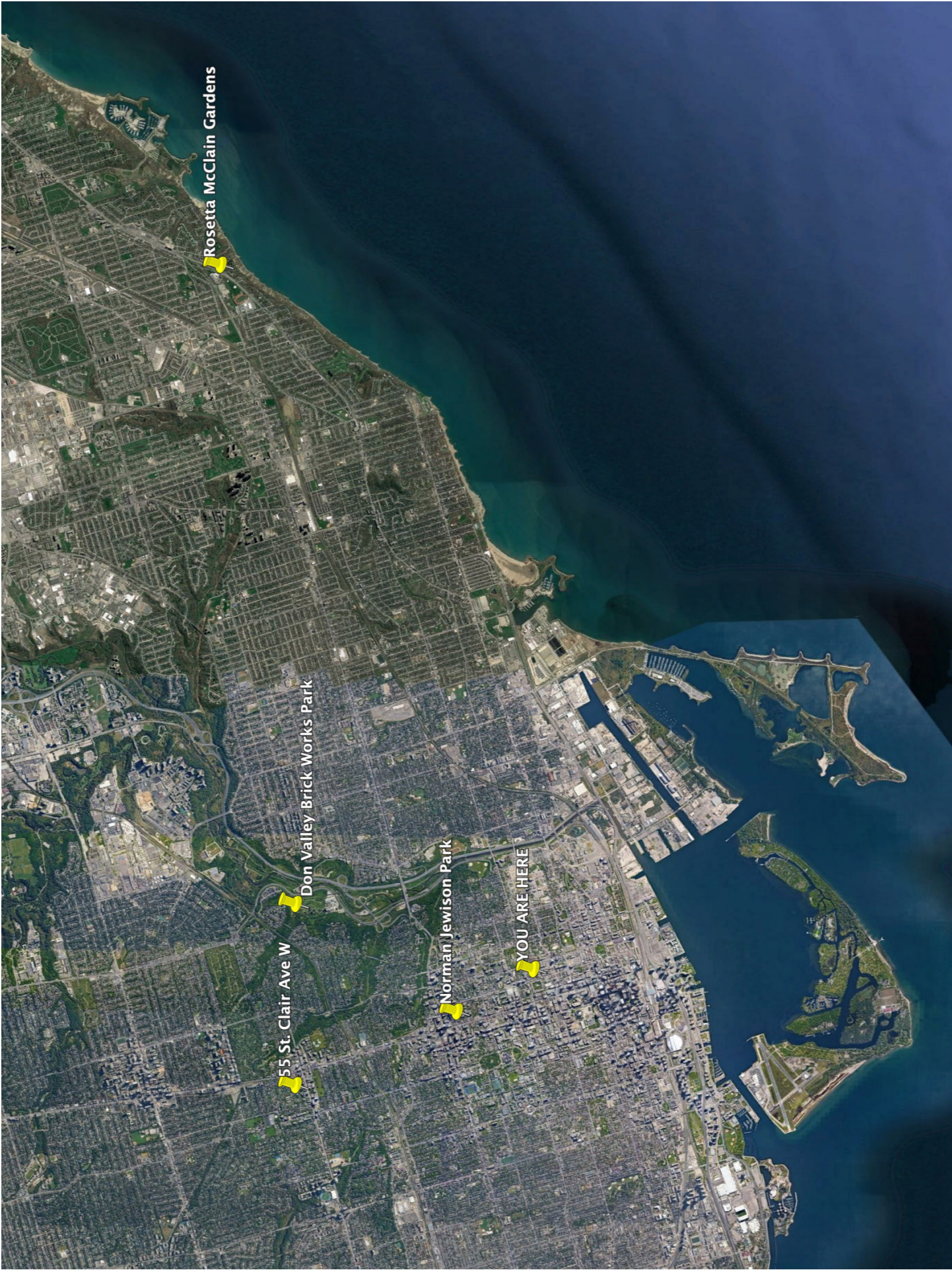


CASE STUDIES





Rosetta McClain Gardens

55 St. Clair Ave W

Don Valley Brick Works Park

Norman Jewison Park

YOU ARE HERE

WHAT'S THE REFERENCE WORKSHOP

Selecting Appropriate Ecological References for Four Urban Sites in Toronto

CASE AUTHORS: SAM BENVIE, MICHELA SUTTER, JONAS SPRING

CONTEXT

The City of Toronto has hired your group to provide an ecological analysis of four sites in the Greater Toronto Area.

PROBLEM STATEMENT

Find an appropriate ecological reference for each site.

DISCUSSION QUESTIONS

1. What physical characteristics of a site are important for identifying an ecological reference?
2. Review the site information package and compare the information there with the physical information identified in question 1. Do you have all the information you require?
- 3a. As a group place your site on the graph using soil structure and moisture information provided. Identify what Ecosite code(s) relate to your site.
- 3b. Lookup and review Ecosite codes in the Ecosites of Ontario package provided. Which ecosite code vegetation type is most appropriate and why?
4. What are the dominant species of this Ecosite?

ADDITIONAL INFORMATION

1. What additional species of plants would be appropriate for this site? (Use whatever handouts provided by speaker(s) that are appropriate)
2. Which species of plants are commercially available?
3. Refine and rank the species you would recommend based on availability.
4. What are the benefits of the ecological reference selected for the site?
5. What are the limitations of the ecological reference selected for the site?

CASE LEARNING OUTCOMES

1. Awareness of Ecological Land Classification System of Ontario and Ecosites in particular
2. Ability to develop an ecological reference based on soil structure, moisture and vegetation type using matrix provided
3. Awareness of commercial plant availability for appropriate plant species

NORMAN JEWISON PARK

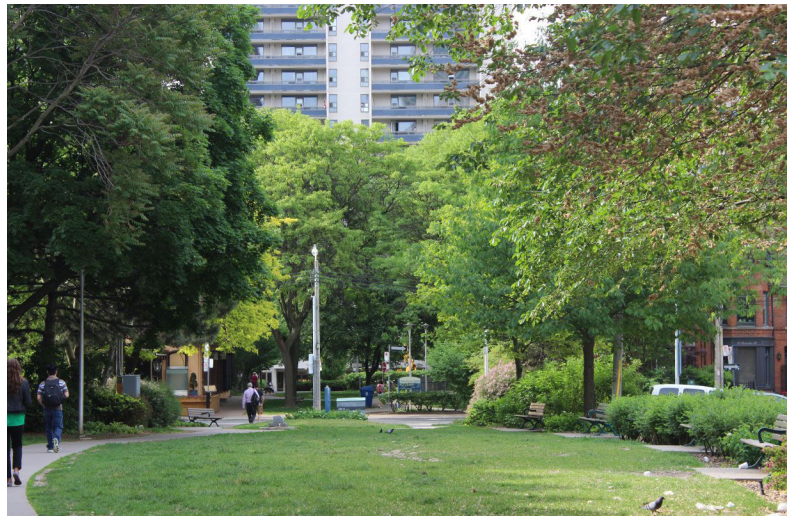
DETAILS

This site is an urban pocket park of approximately 425 square meters. It is situated over the Yonge subway tunnel between Isabella Street to the north and Gloucester Street to the south. Consequently, the park has a narrow rectangular shape, with the long axis oriented over the subway. The principal pedestrian access is off of Charles Street and Isabella Street. There is a small lane with side parking to the immediate west of the site, and low-rise commercial buildings to the west of that. To the east are low-rise, primarily residential and institutional buildings, except at the south-east corner where there is a 22 storey apartment building, its long axis parallel to Gloucester Street.

Topographically, the site has an even, very shallow gradient from the northeast corner to the southwest corner of about 1.0 percent, with a very slight rise in the north-west quadrant of the park. The north-south central half of the park has shallow, mixed-textured soil over the subway tunnel. Useable soil depth here is about 15+ cm. along the central axis, and somewhat deeper, about 20+ cm., at the edges of the north-south central half of the site. The areas to the east and west of the central area over the subway are connected to the ground. Soil here is sandy silt. Organic matter throughout the site is low to very low, with little organic detritus building up. Infrequent application of shredded wood-chip mulch is applied to peripheral areas, primarily to suppress weed species. Soil pH is mildly alkaline (7.2 to 7.5) in the central area over the subway tunnel, and mildly acidic along the west and east perimeters of the park. There is extensive soil compaction in the area over the subway tunnel. The vegetation on this site relies on natural precipitation, and water drains away rapidly, primarily as runoff. The soil tends to become completely saturated over the subway tunnel during major rain events, and dry out quickly in summer heat.

Vegetative cover in the park consists of peripheral horticultural plantings of clonal trees, shrubs and herbaceous plants, and mown grass lawn in the central area over the subway tunnel. Tree coverage is approximately 25 - 30 % of the site; shrub coverage amounts to 10 - 20 %; mown grass lawn, 50 - 60 %; and herbaceous species, less than 10%. There are small patches of bare soil where individual trees, shrubs and/or herbaceous plants have died. Collectively these bare areas amount to about 5% of the whole site. Aside from grass lawn current species are:

TREES: *Acer platanoides* (clonal), *Gleditsia triacanthos* (clonal), *Quercus rubra* (clonal), *Ulmus* spp (volunteer), *Pinus nigra* (clonal); **SHRUBS:** *Cornus mas* (clonal), *Hamamelis x intermedia* (clonal), *Mahonia aquilegifolium* (clonal), *Rosa multiflora* (clonal), *Taxus x media* (clonal); **HERBACEOUS:** *Baptisia australis* (clonal), *Echinacea purpurea* (clonal), *Hemerocallis fulva* (clonal), *Rudbeckia fuldiga* (clonal/seeding), *Salvia nemorosa* (clonal); Assorted ruderals.





Norman Jewison Park

THE BRICKWORKS EAST SLOPE

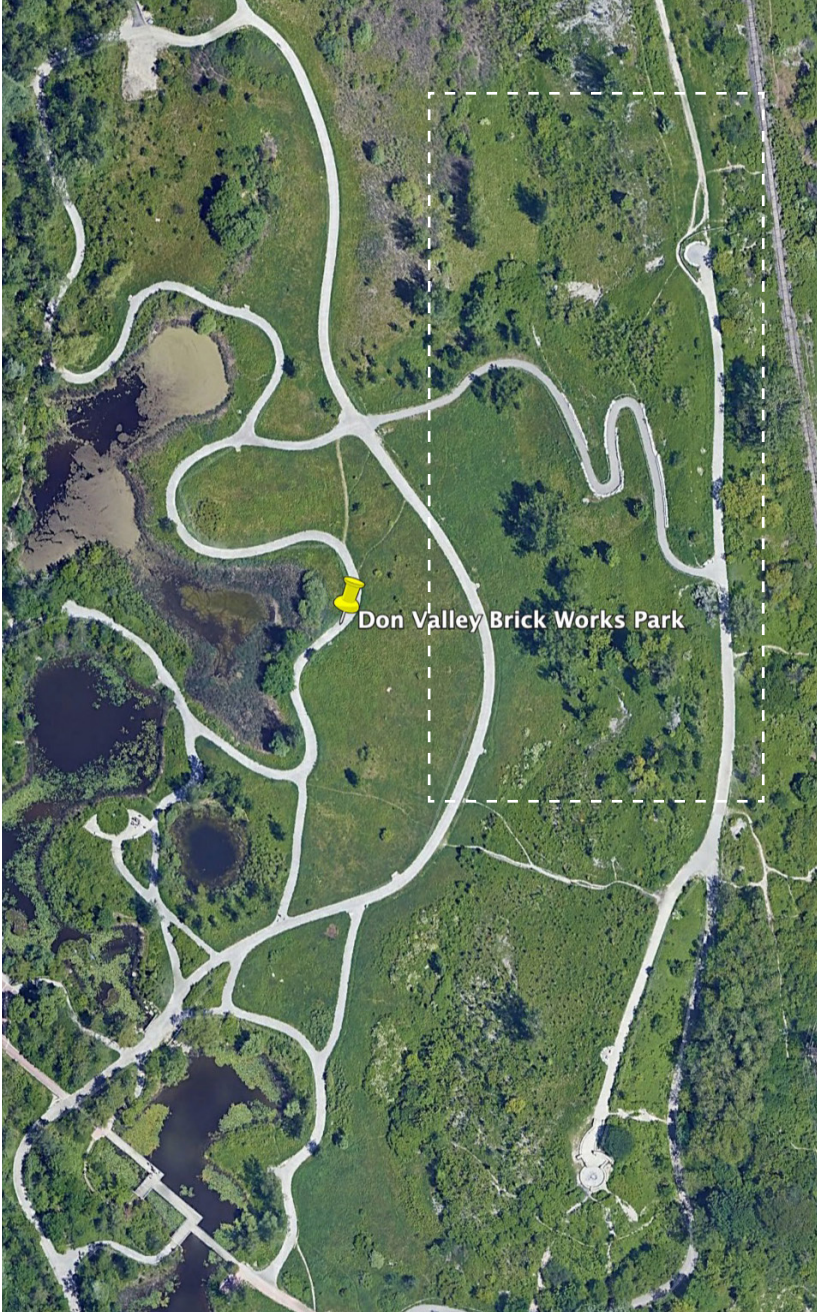
DETAILS

This site is located along the east boundary of the Toronto Brickworks. The Metrolinx rail line runs straight north to south immediately east at the top the slope, along a narrow ridge that slopes steeply down to the west bank Don River Valley. The east slope of the Brickworks is approximately 125 M long, and slightly concave along its length. It is between 19 M and 26 M high with overall slope pitch between 40 and 100 percent. The overall area of the east slope is 6,250 square meters. To the west, it overlooks the mildly rolling landscape of meadow and wetland restorations that have been undertaken in the Brickworks over the past few decades. The wooded, west slope on the opposite side of the Brickworks is approximately 200 M away. At its north end, the east slope turns west to become the south-facing north slope of the Brickworks. Various footpaths run along the top and bottom of the slope, and one switch-back footpath runs from the bottom to the top of the slope midway along its length. There is a desire-line path from bottom to top closer to the south end of the slope. Repurposed and newer buildings are located at the south end of the slope.

The east slope, like the north and west slopes, is the result of clay excavations. It is carved by several gullies, with a few broad, intervening ridges that bottom out in higher mounding landscapes of meadows. At the top of the slope the soil there is a thin layer Iroquois silty sand over deeper, dense silty clay. The remainder of the slope to the toe of slope is primarily dense clay and silty clay. There is scant organic matter in the soils of the slope. Organic detritus derived primarily from grasses and herbaceous forbs is thinly present over much, but not all of this slope. The top of the slope in the northern most quarter of its length is exposed mineral soil, the result of mass sliding. Soil PH is on the alkaline side, more so at the top (PH 7.5 -7.9), less so at the bottom (7.2 - 7.5) and in the gullies. Because the east slope is the west-facing side of a narrow ridge, the top of slope tends to be relatively dry, more so than the bottom of the slope. Two deeper gullies are also relatively moist. During hot, summer drought, the bottom of the slope, especially the bottom of the two largest gullies and the corner at the north end of slope, remain moister for longer, while the top of the slope becomes very dry.

Vegetation cover on the east slope is primarily a variety of grass and herbaceous forb species. Some of these species, particularly forb species, have populations that expand and crash from year to year. Young trees and shrubs occur mostly in scattered small groups on the lower slope, and upslope in the main gullies. There are a few isolated trees and small clusters of trees at the top of the slope. The vast majority of the vegetation on the east slope is from volunteer seed. Several invasive species are expanding their populations. The current species include:

TREES: *Acer platanoides*, *Acer negundo*, *Acer saccharinum*, *Gleditsia triacanthos* 'inermis', *Morus alba*, *Juglans nigra*, *Populus grandidentata*, *Populus tremuloides*, *Rhamnus* spp., *Robinia Pseudoacacia*, *Salix alba* 'tristis', *Salix nigra*, *Ulmus pumila*; **SHRUBS:** *Cornus racemosa*, *Cornus sericea*, *Prunus virginiana*. *Rhus aromatica*, *Rhus typhina*, *Sambucus canadensis*, *Viburnum lentago*; **VINES:** *Parthanocissus quinquefolia*, *Solanum dulcamara*; **HERBACEOUS:** *Achillea millefolia*, *Ambrosia artemisiifolia*, *Arctium minus*, *Artemisia vulgaris*, *Asclepias tuberosa*, *Bidens tripartite*, *Chicorium intybus*, *Cirsium arvense*, *Cirsium vulgare*, *Coronilla varia*, *Daucus carota*, *Hypericum perforatum*, *Linaria vulgaris*, *Melilotus officinalis*, *Monarda fistulosa*, *Oenothera biennis*, *Plantago linearis*, *Plantago major*, *Polygonum pennsylvanicum*, *Ratibida pinnata*, *Solidago canadensis*, *Sonchus oleraceus*, *Symphyotrichum novae-anglicae*, *Tanacetum vulgare*, *Taraxicum officinalis*, *Trifolium pratense*, *Trifolium repens*, *Verbascum thapsis*, *Verbena* spp., *Vicia cracca*, *Vincitoxicum nigrum*; **GRASSES:** *Andropogon gerardii*, *Panicum rigidulum*, *Panicum virgatum*, *Phragmites communis*.





Don Valley Brick Works Park

ROSETTA MCCAIN GARDENS

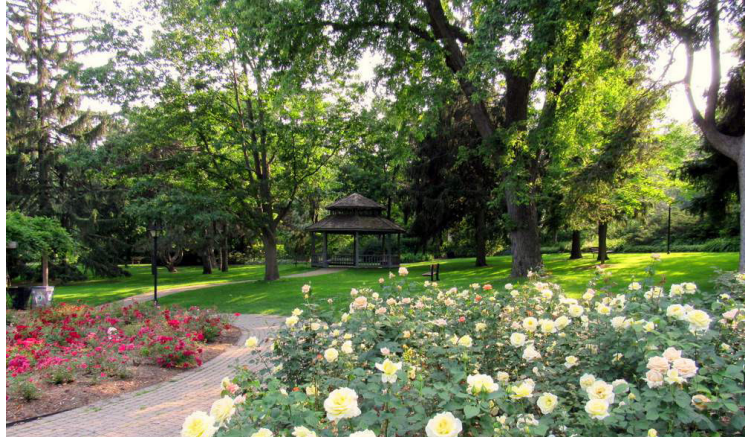
DETAILS

This site is primarily a public garden having the overall updated sensibility of a late Arts and Crafts / Edwardian garden, set into the overall park-like setting of an English Pastoral Landscape. The site is located on a narrow portion of land at the top of the westernmost portion of the Scarborough Bluffs, immediately south of where Kingston Road and Danforth Avenue meet. The site is roughly trapezoidal, and measures approximately 250 M by 160 M (total area approximately 4.0 hectares). It is bounded by the Scarborough bluffs to the south and Kingston Road to the north. To the east and west are residential neighbourhoods.

Topographically the site is mostly level, with a very slight, even gradient southward, down towards the top of the Scarborough bluffs. There is a narrow bank along Kingston Road that slopes down from the road at about 5 %. The soil of this site, and the adjacent landscapes at the top of the Bluffs, is sandy silt down to a depth of about 10 M, below which there is dense silty clay. The topmost 15 cm soil horizon contains about 5 % organic matter with a circum-neutral pH, and is moderately moist to moderately dry, with good drainage. Horticultural areas contain more organic matter in the upper horizon, along with acidic pH (pH 6.5 - 6.8, and are irrigated. In hot summer drought the soil throughout much of the site can go dry.

The vegetative cover of this site is extensively horticultural, except for a very narrow boundary at the top of the Bluffs, where there is a mix of herbaceous forbs and grass more typical of dry to dry-fresh meadows. Tree cover is approximately 50 %, a quarter of which is coniferous evergreen. Shrub cover is mostly restricted to the two horticultural display area, along with horticultural herbaceous perennials. Mown grass lawn covers approximately 75 - 80 % of the site. Trees are randomly dispersed over the site, with relatively open areas, several of which are large enough to receive full sun for most or all of the day. Filtered dappled shade occurs. Many of the coniferous evergreen trees, particularly Spruces, show symptoms consistent with severe drought stress, and several spruces have died and been removed over the past several years. Drought stress has also resulted in higher insect-pest and foliar disease issues on the deciduous trees. Clonal horticultural species on this site include:

TREES: *Acer platanoides*, *Acer saccharinum*, *Chamaecyparis nootkatensis* 'pendula', *Gleditsia triacanthos* 'inermis', *Malus x hybrida*, *Picea pungens* 'glauca', *Picea abies*, *Robinia pseudoacacia*; **SHRUBS:** *Cercis canadensis*, *Euonymus fortunei* 'sarcocoe', *Rosa x hybrida*, *Taxus media* 'densiformis'; **HERBACEOUS:** *Echinacea purpurea*, *Heliotrichon sempervirens*, *Hemerocallis x hybrida*, *Hosta x hybrida*, *Iris siberica*, *Miscanthus sinensis*, *Panicum virgatum*, *Rudbeckia fuldiga*



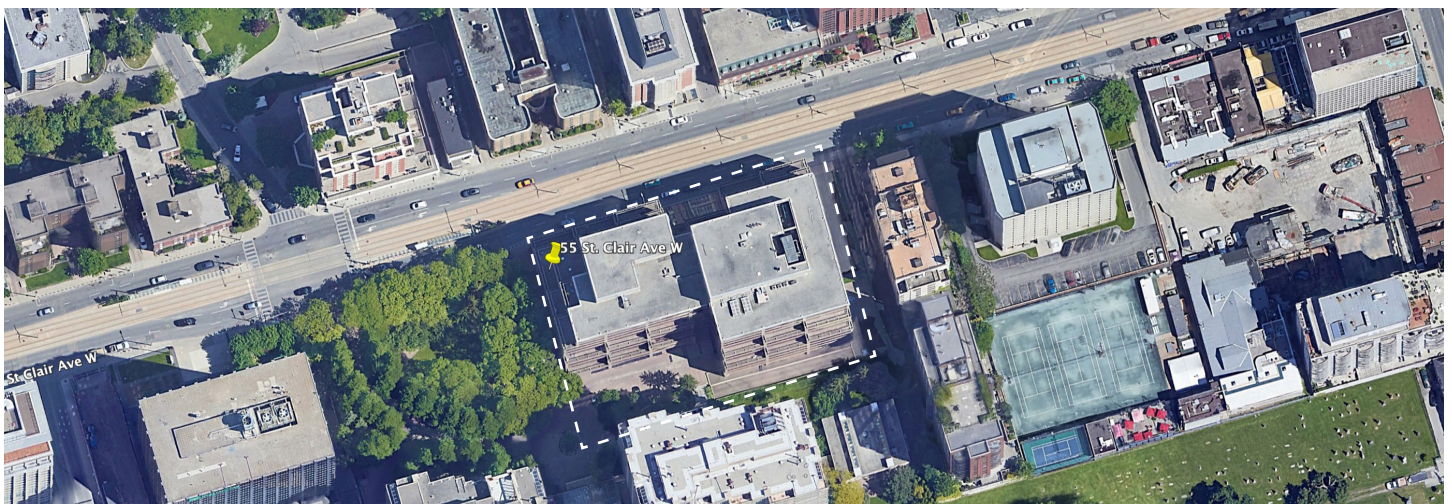


55 ST. CLAIR AVENUE WEST

DETAILS | This site consists of 34 planters built into 18 north and west facing, stepped-back terraces of a nine-storey commercial building, located on the south side of St. Clair Avenue West, just west of Yonge Street. Sixteen of the terraces are framed on two outer edges with a planter and low railing; the inner two sides of the terrace are framed by the building. Two terraces have only one short, built-in planter on the outer edge; the building frames the other three sides. The planters are all 0.9 M deep, and 0.6 M wide, with built-in drainage. They are sealed and lined with erosion-control geo-textile. The length of the planters varies, the shortest being 3.0 M and the longest 12 M.

Light levels are variable with respect to different planters. Those that face west receive the most light. The planters on the north side of the building receive morning, late afternoon and evening light from early April through early September. These north-facing planters receive no light during the winter. Planters at the corners of the building are more exposed to wind, but again because of the building configuration, winds are generally dampened.

Because the building is stepped back each storey to accommodate terraces and planters, and configured in a way that neither terraces nor planters are contiguous, the planters associated with each terrace can be considered “islands” of potential vegetation on a cliff. There is neither soil nor vegetation currently in the planters. In this case, both soil and vegetation may be considered together.





75 St. Clair Ave W

55 St. Clair