

An aerial photograph of a residential development site. The site is outlined in red and contains several colored rectangular areas: yellow, orange, and green. Green circles representing trees are placed along the boundaries of these colored areas and along the internal roads. The surrounding area is shown in a faded grey tone.

Green Ginger Phase 2

Tree Canopy Plan

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

Prepared by The Planning Partnership
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Tree Canopy Plan



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 near 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% urban forest 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, recommendations, and measuring criteria in order to standardize canopy cover 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 - 40 square metres.
- Medium Stature Tree = 10 metre diameter/spread - 80 square metres.
- Large Stature Tree (14+m spread) = 12 metre diameter/spread - 110 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 Park 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

A minimum of 30m³ of soil volume per tree is required (based on a maximum depth of 900mm).

- Small Stature Trees (Max. 9m Spread) - minimum 30m³ of soil
- Medium Stature Trees (Max. 13m Spread) - minimum 30m³ of soil
- Large Stature Trees (Min. 14m Spread) - minimum 30m³ of soil

Tree Canopy Plan



Figure 1: Green Ginger Phase 2 Street Tree Canopy Plan / Overall Plan

Green Ginger Phase 2 Tree Coverage

Within the Green Ginger Phase 2 lands, the canopy coverage contribution will be achieved through the proposed streetscape treatment and urban squares. Although not measured specifically in this analysis, a secondary contribution may be considered through front and rear yard landscape treatments.

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 - 1 small stature tree every 5.5m (both sides).
- Collector Streets - Avenues / Transit Corridors and Connectors/Transit Corridors - 1 medium stature tree every 10m (both sides).
- Trafalgar Road (west side only) - 1 large stature tree every 14m.

This assessment is a preliminary estimation and a more comprehensive streetscape plan will be undertaken as part of a detailed landscape process. 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 Subdivision Area – approx. 272,600 square metres (excludes Natural Heritage System, Urban Squares and Stormwater Management Facility)
- Total Tree Canopy Coverage Area (based on medium stature trees) – approx. 68,613 square metres
- Tree Canopy Coverage = 25%

Tree Canopy Plan

Park Tree Canopy Coverage

The park tree canopy coverage calculation is a preliminary estimate based on a facility fit plan for the urban squares. Both park designs are conceptual and subject to modification as part of the landscape design process. All tree sizes have been included in the design and assessment, including ornamental, small stature, medium stature, and large stature trees.

LEGEND

-  Large Stature Tree (12 metre diameter)
-  Medium Stature Tree (10 metre diameter)
-  Small Stature Tree (7 metre diameter)
-  Block Boundary

Urban Square 1:

- Total Urban Square 1 Land Area – approx. 6,300 square metres
- Total Tree Canopy Coverage Area– approx. 4,020 square metres
- Tree Canopy Coverage = 64%

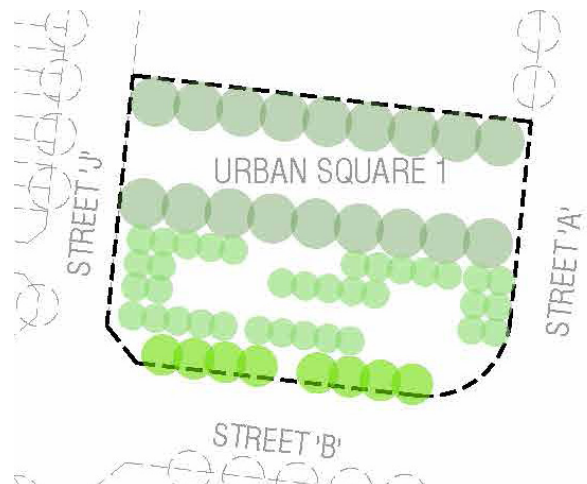


Figure 2: Green Ginger Phase 2 Tree Canopy Plan / Urban Square 1

Urban Square 2:

- Total Urban Square 2 Land Area – approx. 3,000 square metres
- Total Tree Canopy Coverage Area– approx. 2,010 square metres
- Tree Canopy Coverage = 67%

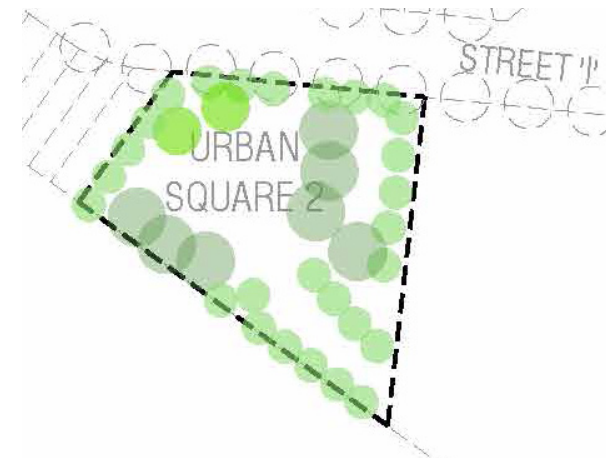


Figure 3: Green Ginger Phase 2 Tree Canopy Plan / Urban Square 2

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%.

Storm Water Management

The canopy coverage target for storm water facility is 15%. 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 ornamental, small stature, medium stature, and large stature trees.

- Total Storm Water Management Facility Land Area – approx. 22,400 square metres
- Total Tree Canopy Coverage Area (based on medium stature trees) – approx. 6,640 square metres
- Tree Canopy Coverage = 30%

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 still currently 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 residential areas, designated urban square parkland, and storm water management facilities.

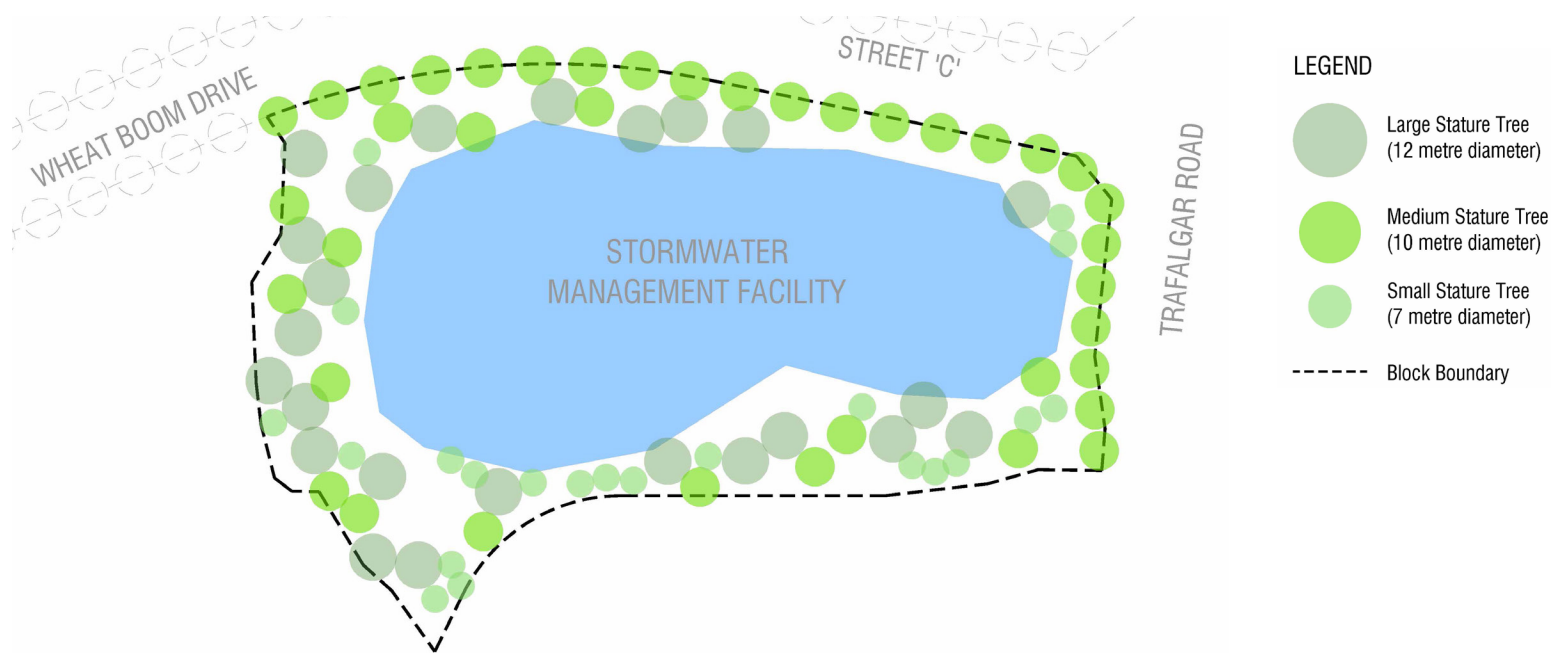


Figure 4: Green Ginger Phase 2 Tree Canopy Plan / Urban Storm Water Management Facility

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