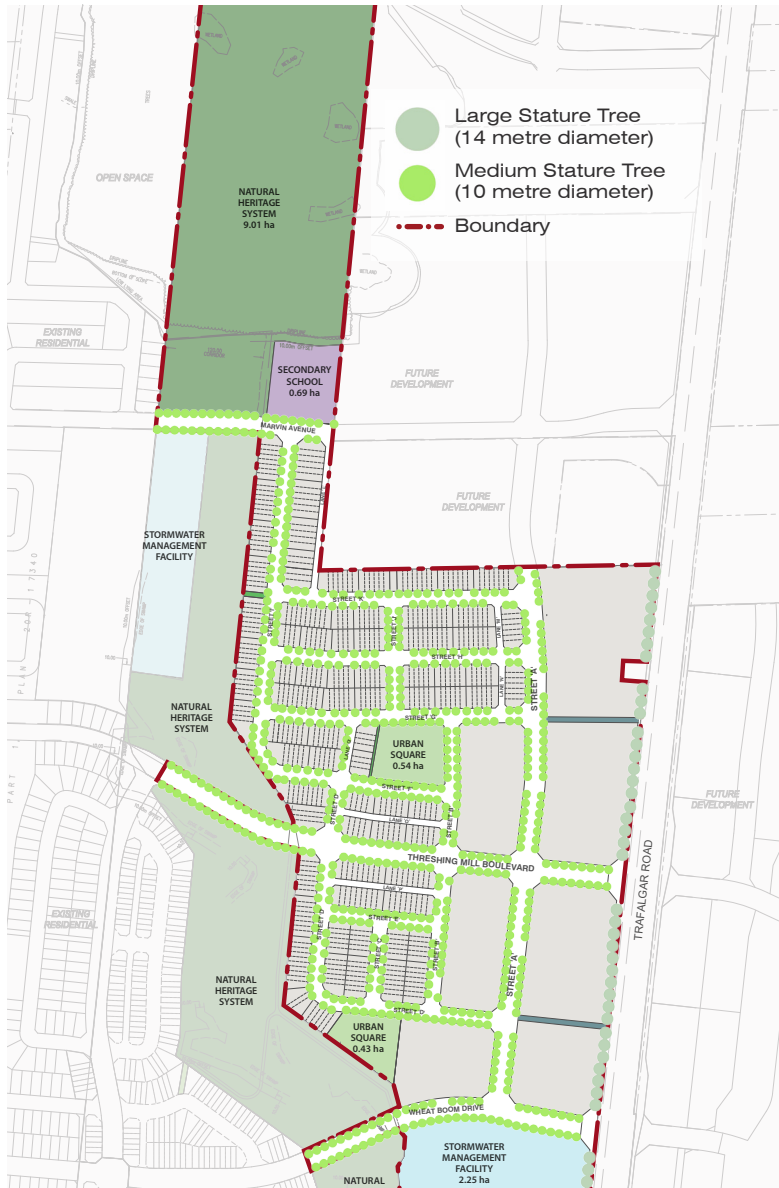
The Town of Oakville's projected possible canopy cover for urban squares is 77% but the NOUFSMP requires a minimum coverage of 50%. Canopy coverage reflects an estimate of the proportion of the ground area that is covered by tree and shrub crowns, expressed as a percentage value. Where canopies merge or overlap, the combined area contributes to the coverage requirement, as opposed to including the canopy area of each overlapping tree.

Soil Volumes

Based on the recommended soil volume requirements/standards included in the NOUFSMP and the Liveable by Design Manual, the following are the soil volume requirements for new tree plantings in the Green Ginger (Phase 2) community:

- 30 cubic metres of good quality topsoil for each tree, with a minimum depth of 750 millimetres to a maximum depth of 900 millimetres. Trees in common planting areas may share soil volume to a maximum of 15.0 cubic metres each.
- Integrate 300 millimetres wide rooting break-out zones where 30 cubic metres cannot be realized.
- Soil quality to be in compliance with Town of Oakville standards.
- Soil shall be placed in maximum 150-millimetre lifts and compressed to between 80-85% Standard Proctor Density (SPD).

Tree Canopy Plan



Green Ginger Phase 2 Tree Canopy Coverage

Within the Green Ginger Phase 2 lands, the canopy coverage contribution will be achieved through the proposed streetscape treatment, urban squares and SWM facility, in combination with the Natural Heritage System (NHS) area on the north end. Although not measured specifically in this analysis, a secondary contribution may be considered through front and rear yard landscape treatments. Refer to table on page 6 for details on tree canopy coverage calculations per land use.

Street Tree Canopy Coverage

The street tree canopy coverage calculation for Green Ginger Phase 2 is a preliminary estimate based on a conceptual community plan. It considers all street trees to be planted within grass boulevards. Given the nature of the community, it is not expected that engineered soils will be used.

Street trees have been calculated based on the following:

- Local Streets (Residential area), Collector Streets - Avenues/Transit Corridors and Connectors/Transit Corridors - 1 medium stature tree generally every 10m to 11m (both sides).
- Trafalgar Road (on-site, west side only) - 1 large stature tree generally every 14m.

This assessment is a preliminary estimation and a more comprehensive streetscape plan will be undertaken as part of a detailed landscape design. At this stage, driveway locations, above and below-ground utility requirements are not defined and assumptions were made in this regard.

The preliminary street tree canopy coverage results in the following:

- Total Area – approx. 265,200 m² (includes residential area (13.27 ha), arterial + avenue roads (3.89 ha), urban core blocks and public accessible walkways (9.36 ha) / excludes NHS (9.01 ha), parkland (urban squares - 0.97 ha), SWM Facility (2.25 ha), and school site (0.69 ha)).
- Total Street Tree Canopy Coverage Area (based on medium and large stature trees) – approx. 58,743 m².
- Tree Canopy Coverage = 22%

Figure 13: Street Tree Canopy Coverage Plan

Tree Canopy Plan

Parkland and SWM Facility Tree Canopy Coverage

The canopy coverage target for parkland is 50% and for SWM facilities is 15%. The preliminary park and SWM facility tree canopy coverage is a projected estimate based on conceptual facility fit plans.

These projections have been calculated based generally on the Town's NOUFSMP. It should be noted that, although the facility fit diagrams may show tree canopy overlap, these will be refined in the detailed landscape design state to ensure the projected tree canopy coverage is achieved.

Urban Squares 1:

- Total Urban Square 1 Area – approx. 5,400 m².
- Total Tree Canopy Coverage Area – approx. 2,655 m².
- Tree Canopy Coverage = 49%

Urban Square 2:

- Total Urban Square 2 Area – approx. 4,300 m².
- Total Tree Canopy Coverage Area – approx. 2,376 m².
- Tree Canopy Coverage = 55%

Storm Water Management Facility

The design of the SWM facility is conceptual and subject to modification as part of the landscape design process. All tree sizes have been included in the design and assessment including small stature, medium stature, and large stature trees.

- Total Storm Water Management Facility Land Area – approx. 22,500 m².
- Total Tree Canopy Coverage Area (based on medium stature trees) – approx. 5,524 m².
- Tree Canopy Coverage = 25%

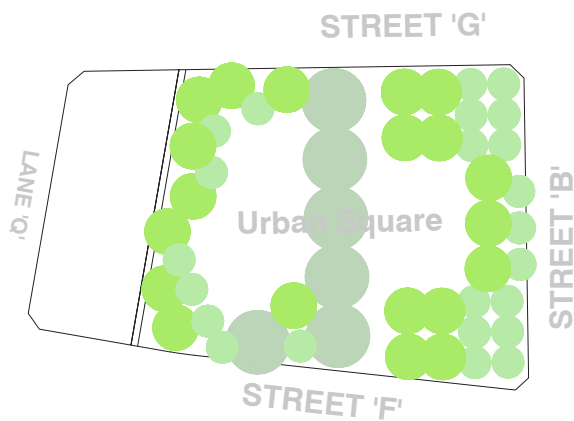


Figure 14: Urban Square 1 Conceptual Tree Canopy Coverage Plan

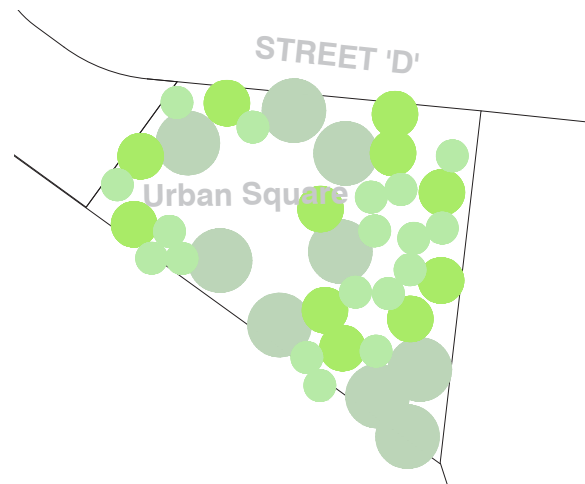


Figure 15: Urban Square 2 Conceptual Tree Canopy Coverage Plan

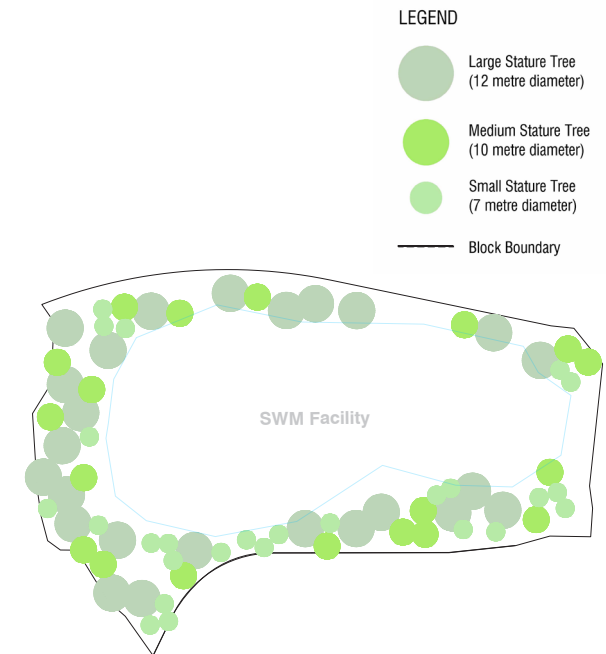


Figure 16: Storm Water Management Facility Conceptual Tree Canopy Coverage Plan

Tree Canopy Plan

Natural Heritage Area Coverage

The northern-most portion of the development site includes 9.01ha dedicated as a Natural Heritage System that connects to the East Morrison Creek Natural Heritage System. As the NHS area consists of a woodlot intended for retention, the canopy coverage for this area will likely be greater than 90%.

Conclusion

The intention of the Town of Oakville is to establish 40% tree canopy coverage through the town, and particularly through new development projects in North Oakville. While the Green Ginger Phase 2 development is currently still in early stages and all landscapes included within the project are entirely conceptual, this Tree Canopy Coverage plan has demonstrated the ability of this design to meet or exceed the Town's tree canopy coverage targets for designated residential, mixed-use, public use (school), arteria + avenue roads, parkland, and storm water management facility areas.

Tree Canopy Coverage per Land Use

Land Use	Target Coverage	Area * (ha)	Small Stature Trees (7m dia.)		Medium Stature Trees (10m dia.)		Large Stature Trees (14m dia.)		Combined Tree Area	Actual Coverage
			Units	Area (7m ² /tree)	Units	Area (78.5m ² /tree)	Units	Area (154m ² /tree)		
Residential	20%	13.27	0	0	422	33127	0	0	33127	25%
Arterial + Avenue Roads **	34%	3.89	0	0	240	18840	44	6776	25616	66%
Parkland (urban squares)	50%	0.97	41	287	31	2433.5	15	2310	5031	52%
SWM Facility	15%	2.25	26	182	19	1491.5	25	3850	5524	25%

* Area calculated based on Draft Plan of Subdivision dated March 16, 2023

** Includes Trafalgar Road, Street A, Threshing Mill Boulevard and Wheat Boom Drive

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