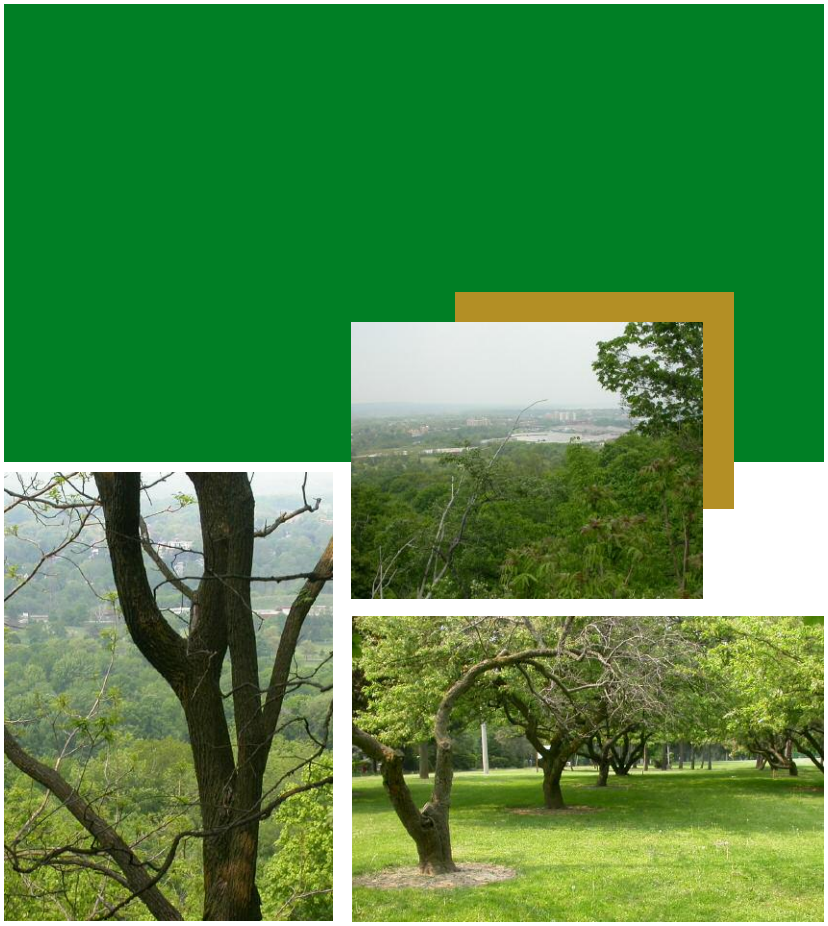

Image Credit: Tyler Colhurst

TABLE OF CONTENTS



INTRODUCTION

The Urban Design Guidelines for the Chedoke Browlands site have been prepared to provide a framework for future development. These guidelines establish visionary goals and principles for the area focusing on urban design, architecture, streetscape and the natural environment.

Purpose:

- To provide design direction for future development.
- To promote a high level of sustainable design in accordance with the City of Hamilton and the Niagara Escarpment Commission policies and guidelines.
- Promote responsible development in accordance with provincial policy and the Places To Grow Act.

Image Credit: Tyler Colhurst

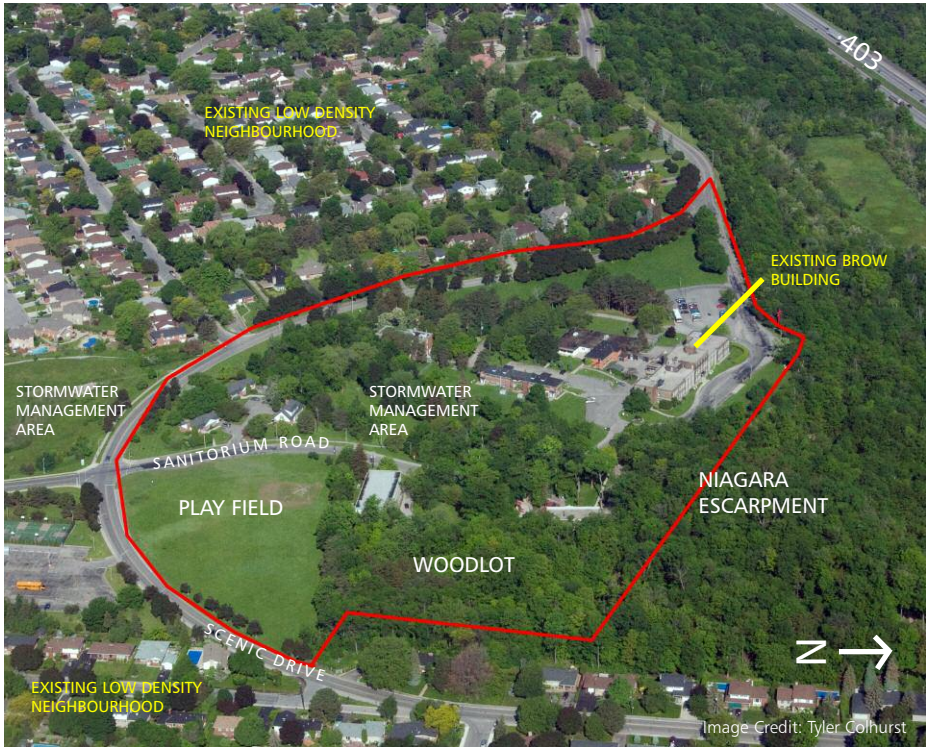


Figure 1: Existing Context

1.0 OVERALL NEIGHBOURHOOD IDENTITY

1.1 SUB-NEIGHBOURHOOD CONTEXT

The Chedoke Browlands Sub-Neighbourhood comprising 9.05 Ha, including the woodlot and existing stormwater management facility, is located at the intersection of Scenic Drive and Sanatorium Road. It extends south of the curved brow of the Niagara Escarpment to Scenic Drive. (Figure 1) The lands are irregular in shape, with a total of approximately 473 metres of frontage along Scenic Drive. Sanatorium Road also runs in a curvilinear route through the site from the intersection at Scenic Drive to the Niagara Escarpment brow, reconnecting with Scenic Drive at the northwestern corner of the site.

Adjacent land uses include:

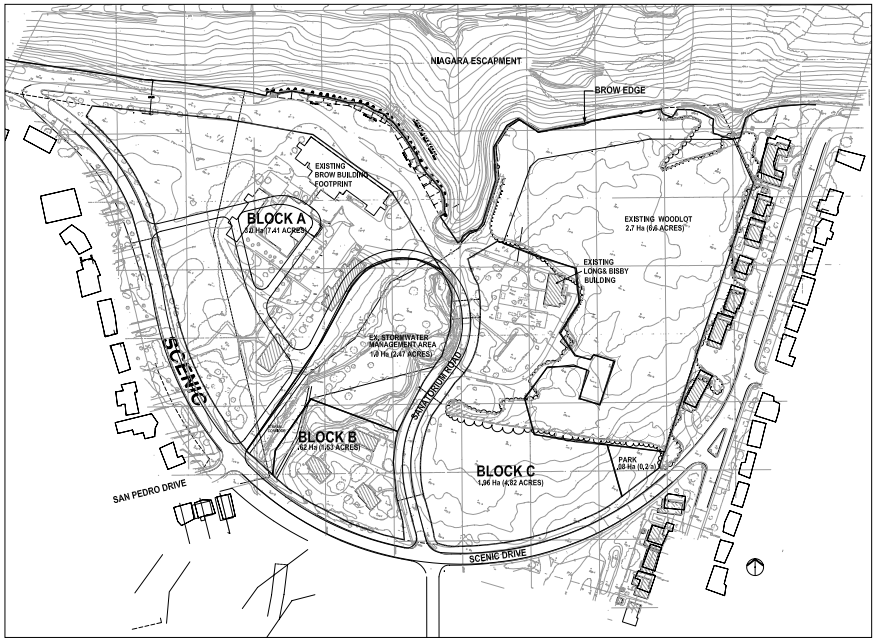
- The brow of the Niagara Escarpment to the north with the Chedoke municipal golf course at its base;
- Low density residential neighbourhoods to the east;
- Columbia College institutional residences at the southeast corner of the Scenic Drive/Sanatorium Road intersection;
- Stormwater management facility at the southwest corner of the Scenic Drive/Sanatorium Road intersection;
- Low density residential uses to the west with larger lots fronting directly onto Scenic Drive and traditionally-sized lots in the interior neighbourhood;
- Chedoke Hospital facilities to the south along Sanatorium Road;
- Multi-family residential (i.e. apartments and townhouses) and community-scale commercial land uses including retail food and convenience uses along Mohawk Road West to the south.

1.2 NEIGHBOURHOOD PLAN

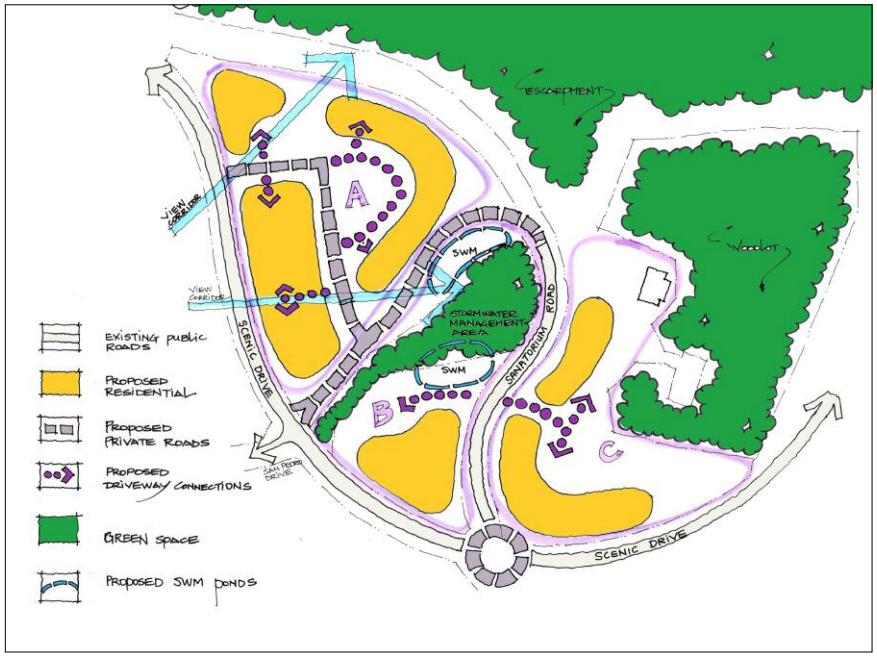
As a result of the existing physical characteristics of the Chedoke Browlands Sub-Neighbourhood, there are three separate developable areas (Figure 1) reflected in the neighbourhood plan, as follows:

- Block A: 3.00 Ha in area and bounded by Scenic Drive (west), the Escarpment Brow and the SWM facility;
- Block B: 0.62 Ha in area and bounded by the SWM facility, Sanatorium Road and Scenic Drive; and,
- Block C: 1.96 Ha in area and bounded by Sanatorium Road, the woodlot and Scenic Drive (east).

The Urban Design Guidelines reflect the preferred land use plan for the Chedoke Browlands Sub-Neighbourhood illustrated on below in the Land Use and Development Concept Plan.



▲ *Figure 1: Neighbourhood Plan*



▲ *Land Use and Development Concept Plan*

▲ *Aerial view of existing site*

▲ *Street-related development*

▲ *View from brow edge overlooking Niagara Escarpment*

1.3 GUIDING PRINCIPLES

The redevelopment of the Chedoke Browlands Sub-Neighbourhood shall be guided by the following principles:

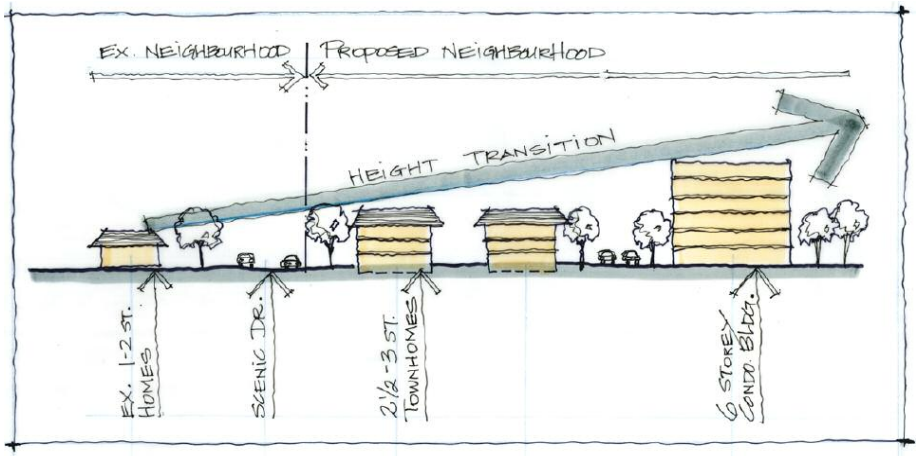
- Public access along the Niagara Escarpment should be maintained.
- The existing woodlot and open space associated with the Chedoke Creek/stormwater management facility should be retained
- Significant view corridors of and through the site should be maintained.
- A network of connected landscaped open space and walkways should be provided, which are accessible to all residents, with a strong link to the Niagara Escarpment brow.
- Significant cultural landscape and built-form heritage features (including the Long & Bisby Building) should be preserved or commemorated with any redevelopment.
- Taller building heights should be sensitively located to minimize visual impacts as seen from the surrounding neighbourhood and along the Niagara Escarpment brow.
- High quality, higher density, owner occupied residential uses, responding to the City's long-term housing demands including seniors housing, are accommodated.

2.0 BUILT FORM

2.1 LOCATION

2.1.1 High Rise

- Defined as multi-family residential buildings of 7 full storeys and over.
- The higher rise development of the site is planned for the area north of the intersection of Scenic Drive and Sanatorium Road.
- Appropriate massing, building projections, and recesses at grade will promote the prominence of this intersection and create a gateway into the development.
- These buildings will also serve to frame prominent view corridors of the escarpment and the existing Long and Bisby building.
- The properties across the street and south of this intersection are institutional and/or stormwater management areas and are more suited to higher density neighbours than the existing low rise housing near the western portion of the site.



▲ *Transition in scale from existing neighbourhood south of Scenic Drive*

2.1.2 Medium Rise

- Defined as multi-family residential buildings of 4–6 full storeys.
- Medium rise housing is found throughout the site to provide appropriate transition in scale from the existing low density neighbourhood to the taller buildings on the site.

2.1.3 Low Rise

- Defined as grade related multi-family residential buildings of up to 3 full storeys.
- In order to accommodate rear lane parking access.
- The ground floor of townhouses fronting on Scenic Drive will be raised by less than a floor above existing sidewalk grade.
- Low rise townhouses should be located along Scenic Drive directly across from the existing low density development to provide an appropriate transition in scale.

EXAMPLES OF BUILT FORM RELATED TO DENSITY

▲ *High Rise*

▲ *Medium Rise*

▲ *Low Rise*

▲ *Examples of corner lot buildings that addresses the street with all building elevations treated as principal façades.*

2.2 ORIENTATION

In order to create a strong pedestrian-related community, it is important that all built form address both local public roads and condominium roads.

Design Principles:

- All of the built form in the development will front onto adjacent public streets and internal condominium roads. By doing so, a strong prominent street wall is created.
- Reverse frontage orientation should not be permitted on public streets.
- Corner lot buildings or flankage lots should be oriented toward the street with their building elevations treated as principal building façades. Architectural detailing will emphasize these buildings as prominent structures within the street wall.
- All of the buildings facing the Niagara Escarpment will respect its character and protect its views in accordance with the Niagara Escarpment Commission Development Guidelines and approved building envelope.

2.3 BUILDING SETBACKS

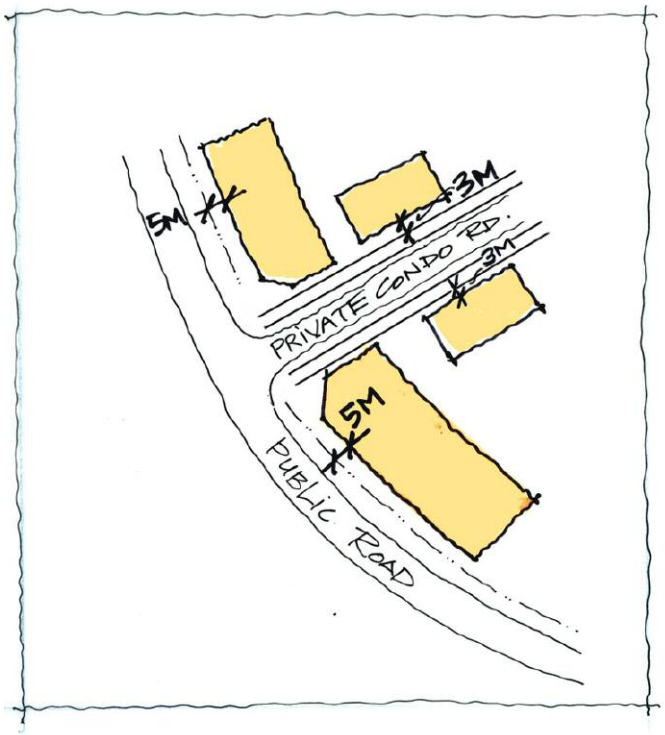
- Building setbacks from the property line are designed to accommodate a variety of functions.
- The majority of the streets within the development will have a building setback that ranges from 3.0m to 5.0m from the sidewalk or curb to accommodate street tree planting and special character areas.

2.3.1 Buildings on Public Roads

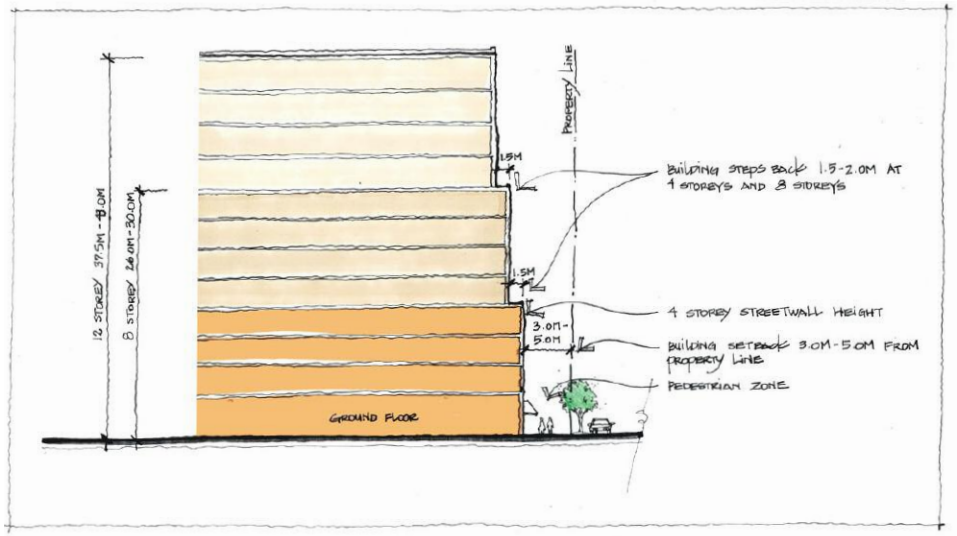
- The buildings along the public roads (Scenic Drive and Sanatorium Road) will generally have a setback of 5.0m to create a constant and clearly identifiable public realm and pedestrian zone.

2.3.2 Buildings on Condominium Roads

- The residential buildings on the condominium roads will generally have a setback of approximately 3.0m from the sidewalk to the main building face. Non-habitable front porches, canopies, and steps however, are encouraged to encroach in this setback zone.



▲ *Building Setbacks*



▲ *Building Stepbacks Diagram*

Examples of Building Stepbacks in an urban context

2.4 BUILDING STEPBACKS

Building stepbacks or terracing help visually reduce the vertical scale of taller buildings at pedestrian level. They are usually utilized in buildings with heights greater than 4 storeys.

The buildings along Sanatorium Road will transition in height from 4 to 12 storeys and are considered street wall buildings that define the street. The street wall height here will be 4 storeys and will stepback a distance of 1.5 to 2m and again at 8 storeys. This is intended to acknowledge the existing low-rise character of the surrounding neighbourhood and provide a gradual transition in scale. Stepping of the building at the upper floors to provide terraces is encouraged.

2.5 GRADUATED BUILDING HEIGHT RELATED TO BUILDING STOREYS

- The medium and high rise buildings on the Browlands site should have a ground floor height of approximately 4–4.5m tall in order to accommodate a diverse range of uses depending on the building's location. Such uses may include local ancillary/convenience and amenity space.
- The floor-to-floor heights of the mid and high-rise buildings above the ground floor are assumed to be in the range of 3.0 to 3.5m in height to allow for greater ceiling heights in luxury units. The following assumptions have been made:
  - ➛ 6 storey building: 19.5m–25.0m total height
  - ➛ 8 storey building: 26.0m–30m total height
  - ➛ 12 storey height: 37.5m–43.0m total height

Note: The guidelines related to building stepbacks and building storeys are general guidelines and should offer flexibility to incorporate site specific design expression.

2.6 HEIGHT AND MASSING

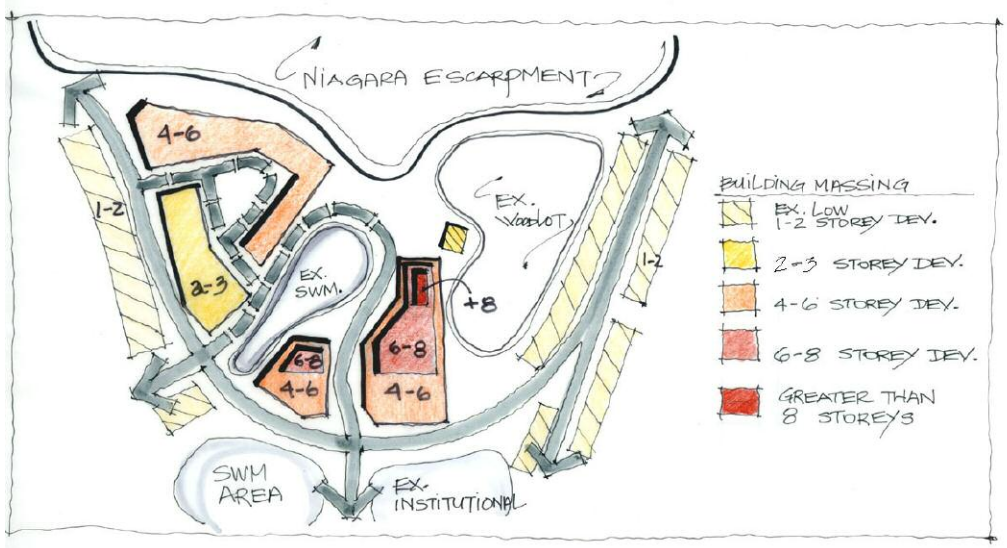
The design and height of the proposed buildings will take into consideration the fact that the surrounding neighbourhood context is low density, low-rise development. The impact of the new development on the existing neighbourhood will be analyzed according to sun/shadow studies, and the design developed to reduce shadowing and overview.

There will be a gradual transition in scale from the adjacent low rise neighbourhood along Scenic Drive towards the centre of the site with the higher rise development being concentrated north of the major street intersection of Scenic Drive and Sanatorium Road. This will help to reinforce the prominence of this location and acts as a gateway into the development. In addition, the properties directly across from this planned gateway include institutional buildings, a future stormwater management area and a parking lot, which are less sensitive to the effects of taller buildings.

Taller buildings of the development will have a base, middle, and top with the first 2–4 storeys appearing to be visually separate from the upper storeys. This can be achieved by a variety of methods including banding, cornice, window fenestration and pedestrian scale lighting for example. A highly defined building base will ensure a strong streetwall at a pedestrian scale and will improve the community feel of the development. Above the 6 storey height, upper storeys will be recessed, stepped back, or otherwise treated in order to visually break up the building mass *(see section on Building Stepbacks 2.5)*.

Along the length of Scenic Drive directly opposite the site, there is presently low rise development of 1 to 2 storeys in height. Any proposed buildings along this frontage will have a base height no greater than 2 storeys above the adjacent neighbouring properties, i.e. no greater than 4 storeys for example at this location. By providing a gradual height transition of the built form, the impact of sun/shadow on the adjacent low density developments is minimized.

Note: All building heights should satisfy the angular plane restrictions and development guidelines in force by the Niagara Escarpment Commission.



▲ *Height and Massing Diagram*

▲ *Existing low-rise development on Scenic Drive*

2.7 ARCHITECTURAL DESIGN - FAÇADE TREATMENT

The architectural design of the proposed buildings will follow established urban design principles to ensure a high quality pedestrian-friendly environment. The following guidelines apply:

- Establish diversity along lengthy building façades in the form of articulation and materials that permit visual expression and flexibility. Architectural elements such as balconies, terraces, bay windows and fenestration will add to the architectural diversity.
- The building material will reflect the general character of the historical Chedoke hospital site specifically stone or clay masonry units of either red or buff colour. These colours can occur simultaneously on the same building façade.
- The architectural detailing shall include historical details of the Chedoke site such as: parapets with stone or decorative metal coping, decorative eave brackets, stone or precast window sills, divided window units/mullions with clear glazing, recessed masonry panels, and/or horizontal stone banding for example.
- The 2-storey base of all buildings will have a high level of detail and articulation in order to reinforce the street wall and pedestrian scale of the community.
- Where conditions permit, and with the exception of townhouses and existing buildings, buildings will have their ground floors located at street level in order to support street related activities. The treatment of the ground floor should reflect the activities and nature of the uses within.
- Rhythm and design of the architecture of the entire development will be cohesive and unified.
- Corner façades should have a high level of detail and should be treated as principle building façades. Architectural detailing should emphasize these buildings as prominent structures within the street wall.
- Mechanical equipment i.e. air conditioners, transformers, hydro/gas meters will not be located at the fronts of buildings but will be located to the side or back of the building, wherever possible away from view of the public street. Rooftop mechanical equipment and venting should be incorporated into the building design and screened from view using complimentary building techniques and materials.

▲ *Corner façade with a high level of architectural detail such as porch, bay window and landscaping.*

▲ *Architectural elements such as balconies, terraces, bay windows and fenestration add architectural diversity to the building façade.*

2.8 ACCESS / EGRESS

- For access, safety and eyes-on-the-street purposes, all principle residential entrances should be located along primary internal roads and should be clearly defined, safe, barrier-free and visible for both residents and visitors.
- Secondary rear and side entrances should be provided whenever parking areas are located to the rear or side of the building.

2.9 PARKING

The majority of parking required for the development will be located underground for the larger buildings or under a patio terrace for the townhouse blocks. By eliminating the majority of cars from view, a stronger pedestrian-friendly community is established.

It is recognized that some short-term surface parking stalls are necessary for the larger development blocks to accommodate deliveries, mail drop-off and passenger pick-up for example. Here, the surface parking lots will be limited to a maximum of two aisles with a drive. They will ideally be located adjacent to principle building entrances and screened from view of the street using plant material, low architectural walls, fencing or a combination of these.

▲ *Parking garages are concealed from view of the public street by a rooftop terrace in this townhouse development.*

▲ *Underground parking ramp is incorporated into the building design of this low-rise condominium.*

▲ *Cross of Lorraine*

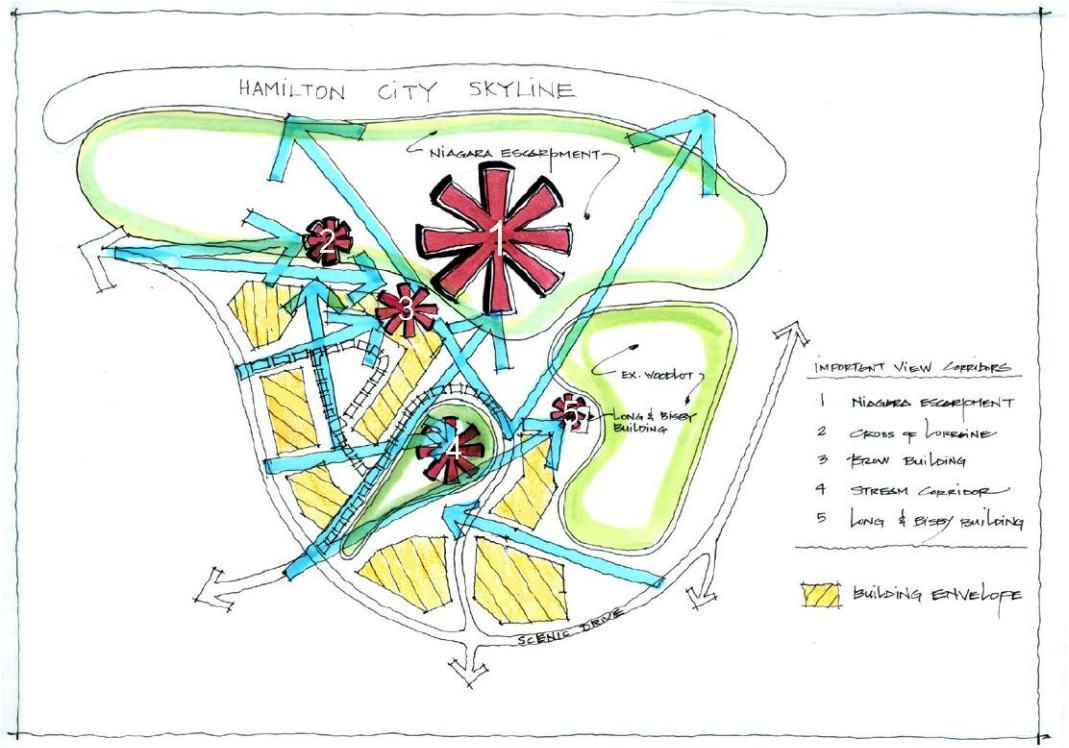
▲ *Stream Corridor*

▲ *Hamilton City Skyline*

2.10 VIEW CORRIDORS

This picturesque site is prominently located on top of the Niagara Escarpment near the brow edge. The site plan acknowledges that there are existing major historic views to and from the site and that they should be respected and/or protected. Views to the City of Hamilton skyline, along the stream corridor, the Cross of Lorraine, the Long and Bisby Building and to the Brow Building from Sanatorium Road will be respected and/or framed and accentuated by the proposed building design and placement.

Note: All buildings facing the Niagara Escarpment will respect its' character and protect its' views in accordance with the Niagara Escarpment Commission Development Guidelines.



▲ *View Corridors*

3.0 HERITAGE MATTERS

Development within the Chedoke Browlands Sub-Neighbourhood shall have regard to the following heritage built-form intervention guidelines:

- The continuation of a pedestrian corridor along the brow of the Escarpment;
- Retention and conservation of the 'Long & Bisby' Building with an adaptive re-use;
- Where possible, the front façade of the 'Brow' Building and/or the 'Brow Annex' Building may be integrated into any redevelopment plans;
- Should the 'Brow' Building be demolished, new development should be set back 30 meters from the defined Escarpment edge and incorporate a built-form or landscape element demarcation to denote the location of the 'Brow' Building's front façade; and,
- Appropriate documentation of all buildings to be demolished shall be provided to the City.

Development within the Chedoke Browlands Sub-Neighbourhood shall have regard to the following cultural heritage landscape intervention guidelines:

- Maintenance of the existing topography of the perimeter roads, woodlot, and central stream/stormwater management facility;
- Wherever possible, the alignment of new buildings located to the west of the Chedoke Creek/stormwater management facility, shall generally on an axial basis to the Niagara Escarpment brow with curvilinear pedestrian and/or vehicular networks;
- Retention and protection of the woodlot and vegetation in the Chedoke Creek/stormwater management facility;
- Preparation of a tree assessment to determine opportunities for the protection and preservation of individual specimen or street trees;
- Protection and integration of existing commemorative trees into redevelopment plans, wherever possible;
- Protection of significant views to, and view corridors from, the site and its built-form;
- Protection of the open park-like landscape setting in front of the 'Long & Bisby' Building;
- Respecting the existing Scenic Drive and Sanatorium Road alignments;
- Prohibiting development within the Chedoke Creek stream channel/stormwater management facility; and,
- Preservation of significant heritage built features such as the existing pedestrian bridge, stone wall/pillars, and Cross of Lorraine, where possible.

▲ *Brow Building*

▲ *Long and Bisby Building*

▲ *Stone wall and pillar at vehicular bridge*

▲ *Cross of Lorraine*

▲ *Pedestrian bridge*

▲ *Aerial view over Chedoke Browlands site and Niagara Escarpment.*

4.0 OPEN SPACE AND LANDSCAPE

4.1 EXISTING NATURAL FEATURES

4.1.1 The Niagara Escarpment

Because the Niagara Escarpment extends along the northern boundary of the Chedoke site, any development here must adhere to the strict development guidelines and policies put forth by the Niagara Escarpment Commission.

- In order to protect the cultural integrity of the Escarpment, any new development in proximity of the brow edge must be setback a minimum of 30 metres.
- Any building renovations such as the Brow Building will follow existing building footprints and setbacks.
- Any and all development should be located to protect and conserve views to and from the Escarpment.
- Lighting along the Escarpment brow should be downcast to minimize impact on the existing wildlife habitat living within the escarpment.

4.1.2 The Woodlot

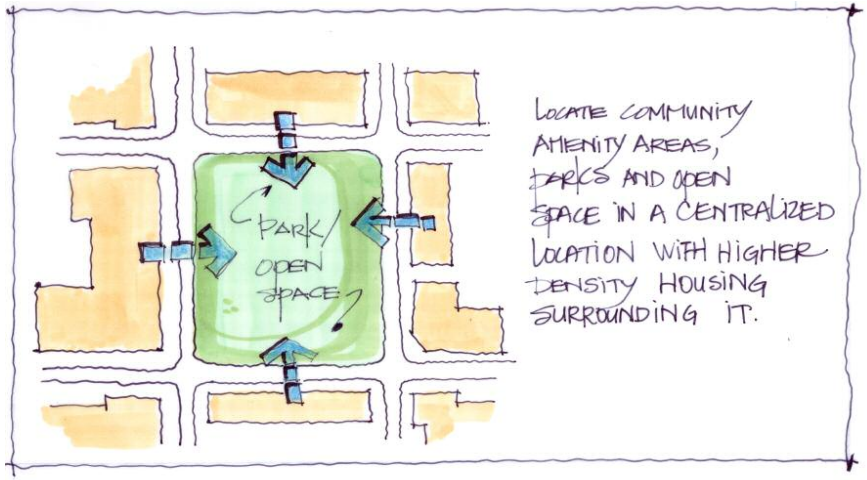
- The mature woodlot located on the eastern boundary of the site will be maintained.
- Any existing hazardous trees including invasive species and diseased or weak wooded trees should be removed as recommended by a certified arborist.
- An accessible trail system through the woodlot that connects with the existing escarpment trail network may be implemented, subject to ensuring the protection of significant woodlot species. This will improve connectivity through the development and provide passive recreation opportunities for the neighbourhood.

4.2 PARKS AND OPEN SPACE

The open space network of the Chedoke Browlands Sub-Neighbourhood is comprised of passive open spaces, neighbourhood parks, naturalized stormwater management areas, and the stream corridor all integrated into the existing neighbourhood context.

Design Principles:

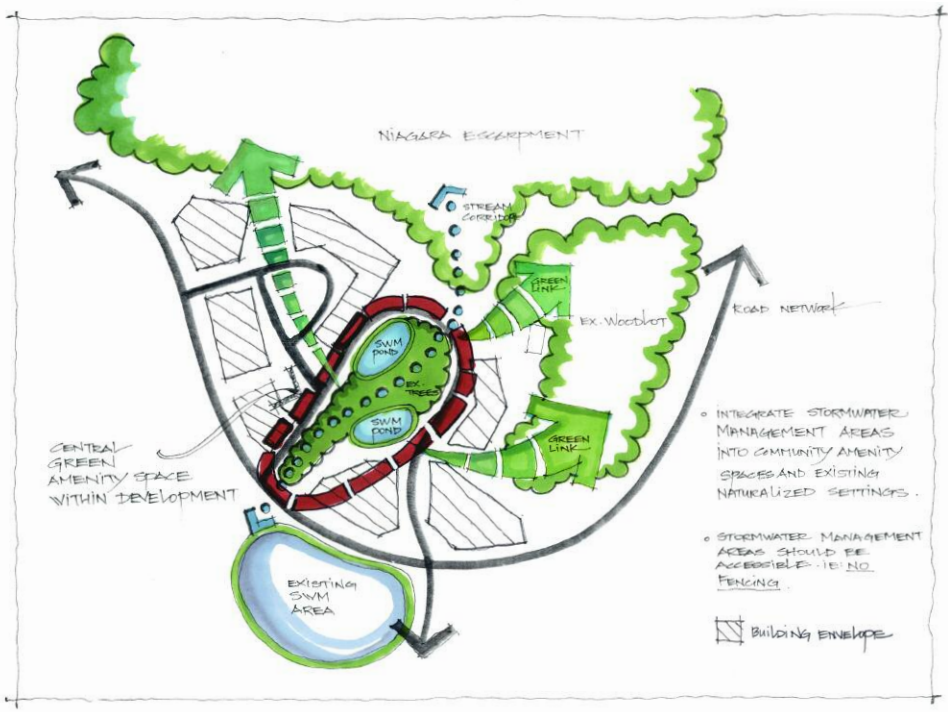
- Parks and open space should be centrally located to provide optimum access and visibility to the community.
- Provide park entrances along the street frontage with seating, signage and landscaping.
- Preserve and protect existing mature and healthy trees, including commemorative trees.
- Proposed vegetation particularly trees should be native species to protect the cultural landscape of the Niagara Escarpment.
- Integrate the open space and/or parks with existing natural attributes including topography, woodlots, the escarpment brow and Chedoke Creek.
- Where possible, extend parks and open space through the development block so that they become a continuation of the street and public realm in addition to having public exposure for safety.
- Provide common open space for passive recreation accessible to the neighbourhood.
- Pedestrian and bicycle trails through the park or open space should connect with the larger municipal trail system where possible.



▲ *Example of a centrally located neighbourhood park surrounded by medium and high density development*

▲ *Integrate the Chedoke Creek and its related mature vegetation into the parks and open space system*

Connect proposed pedestrian trails with existing Bruce Trail ▶



▲ *Integrate Stormwater Management Areas into the existing natural attributes of the site*

▲ *Chedoke Creek*

▲ *Existing pedestrian bridge crosses Chedoke Creek Stream Corridor.*

4.3 STORMWATER MANAGEMENT FACILITIES

Stormwater management ponds should be publicly accessible and enhanced as passive community amenities. They should be designed in an appropriate manner sensitive to the surrounding neighbourhood context.

The site has an existing stormwater management area and watercourse (Chedoke Creek) running through its centre. It is bordered by Sanatorium Road and is well established with mature vegetation. This area of the site already functions as a passive recreational area surrounded by mature vegetation and the existing heritage pedestrian bridge. There is a good opportunity to locate any proposed ponds here to enhance the existing stream corridor.

Design principles of stormwater management ponds:

- Stormwater management facilities (SWM) should be integrated into the community amenity areas, open space and into existing naturalized areas where possible.
- Coordinate an urban edge treatment for the ponds with the abutting street edge and pedestrian system.
- The design of the SWM facility should negate the need for any fencing. The facility should be an accessible amenity feature integrated into the neighbourhood trail system.
- The vegetation of the SWM facility should be naturalized including native riparian plant species to encourage natural habitat and survivability.
- Concrete headwalls should be screened with naturalized native plant species, if required.
- SWM facilities should be designed to meet public safety standards.

5.0 ROADS AND STREETSCAPE

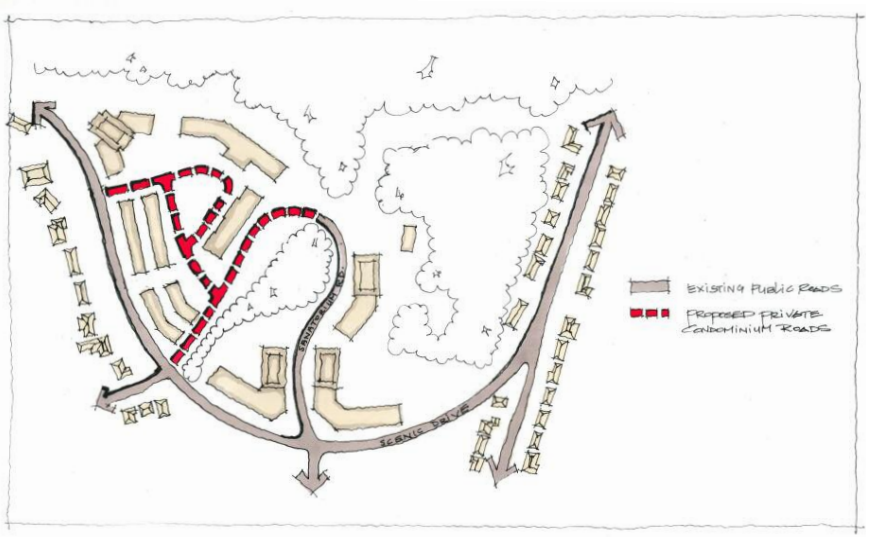
Pedestrian oriented aesthetic streetscapes provide a vital role in establishing the visual character of a neighbourhood. Good streetscape design ties the public realm to the private realm and promotes walkability.

Design Principles:

- Position buildings to parallel the street edge.
- Limit the building setback from the road right of way.
- Create visual interest through architectural design detailing such as varied but compatible massing, roof lines, and materials for example.
- Coordinate street furnishings and paving to promote community identity.
- Provide a continuous tree canopy to create a 'green' streetwall.

5.1 PUBLIC REALM – Scenic Drive and Sanatorium Road

- Street trees should be provided along all streets wherever possible to improve the streetscape, strengthen the street wall and provide shade.
- Street trees should generally be located within the boulevard in a continuous linear row spaced 6 to 8 metres on centre according to traffic safety criteria.
- Tree species should be predominately native to ensure survivability and compatibility with the existing native species within the Niagara Escarpment.
- The planting of infill trees along existing streets should be of compatible spacing and species to existing trees for consistency.



▲ *Layout new roads respecting existing significant view corridors, vegetation and circulation patterns*

▲ *New street tree planting in a grassed boulevard*

Street tree planting along Scenic Drive creates a green street wall ▶

▲ *Examples of pedestrian scaled streets with a consistent row of street trees*

5.2 PRIVATE REALM

5.2.1 Local Condominium Roads

- Local condominium roads should be designed at a pedestrian scale to promote walkability and discourage excessive speed and through traffic. The right-of-way standards should be reduced to the minimum width where possible.
- The street furniture including light standards, benches, trash receptacles, recycling facilities should be of pedestrian scale and contribute to the identity of the neighbourhood.
- Deciduous street trees, preferably native species, should line the street in a continuous linear row spaced from 6 to 8 metres on centre.
- Sidewalks with a minimum width of 1.5 metres should be provided on at least one side of all streets.
- Street curb radii at intersections should not exceed 6.5 meters. Smaller curb radii at corners will:
    - ➛ Reduce the distance of the crosswalk at intersections
    - ➛ Provide more pedestrian area at intersections
    - ➛ Require vehicles to slow down as they turn corners
- Utilities should be buried underground where possible. All above grade utilities within the road right-of-way should be screened from view of the street through the use of landscaping and/or architectural screen walls.
- Street corners should be designed to adequately accommodate multiple functions, including pedestrian crossings, location of utility and traffic signal poles, traffic movements, and pedestrian waiting areas for example.
- The choice of curb radii should consider the geometry of the intersection, the street classification and whether there is on-street parking and or a bike lane within the road right-of-way.

5.2.2 Sidewalks

- Sidewalks should be provided on at least one side of the street.
- Sidewalks should have a minimum width of 1.5m and should be accessible.
- Sidewalks should be barrier-free and made of stable smooth materials such as poured concrete.
- Sidewalks should be coordinated with any feature paving material found at major intersections.
- Sidewalks should connect with any proposed or existing public recreational trail systems.

▲ *Provide pedestrian connections into the development from public sidewalks.*

5.2.3 Street Furniture and Lighting

- All street furniture including lighting, benches, trash receptacles and recycling facilities should be developed within an overall theme to contribute to the identity of the neighbourhood.
- Pedestrian scale lighting at a maximum height of 4.5 metres should be implemented along all local roads within the development.
- All lighting should be downcast to protect the night sky, prevent negative impacts on wildlife within the escarpment, and to prevent light trespass on adjacent existing residential properties.
- Additional lighting should be considered where pedestrians tend to gather such as major crosswalks, public trail access points and pedestrian nodes along the escarpment brow.
- All lighting should be located within the road boulevard, approximately 1.0m from the curb edge.

▲ *Street furniture such as lighting, benches and fencing contribute to neighbourhood identity*

◀ *Integrate underground parking ramps into the architectural design of the building*

▲ *This architectural planter wall creatively screens the building venting system from view.*

▲ *Screen utilities that are at street level with architectural walls and/or landscaping*

5.2.4 Parking

- Where possible, the majority of residential parking will be located below grade.
- Integrate underground parking ramps into the architectural design of the building.
- Locate surface parking to the side and rear of buildings where possible.
- Short term parking facilities within a residential block should be limited to single row with drive and should be screened from view of the street with landscaping.
- Appropriate lighting levels should be provided in parking areas to assist pedestrian and vehicular circulation and safety while respecting adjacent land uses.
- Designated handicapped spaces to city standards should be located as close to the building entrance as possible.

5.2.5 Utilities

- Utilities should be located below grade where possible.
- Above grade utilities should be sited with regard for their visual impact on the streetscape.
- Where possible, above-grade facilities should be located in low profile areas away from intersections, day-light triangles, and important view corridors.
- Where possible, street grade public utilities such as transformers or switching stations should be screened through the use of landscaping or low architectural walls that fit into the neighbourhood context.

6.0 ENVIRONMENTAL SUSTAINABILITY

6.1 LANDSCAPE AND STREETSCAPE

- Soft landscaping should be maximized to increase the amount of rainwater absorption by plants.
- Minimize the surface area of impervious hardscape (i.e. concrete and asphalt paving) to reduce discharge into the storm drainage system.
- Green roofs on larger buildings should be incorporated where feasible to improve building insulation, reduce surface runoff and minimize discharge into the storm drainage system.
- Native plant species should be used throughout the site to protect the cultural heritage landscape of the Niagara Escarpment. Native plant species are also low maintenance and require less water than non-native species.
- Existing mature significant non-invasive trees should be preserved and integrated into the design development where possible.
- Incorporate deciduous trees throughput the development. Deciduous trees provide shade in the summer and help to reduce internal building temperatures. In the winter months, deciduous trees shed their leaves and allow sunlight to penetrate windows and warm internal temperatures.
- Solar powered lighting and LED lighting should be implemented throughout the site to minimize energy consumption.
- Implement full cut-off lanterns to minimize light pollution, glare and light trespass and ensure protection of the night sky.

6.2 BUILT FORM

- Site design and building placement should consider passive cooling and ventilation.
- New buildings should incorporate sustainable building technology including high energy efficiency, recycled materials for example using LEED standards as a model.
- Adaptive reuse of existing buildings on site should be incorporated into the design development where feasible.
- Renewable energy systems should be considered for all buildings.
- Innovative recycling of wastewater and graywater should be encouraged including sustainable irrigation systems. This will reduce the amount of discharge into the storm drainage system.

7.0 IMPLEMENTATION

These urban design guidelines have been prepared to provide a framework for development within the Chedoke Browlands development. They will guide the private sector in preparation of site plan applications and assist the public sector in their review and assessment of such proposals. However, design criterion contained herein may be superceded by the City of Hamilton design and engineering standards and bylaws during the evaluation process.