THE PURPOSE OF THIS GUIDELINE

The purpose of this Comprehensive Infill Guideline is to provide some direction regarding how low-rise residential infill projects can be assessed to ensure sensitive design and integration into existing neighbourhoods. This guideline will provide municipalities within Ontario with information about infill design considerations and an assessment tool to help evaluate the quality and suitability of infill development projects. It is not the intent of these guidelines to restrict design flexibility or creativity, but to encourage architects and designers to avoid the potential conflicts that may arise with residential infill development.

This guideline is for information and reference purposes only. It is not a policy or regulatory document.

HOW TO READ THIS GUIDELINE

The Comprehensive Infill Guideline consists of guidelines, a multiple account evaluation tool, definitions, and appendices. It also includes non-guideline contextual commentary to provide background and describe the intent of the guideline. Terms in italics are defined in the Glossary of Terms section of this guideline. The information found in this guideline has been derived from a wide range of references. These references are provided in the References section.

These guidelines are to be read in conjunction with a municipalities’ Official Plan, Zoning By-laws, and technical guideline documents, and are intended to enhance the development approval process, the quality of infill housing, and redevelopment in the community. As provided for municipalities in the Province of Ontario, enforced policies prevail where there is conflict between this guideline and enforced policies, including the Provincial Policy Statement, the Growth Plan, Official Plans, and Zoning By-laws in the respective municipality of the proposed residential infill development.
3.3 NATURAL ENVIRONMENT

The natural environment encompasses all living and non-living things that exist naturally in the Earth's ecosystem. The natural environment can be highly influenced by development of the built environment. Specifically, there are a number of variables within the natural environment that should be considered in relation to infill development.

Vegetation is a vital component of the natural environment as it provides a habitat to animals, and almost all potential development sites will have some form of existing vegetation. In terms of infill development in established neighbourhoods, the existing vegetation is typically composed of mature trees and shrubs, as well as plants and grasses that are often overgrown. The ways in which existing vegetation is handled and treated can have a significant impact on the area's natural environment.

3.3.1 Infill development should minimize possible negative impacts on the natural environment by preserving existing vegetation on site wherever possible.

- Optimal: The proposed development preserves all existing vegetation, while also planting additional native species on the site.
- Satisfactory: The proposed development preserves some existing vegetation and removes some of the vegetation. The removed vegetation will be replaced with native species on site, or financially compensated to the local municipality.
- Unsatisfactory: The proposed development removes all existing vegetation.

Relevant tools that support the objectives of the guidelines within the theme area:

- Environmental Assessment
- Environmental Master Plan
- Natural Environment Plan
- Preliminary Environmental Impact Report
- Tree Inventory Report
- Tree Preservation Plans
- Topographic Surveys
- Tree compensation calculations
- Conservation Authority's policy documents
- Local Environmental Advisory Committees
- Low impact development guidelines

Explanation on how the guideline is quantified under the assessment tool.

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1.0 INTRODUCTION

Communities across Ontario have recognized that sprawling patterns of growth cannot be sustained. Problems of increased traffic congestion, overstretched public facilities, increased infrastructure costs, loss of open space and other valued community resources, and even reduced physical activity and community health typically are associated with such patterns. As a result, there has been an increased emphasis on developing passed-over parcels within developed areas and on maximizing use of existing public facilities.

Increasing residential densities within existing developed areas is an important planning goal in most municipalities in Ontario, particularly given recently approved Provincial legislation, such as the Growth Plan for the Greater Golden Horseshoe (2006). While much support is given to developing within urban cores and along major corridors, there is less emphasis on small-scaled infill developments outside of the aforementioned areas.

Focusing infill development in stable and transitioning residential neighbourhoods within rural, suburban, and urban fringe areas provide the opportunity to increase the efficiency of land use and existing infrastructure by increasing density. However, this development must address the character of established areas and its compatibility with the surrounding context.

Hence, a Comprehensive Infill Guideline for low-rise residential infill developments in Ontario’s municipalities is an important tool for fostering quality infill development that achieves municipalities’ goals and objectives. The guideline provided here will address different scale and forms of low-rise housing and how buildings and sites should be designed to support compatibility with the existing built form and the neighbourhood context, as well as support quality intensification through infill that enhances the area.

2.0 BACKGROUND

2.1 BENEFITS OF INFILL DEVELOPMENT

Infill development can benefit existing communities in a variety of ways. It helps to revitalize and renew old housing stock in existing areas, which often helps to increase the real estate and property values. Existing infrastructure is better utilized through infill development and public service costs such as sidewalks, water and sewer, and public safety (fire, hospital, and police) tend to be lowered. It also can assist a community in achieving thresholds of population density necessary for amenities involving park space and community services.

In residential areas it provides the opportunity to create additional housing stock by developing the vacant land, provides an opportunity for a variety of residential development to take place, and provides for the rejuvenation of the area with the infusion of new development.

By absorbing growth into existing communities, infill relieves growth pressures on vacant, rural areas and can improve quality of life for older communities. Infill helps to achieve the goals of smart growth: support existing communities, preserve our best agricultural and natural areas, and save taxpayers from the high cost of building infrastructure to support sprawl. However, there are still many barriers to infill development and municipalities need to properly assess infill developments in order to ensure that infill developments are compatible with existing communities.
2.2 AREAS INTENDED FOR RESIDENTIAL INTENSIFICATION

Although intensification can occur across municipalities, there are a number of principal areas where residential intensification typically occurs. The nature, form, and context of residential intensification vary depending on where projects take place. Principal intensifications areas include downtowns, major street corridors, community nodes, and former commercial, institutional, and industrial sites, and established residential neighbourhoods.

This guideline is purposed for low-rise residential infill developments occurring in established residential neighbourhoods. Established neighbourhoods are generally built-out and these neighbourhoods may be stable or in transition.

The Rural-to-Urban Transect is an organizing principle used in Form-Based Coding that establishes a hierarchy of places or contexts from the most rural to the most urban. The designation of each zone along this hierarchy is determined first by the character and form, intensity of development, and type of place and secondly by the mix of uses within the area.

The model transect for residential areas is divided into six transect zones or T-zones:

- (T1) Natural
- (T2) Rural
- (T3) Sub-Urban
- (T4) General Urban
- (T5) Urban Center
- (T6) Urban Core

This guideline shall be used for those infill developments proposed in T2, T3, and T4 transect zones.

2.3 DIFFERENT TYPES AND FORMS OF LOW-RISE RESIDENTIAL INFILL DEVELOPMENT

Compatibility and appropriate transitions are particularly important in established residential neighbourhoods. Given their character, the established residential neighbourhoods are generally intended to accommodate new low-rise development, such as single detached dwellings, townhouses, duplexes, and apartments, as well as adaptive re-use and conversions of existing buildings. The guideline is geared towards the following forms of residential infill development:

- Developing one or more new residences on an undeveloped or underutilized site within an existing, established neighbourhood;
- Redevelopment of underutilized properties (i.e. tear-downs);
- Redevelopment of existing buildings;
- Conversion of previous commercial or industrial spaces;
- Adaptive reuse of existing institutional or public buildings;
- Severance of an existing property;
- Vertical additions to existing buildings; and
- Addition of new residential units in an existing residential building.

For the purpose of this guideline, low-rise residential development include:

- Small Lot: A single detached house on a narrow lot (typically 10m wide)
- Duplex: One building with two dwellings placed one on top of the other
- Semi Detached: One building with two dwellings attached at the side
- Fourplex: One building with 4 dwellings, arranged 2 deep up-and-down, or back-to-back
- Row Housing: 3 or more dwelling attached at the side
- Stacked Row Housing: A building with multiple units stacked 2 deep either vertically or horizontally
- Low Rise Apartment: A building up to 4 storeys with many dwelling units stacked in a vertical and horizontal configuration.
2.4 PLANNING TOOLS FOR A CITY TO ENSURE APPROPRIATE RESIDENTIAL INTENSIFICATION

There are a number of planning tools available at the municipal level to ensure that residential intensification is well-designed and appropriate within a neighbourhood.

**Official Plan**
A long range planning policy document which guides growth and manages development over time. It establishes goals, objectives and policies to guide the future physical development of the City. The Official Plan, including its Secondary Plans, establishes the general land use pattern across the City and identifies the preferred primary locations for residential intensification.

**Zoning By-law**
Takes its direction from the policies of the Official Plan in providing specific regulations and standards that control what can be done with a property. A zoning by-law typically regulates building size; building height and coverage; building mass or bulk; building location and setbacks; parking requirements; and permitted uses.

**Minor Variances**
Minor Variances are a way of enabling slight changes to the requirements of the zoning by-law without requiring a zoning by-law amendment. The four tests of a minor variance, as set out in the Ontario Planning Act, must all be met before a minor variance is granted by the appropriate approval authority, which is commonly a municipality’s Committee of Adjustment. Minor variances are commonly sought when infill developments are occurring to existing structures that increases density without varying significantly from the established purpose and form of the structure.

**Severances**
Severances are a methods of dividing properties, regulated by the Ontario Planning Act. A severance is the authorized separation of a piece of land to form two new adjoining properties. Severances are commonly used within established neighbourhoods where a larger lot is divided to create a new infill lot or lots.

**Site Plan Control**
The principal tool for ensuring appropriate residential intensification is achieved is the Site Plan Control process. Site Plan Control is a tool available to municipalities under the Ontario Planning Act that enables the City to perform a detailed review of proposed developments, including industrial, commercial, institutional, and multiple residential projects. Site Plan Control does not deal with the review of single detached houses and is limited in that regard. Site Plan Control enables the City to consider a number of site elements, including building mass and design; relationship to surrounding land uses; driveways, curbing and traffic signs; loading and parking facilities; emergency vehicle routes; pedestrian accesses and walkways; site landscaping; grading and servicing; and road widening.

Urban Design Guidelines
Urban design guidelines are adopted to advance the policies, goals, and objectives of the Official Plan and help translate these directions into desired outcomes for the design of streets, parks, open spaces and buildings. The guidelines are intended to assist the public, land owners, developers, and City Staff with clear tools to guide the design of projects with a residential component. Generally, the guidelines illustrate some of the best practices and important principles for design in the public and private realms.

**Comprehensive Infill Guideline**
The Comprehensive Infill Guideline is provided to identify and illustrate design preferences and expectations for site development, and to assist applicants with the approval process. These Guidelines encourage high quality building and site design, ensuring that new development is accessible, safe, and functional. A broad range of topics is addressed in the Guidelines to ensure that all aspects of a proposed development are considered in the site design process. These guidelines are to be read in conjunction with the City’s Official Plan and Zoning By-law and are intended to enhance the development approval process and the quality of infill housing and redevelopment in the community.
To help ensure compatibility with the surrounding residential neighbourhood and to provide liveable dwellings, infill development should be in the same general character of the residential homes in the area while at the same time contributing to the design diversity of the neighbourhood. To deal with the context within which projects occur, the infill guideline has been developed to take into consideration local regulations and provide flexibility in the assessment process. The guideline can be applied universally but will cover a range of situations, and the guidelines are performance-based rather than detailed regulations.

3.1 GUIDING PRINCIPLES

To ensure a comprehensive approach to developing the infill guideline, the criteria provided under five broad theme areas serve as direction towards a successful low-rise residential infill development project, and tests for compatibility, character of neighbourhoods, and efficacy of policies.

<table>
<thead>
<tr>
<th>NATURAL ENVIRONMENT</th>
<th>TRANSPORTATION &amp; INFRASTRUCTURE</th>
<th>CULTURE &amp; SOCIETY</th>
<th>ECONOMIC DEVELOPMENT</th>
<th>LAND USE &amp; BUILT FORM</th>
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<tr>
<td>Prioritize infill proposals that minimize adverse effects on the natural environment, have undergone necessary Environmental Assessments and take into account innovative solutions to comply with sustainable development principles.</td>
<td>Prioritize infill proposals that improve, maximize, or make efficient use of local transportation, sewage, and stormwater infrastructure capacities.</td>
<td>Prioritize infill proposals that limit negative impacts to the surrounding community, consider the preservation of cultural heritage and needs of the local community members and future residents.</td>
<td>Prioritize infill proposals that support population and employment growth, support the employment and commercial needs of the residents and encourage local economic development.</td>
<td>Prioritize infill proposals that comply with land use policies and planning directions established by local municipalities and are compatible with surrounding land uses with consideration to appropriate size, scale, and form.</td>
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3.2 DEFINING THE STUDY AREA

When assessing the potential impacts of a proposed infill development, users of the guideline and assessment tool must first define the study area through on-site field surveys. The assessment of infill developments will require the identification of multiple study areas at various scales in order to assess the varying zones of impact: environmental, social, and economic. This Comprehensive Infill Guideline suggests four study area classifications: the Site-Level scale, the Visible Study Area (small-scale), and the Surrounding Environment Study Area (large-scale), and the Surrounding Socio-Economic Study Area (large-scale). The four categories are defined based on unique considerations to encompass the impacts of a proposed development.

**SITE LEVEL STUDY AREA**

The site-level scale implies that only the land contained within the boundaries of the subject site should be taken into consideration.

**VISIBLE STUDY AREA**

Identifying the study area based on visual elements enables the user to take into account the local topography, pattern, and curvature in the street network, and variation in the built form. To identify the Visible Study Area, proceed with the following instructions:

1. Standing at the centre point of the front property line of the subject site (the property line fronting onto a street), identify all structures and other significant features that are visible from all angles (such as public open spaces or environmental features). Note that for corner lots, the user should stand at the centre point of any property line abutting a street (front and flankage). The limit of the study area should be the extent at which the surveyor can no longer visibly see any additional structures or significant features.

2. This process should be repeated at the centre point of rear property line.

3. Emphasis should be placed on structures and features you can see in the foreground, rather than taller structures that may appear in the background.

4. In the case of extreme topography or curvature in the street network, discretion should be used to expand the limit of the Visible Study Area to take into account any additional areas that are not visible.

5. The Visible Study Area should not exceed a distance of 400 metres from the centre of the front or rear lot line of the property.

**SURROUNDING ENVIRONMENT STUDY AREA**

If the subject lands is situated within an environmental feature or corresponding buffer area, the Surrounding Environment Study Area should be defined, containing all connecting systems influencing defined environmental feature. For example, if a river (or the regulated buffer area of a river) is located on the subject lands, a Secondary Environment Study Area will be defined by a qualified environmental professional. This larger study area should encompass the surrounding network depending on the significance of the environmental feature, as determined by a qualified professional. In some cases, it may be unnecessary to specify a Surrounding Environment Study Area if an environmental feature or buffer area (regulated by a recognized environmental agency, such as a Conservation Authority or the Ministry of the Environment) is not present on the site.

1. Identify any significant environmental features of buffer areas that are contained within on the subject site.

2. The surrounding environment study area should include all connecting systems that influence any identified environmental features.

**SURROUNDING SOCIO-ECONOMIC STUDY AREA**

The extent of the Surrounding Socio-Economic Study Area should be determined by a qualified professional based on realistic assumptions regarding willingness to travel to social amenities and areas of economic generators from the subject lands. Typically, the Surrounding Socio-Economic Study Area will exceed well beyond the Visible Study Area within 800 metres from the subject site. However, an activity centre should not be disregarded if it is outside an 800 metre radius from the subject site.

1. The extent of the Surrounding Socio-Economic Study Area should be determined by a qualified professional based on realistic assumptions regarding willingness to travel to social amenities and areas of economic generators from the subject lands.

2. The Surrounding Socio-Economic Study Area should be approximately within 800 metres from the centre of the front or rear lot line of the property.
3.3 NATURAL ENVIRONMENT

The natural environment encompasses all living and non-living things that exist naturally in the Earth's ecosystems. The natural environment can be highly influenced by development of the built environment. Specifically, there are a number of variables within the natural environment that should be considered in relation to infill development.

**Existing Vegetation**

Vegetation is a vital component of the natural environment as it provides a habitat to animals, and almost all potential development sites will have some form of existing vegetation. In terms of infill development in established neighbourhoods, the existing vegetation is typically composed of mature trees and shrubs, as well as plants and grasses that are often overgrown. The ways in which existing vegetation is handled and treated can have a significant impact on the area's natural environment.

### 3.3.1 Infill development should minimize possible negative impacts on the natural environment by preserving existing vegetation on site wherever possible.

**Optimal:** The proposed development preserves all existing vegetation, while also planting additional native species on the site.

**Satisfactory:** The proposed development preserves some existing vegetation and removes some of the vegetation. The removed vegetation will be replaced with native species on site, or financially compensated to the local municipality.

**Unacceptable:** The proposed development removes all existing vegetation.

**Environmental Features**

Environmental features are significant ecological systems that strongly contribute to the ecosystem and ecological function of the area surrounding them, for example a river or a wetland. In Ontario, these environmental features are protected by Conservation Authorities and all development applications involving environmental features must receive approval from the respective Conservation Authority. While these features protected by the Conservation Authorities through setbacks, a developer can go beyond the requirements and further enhance the feature in order to enhance the overall ecosystem in the area.

### 3.3.2 Infill development should attempt to protect environmental features from possible negative effects of development. If an environmental feature or buffer area is present on the site, the development should maintain, and enhance if possible, the existing environmental feature or features.

**Optimal:** The proposal maintains or enhances existing environmental features, for example through providing additional unrequired buffer plantings to a river or by allocating additional land to a Conservation Authority beyond the required quantity.

**Satisfactory:** The proposal maintains existing vegetation.

**Unacceptable:** The proposed development does not maintain or enhance the environmental feature beyond the requirements of the local Conservation Authority or Environmental Advisory Committee.
There are many green building techniques advancing and evolving in the field of land development and homebuilding. As potential purchasers become increasingly aware and concerned for the environment, the housing industry has had to become more environmentally-conscious as well. Green building techniques are building methods that have significantly less negative environmental impacts than traditional building techniques, and they go beyond typical environmental requirements. There are endless green building techniques available: low-impact development, sustainable/local materials, energy-efficient products, and water-efficient techniques. Some building techniques will be introduced at a point after a development receives planning approval, such as the choice to use sustainable building materials or energy efficient products. However, there are also many green building techniques that can be introduced during the planning approval stages, such as bioswales, green roofs, and solar panels.

To encourage the proportion of sustainable development, infill development should implement green building techniques beyond the requirements of the local municipalities.

3.3.3 To encourage the proportion of sustainable development, infill development should implement green building techniques beyond the requirements of the local municipalities.

Optimal: The proposed development includes multiple green building techniques, significantly improving the environmental impacts of the proposed development (i.e. a green roof or solar panels).

Satisfactory: The proposed development includes one green building technique (i.e. a bioswale).

Unacceptable: The proposed development does not incorporate any green building techniques.

3.4 TRANSPORTATION AND INFRASTRUCTURE

New developments have the ability to increase density within a neighbourhood which puts pressure on existing services and infrastructure. Specifically, attention must be given to public transportation systems, pedestrian and cycling infrastructure, stormwater management, and sewage capacity.

Access to Public Transit

Complete communities are transit-oriented. Potential increase in density achieved through a proposed development supports public transit. People are willing to use transit on a regular basis if access to transit is within a reasonable walking distance from where they live and work. A reasonable walking distance is defined as a 400 to 800 metre or a 5 to 10 minute walk, depending on the level of transit service and the pedestrian environment. The development should be compared against the municipal public transit agency’s service plans, if applicable.

3.4.1 To encourage the development of complete communities, infill developments that are situated within 800 metres of a public transit bus stop should be prioritized.

Yes: There is public transit service provided by the municipality or region within 800 metres of the proposed development.

No: There is no public transit service provided by the municipality or region within 800 metres of the proposed development.
Infill development should foster a high quality public land, a comfortable environment for walking and cycling, and new or improved connections within an existing mature area. Sidewalks should be provided that tie into existing pedestrian networks. They should be sufficiently wide and well maintained to encourage walkability and be constructed using a high standard of materials and treatments. Infill development should respect existing pedestrian movement patterns and should look for opportunities to provide new or improved connections. A municipality may have an active transportation master plan which address in detail good policy and planning principles for safe, efficient, convenient, equitable development.

3.4.2 Connect sidewalks with those existing in the area.

**Yes:** The infill development proposes sidewalks to be connected with those in the existing area.

**No:** The infill development does not propose sidewalks to be connected with those in the existing area.

3.4.3 Connect paths and trails with those existing in the area.

**Yes:** The infill development proposes paths and trails to be connected with those in the existing area.

**No:** The infill development does not propose paths and trails to be connected with those in the existing area.

Stormwater and Sewage Infrastructure

Municipalities generally plan a block that assumes the density of an area based on planned zoning. Based on this assumed density, infrastructure and servicing capacity is planned in conjunction with initial development. If a proposed development deviates from the zoning, there may be a chance that current stormwater and sewage capacity will not be sufficient to support the development. A proposed development increases the capacity of existing stormwater and sewage infrastructure is not desired.

3.4.4 To support existing stormwater and sewage infrastructure, infill developments that do not stress the capacity of the existing stormwater and sewage infrastructure and do not increase the need for enhancing the existing systems should be prioritized.

**Yes:** The infill development proposed does not require enhancing of the existing stormwater and sewage infrastructure system.

**No:** The infill development proposed requires enhancing of the existing stormwater and sewage infrastructure system.

3.5 CULTURE AND SOCIETY

Culture and society encompasses the identity and well-being of the surrounding community and future residents. Infill development projects within established residential neighbourhoods should respect the existing community and local context by giving consideration to the preservation of cultural heritage and the potential impacts on local residents. There is opportunity for residential infill developments to address social issues such as the availability of housing options within an established neighbourhood. Infill projects should also be assessed based on whether or not their locations are suitable for residential development in terms of proximity to community facilities, schools, places of worship and entertainment amenities.

Safety

Both real and perceived safety should be primary concerns when building new infill developments. Infill development projects have the potential to positively contribute to the safety and security of the street. Primary entranceways and walkways connecting to the building should be suitably located to enhance safety through natural surveillance (i.e. people on the street). A municipality may have urban design guidelines that address issues of safety through the design of the built environment.

3.5.1 Primary entranceways and walkways connecting to the building should be visible from the street without any visual obstructions.

**Optimal:** Entranceways and walkways connecting to the building are visible from the street without any visual obstructions.

**Satisfactory:** Entranceways and walkways connecting to the building are visible from the street but with some visual obstructions.

**Unacceptable:** Entranceways and walkways connecting to the building are not visible from the street.

3.5.2 The building, primary entrances, windows and/or porches should be oriented towards the street to enhance safety through natural surveillance (or eyes-on-the-street).

**Optimal:** The building, primary entrances, windows and/or porches are oriented towards the street, creating an eyes-on-the-street effect.

**Satisfactory:** The building, primary entrances, windows and/or porches are not entirely oriented towards the street but helps a little to create an eyes-on-the-street effect.

**Unacceptable:** The building, primary entrances, windows and/or porches turns its back onto the street, creating a completely disengaged built form with no eyes-on-the-street effect.

RELEVANT TOOLS

- Urban Design Guidelines
- Crime Prevention through Environmental Design (CPTED) measures
- Noise Impact Study
- Ontario Heritage Act
- Ontario Heritage Toolkit
- Heritage Impact Assessment
- Archaeological Management Plan
- Housing Plan
- Housing Choice Study
- Community Culture Master Plan

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Neighbourhood Impacts

Neighbourhood impacts encompass any impacts that may affect the health, safety, welfare or comfort of the surrounding community. Impacts may include noise, odour, vibration, visual and aesthetic blight.

3.5.3 Infill development should not affect the health, safety, welfare or comfort of the surrounding community; any potential nuisance impacts (such as noise, odour, vibration, visual and aesthetic blight) should be properly mitigated.

Optimal: No impact to health, safety, welfare or comfort of the surrounding community is identified.

Satisfactory: No health and safety impact have been identified but some impacts to welfare or comfort have been identified, such as nuisance concerns.

Unacceptable: Impacts to health and safety of the surrounding community have been identified. The infill development may cause additional impacts on welfare and comfort.

Heritage Impact and Preservation

The provision of built heritage resources and cultural heritage landscapes is important. Infill development may occur as an addition to existing protected heritage properties or to properties existing within a Heritage Conservation District (HCD) as designated or listed in the Ontario Heritage Act Register. Infill development may also occur adjacent to or in close proximity to designated or listed heritage properties. In either case, infill developments should minimize impact on protected heritage properties and/or the HCD. Impacts include visual, contextual, physical and structural effects related to heritage attributes of the property or District. In addition, infill developments should attempt to complement protected heritage properties through building design such as scale, massing, height and façade design.

3.5.4 If an existing heritage building is being intensified, the heritage values, attributes and integrity of the heritage building should be conserved, protected and retained.

Optimal: A heritage impact assessment has been undertaken and it has identified no impact on the heritage values, attributes and integrity of the heritage buildings, features or HCD.

Satisfactory: A heritage impact assessment has been undertaken and it has identified some impacts to the heritage values, attributes and integrity of the heritage buildings, features or HCD, but these impacts may be mitigated.

Unacceptable: A heritage impact assessment has not been undertaken, or a heritage impact assessment has been undertaken and the impacts to the heritage values, attributes and integrity of the heritage building is too severe to be mitigated.

3.5.5 If the infill development is occurring within a HCD, the heritage values, attributes and integrity of the HCD should be conserved, protected and retained.

Optimal: A heritage impact assessment has been undertaken and it has identified no impact on the heritage values, attributes and integrity of the HCD, and the heritage values of the building may even be enhanced.

Satisfactory: A heritage impact assessment has been undertaken and it has identified some impacts to the heritage values, attributes and integrity of the HCD, but these impacts may be mitigated.

Unacceptable: A heritage impact assessment has not been undertaken, or a heritage impact assessment has been undertaken and the impacts to the heritage values, attributes and integrity of the HCD is too severe to be mitigated.

Housing Choice

Infill developments present opportunities to increase housing choice in existing neighbourhoods, whether by housing type or tenure. This objective is often found in Official Plan policies at the regional or local level. This objective, however, is not intended to encourage housing types that are not visually or physically compatible with the existing built form.

3.5.6 Where applicable, it may be desirable for infill developments to diversify the existing housing stock in an area by increasing the available housing options.

Yes: If diversified housing stock is an objective of the municipality, the proposed infill development satisfies the need for diversified housing choice.

No: If diversified housing stock is an objective of the municipality, the proposed infill development does NOT satisfy the need for diversified housing choice.
Suitability of Location

The location of the infill development is a key determinant of its suitability for residential uses. Indicators include: proximity to community facilities (such as public spaces, libraries, community and recreation centres); proximity to schools and places of worship, and proximity to entertainment/amenities (such as theatres, exhibitions, visual arts, screen based performances).

3.5.7 Infill developments are primarily encouraged in areas that are located within a ten-minute walking distance (or 800 metres) to community facilities, such as public spaces, libraries, community and recreation centres.

Optimal: The location of the infill development is located within 800m from one or more community facilities such as public spaces, libraries, community and recreation centres.

Satisfactory: The location of the infill development is located slightly outside of an 800-metre range from community facilities.

Unacceptable: The location of the infill is far beyond an 800-metre range from community facilities.

3.5.8 Infill developments are primarily encouraged in areas that are located within a ten-minute walking distance (or 800 metres) to schools and places of worship.

Optimal: The location of the infill development is located within 800m from one or more schools or places of worship.

Satisfactory: The location of the infill development is located slightly outside of an 800-metre range from schools or places of worship.

Unacceptable: The location of the infill is far beyond an 800-metre range from schools or places of worship.

3.5.9 Infill developments are primarily encouraged in areas that are located within a ten-minute walking distance (or 800 metres) to entertainment and amenities such as theatres, exhibitions, visual arts and screen-based performances.

Optimal: The location of the infill development is located within 800m from one or more entertainment/amenities (such as theatres, exhibitions, visual arts, screen based performances).

Satisfactory: The location of the infill development is located slightly outside of an 800-metre range from entertainment/amenities.

Unacceptable: The location of the infill is far beyond an 800-metre range from entertainment/amenities.

3.6 ECONOMIC DEVELOPMENT

The influence that an infill development will have on the community’s economic context must be considered in the assessment of any proposed development as new developments can be considered drivers of either positive or undesirable changes. Proximity to areas of interest and the consideration of local and regional economic development policies are important considerations that will impact the success of an infill development and its’ impact on the surrounding neighbourhood.

Access to Areas of Interest

By increasing density, through infill development, alongside areas of interest, there will be positive impacts of both the property being close to amenities and those amenities having an increased user base. Areas of interest are considered to be retail and commercial amenities that provide both jobs and retail opportunities to the surrounding community.

3.6.1 To encourage the development of complete communities, infill developments that are situated within 800 m of an area of interest should be prioritized.

Optimal: Sites that are situated within 800m of more than two areas of interest for the benefit of both the commercial/retail land use and the future resident.

Satisfactory: Sites that are situated within 800m of one area of interest for the benefit of both the commercial/retail land use and the future resident.

Unacceptable: Sites that are situated within 800m of an area of interest.

3.6.2 Infill developments should conform to local municipal economic policies and those that are situated in areas of desired intensification, as identified by local policies, should be prioritized.

Optimal: Proposed development is situated in a desired area of intensification, conforms with local policies, and promotes economic development as directed by the local Municipality.

Satisfactory: Proposed development is situated in a desired area of intensification.

Unacceptable: Proposed development is not situated in a desired area of intensification.
3.7 LAND USE AND BUILT FORM

When dealing with established low-density residential neighbourhoods, the existing land use and built form plays a prominent role in determining the character of the area. Infill development in such low-density residential communities has the potential to drastically change the character of an area based on the built form of the development. Wherever possible, infill development should be carried out in a manner that promotes a compatible built form and encourages the preservation of local neighbourhood character.

The character of a neighbourhood is shaped by the collective physical qualities, including architectural elements and building materials, of the built form of an area. Character plays a prominent role in creating a neighbourhood’s sense of identity. Ensuring that infill development located within established residential communities is consistent with the established character of the area is important. If the infill development is located on a corner lot, the user should exercise extra scrutiny when evaluating and assessing a score for the development’s compatibility in terms of character.

3.7.1 Encourage infill development that is consistent with the character established by the built form of the surrounding study area.

Scale and Massing

Scale and massing relate to the size and form of a dwelling in relation to the surrounding context. The scale and massing of a residential infill development will play a significant role in dictating whether the development is compatible with the surrounding built form. An appropriately scaled infill development should not create a situation where the new dwelling(s) dominate the local streetscape. Evaluating streetscape domination is most effectively done at the street-level, where the proposed development is compared to the existing dwellings within the surrounding neighbourhood. In the final assessment tool, a development that is appropriately scaled within the context of the surrounding neighbourhood will receive a high score, whereas developments inconsistent with the scale of the surrounding built form will receive a low score. If the infill development is located on a corner lot, the user should exercise extra scrutiny when evaluating and assessing a score for the development’s compatibility in terms of scale and massing. Zoning by-laws will regulate such aspects as lot coverage, floor area ratio, and height, which all contribute to a development’s overall scale. Municipal zoning by-laws and relevant urban design guidelines should therefore be viewed as applicable policy when evaluating scale and massing.

3.7.2 Encourage infill development that is compatible with the scale and massing of the built form existing within the surrounding study area.

Building Height

Scale and massing relate to the size and form of a dwelling in relation to the surrounding context. The scale and massing of an infill residential development will play a significant role in dictating whether the development is compatible with the surrounding built form. An appropriately scaled infill development should not create a situation where the new dwelling(s) dominate the local streetscape. Evaluating streetscape domination is most effectively done at the street-level, where the proposed development is compared to the existing dwellings within the surrounding neighbourhood. In the final assessment tool, a development that is appropriately scaled within the context of the surrounding neighbourhood will receive a high score, whereas developments inconsistent with the scale of the surrounding built form will receive a low score. If the infill development is located on a corner lot, the user should exercise extra scrutiny when evaluating and assessing a score for the development’s compatibility in terms of scale and massing. Zoning by-laws will regulate such aspects as lot coverage, floor area ratio, and height, which all contribute to a development’s overall scale. Municipal zoning by-laws and relevant urban design guidelines should therefore be viewed as applicable policy when evaluating scale and massing.

3.7.3 Encourage infill development that is compatible with respect to the height of the built form existing within the surrounding study area.
Lotting Pattern

The lotting pattern of a neighbourhood is a function of lot configuration as well as the manner in which dwellings are situated on the lots. Building orientation and location on a lot will generally be consistent across an established residential neighbourhood. Ensuring that residential infill development maintains the pattern of the existing dwellings located in the surrounding area will improve the development’s overall compatibility. Although lotting pattern is a function of more than just the minimum lot area and frontage and setbacks required by a municipal zoning by-law, such regulations may be viewed as applicable policy. Urban design guidelines may also be viewed as applicable policy.

3.7.4 Encourage infill development that is compatible with the existing lotting pattern established by the built form of the surrounding study area.

Setbacks

The distance that a dwelling is from the front, side, and rear property lines are considered setbacks. Setbacks will influence a development’s overall compatibility in terms of lotting pattern. In addition, setbacks will have an impact on the scale and massing of a dwelling. It is generally desirable to maintain a consistent front yard setback for dwellings located along a street in order to create a stable streetscape. In instances where an infill site is immediately adjacent to two properties with drastically different front yard setbacks, a transitioning approach is generally encouraged. While not as visible from the street, maintaining consistent rear yard setbacks is also desirable. In the final assessment tool, higher scores will be awarded to those developments that maintain relatively consistent setbacks with dwellings located on adjacent lots. Municipal zoning by-laws and relevant urban design guidelines should be used as applicable policy when evaluating the compatibility of a development’s setbacks.

3.7.5 Encourage infill development that is compatible with respect to the existing front yard setbacks established by the built form of the surrounding study area.

3.7.6 Encourage infill development that is compatible with respect to the existing side yard setbacks established by the built form of the surrounding study area.

3.7.7 Encourage infill development that is compatible with respect to the existing rear yard setbacks established by the built form of the surrounding study area.

Garages and Driveways

The location, orientation, and size of garages, whether attached or accessory to, infill residential developments should be designed in a manner that is compatible with existing garages in the surrounding neighbourhood. It is generally undesirable for a garage to dominate the streetscape of a residential lot. Driveways should be located and designed in a manner consistent with the existing rhythm of the street. High scores will be awarded to developments with an appropriately designed garage and driveway. A development with an incompatible garage and driveway design will receive a much lower score. Municipal zoning by-laws and relevant urban design guidelines should be used as applicable policy when evaluating the compatibility of garages and driveways associated with residential infill developments.

3.7.8 Encourage infill development that is compatible with the existing garages found within the surrounding study area.

3.7.8 Encourage infill development that is compatible with the existing driveways found within the surrounding study area.

Lot Area

Lot area should only be considered when a new lot is being created with an infill project. Lot area is a function of the lot’s width and depth. It is generally desirable to maintain relatively consistent lot areas in a neighbourhood. As a result, newly created lots with an area compatible with existing lots located in the surrounding area will be awarded higher scores than newly created lots with incompatible lot areas. Municipal zoning by-laws and relevant urban design guidelines should be used as applicable policy when evaluating the compatibility of lot areas associated with applicable residential infill developments.

3.7.8 Encourage infill development that is compatible with the existing lot areas established by the built form of the surrounding study area.
Lot Frontage

Lot frontage should only be considered when a new lot is being created with an infill project. The length of a lot’s front property line is considered to be the lot frontage. It is generally desirable to maintain relatively consistent lot frontages in a neighbourhood. As a result, newly created lots with frontages that are compatible with existing lots located in the surrounding area will be awarded higher scores than newly created lots with incompatible lot frontages. Municipal zoning by-laws and relevant urban design guidelines should be used as applicable policy when evaluating the compatibility of lot frontages associated with applicable residential infill developments.

3.7.9 Encourage infill development that is compatible with the existing lot frontage established by the built form of the surrounding study area.

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Desirable</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Unacceptable</th>
</tr>
</thead>
</table>

Shadowing

The impact of shadowing created by an infill residential development on adjacent properties depends on the scale, massing, height, and lotting pattern of the development. The amount of shadowing that a dwelling casts onto adjacent properties should be minimized wherever possible. Relevant urban design guidelines may be used as applicable policy when evaluating potential shadowing impacts of infill development.

3.7.10 Encourage infill development that does not create negative impacts related to shadowing for adjacent properties.

<table>
<thead>
<tr>
<th>Optimal</th>
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<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Unacceptable</th>
</tr>
</thead>
</table>

Privacy and Overlook

Privacy is an important factor to take into consideration, particularly in the context of established low-density residential communities. Privacy is reduced as opportunities for overlook from an infill development into adjacent dwellings and yards increase. Elements such as windows, balconies, and decks can, in some cases, work to negatively impact the privacy of adjacent properties. Fencing and privacy walls may be utilized in certain cases to improve the privacy of adjacent properties. Maintaining consistent rear yard setbacks as adjacent dwellings, reducing the number of second storey windows, as well as prohibiting balconies and decks above the first storey generally promote the preservation of privacy. Relevant urban design guidelines may be used as applicable policy when evaluating potential privacy impacts of infill development.

3.7.11 Encourage infill development that does not reduce the level of privacy of adjacent properties.

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Desirable</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Unacceptable</th>
</tr>
</thead>
</table>

3.8 Assumptions

1. Where the guidelines in this document are in conflict with guidelines developed by the respective municipality, the municipality’s guideline will supersede the Comprehensive Infill Guideline.

2. The study areas (“Site-Level”, “Visible”, “Surrounding Environment”, and “Surrounding Economic”) are to be defined before the assessment tool is applied to a development proposal.

3. Regulations established by Conservation Authorities, including setbacks from significant environmental features, supersede the guidelines presented in this document.

4. Conformity with municipal servicing and infrastructure is not included in this guideline as this is dependant on the local engineering assessment.

5. Conformity with the municipality’s Zoning By-laws is not considered in this guideline document. The assessment tool is to be used in conjunction with the municipal zoning review process.
4.0 MEASURING SUCCESS OF INFILL DEVELOPMENT

An interactive assessment tool has been developed to support the Comprehensive Infill Guideline toolkit for decision makers in Ontario who are assessing the merits of an infill development proposals for complex and critical investment decisions. The (Multiple Assessment Evaluation tool ('Interactive Assessment Tool') quantifies the qualitative variables of the guideline in the form of accounts to measure the benefits and consequences an infill development project would have on the respective local context. To assess the functionality and viability of each infill proposal in relation to the local context, the Assessment Tool will evaluate a development application based on the five guiding principles described in Section 3.1, using a scoring system to quantify and evaluate each variable. Refer to Appendix A for the Assessment Tool User Manual.

To test the appropriate use of the Comprehensive Infill Guideline and Assessment Tool, two infill developments in Ontario were examined in the form of case studies. Appendix B presents a case study in City of Pickering. Appendix C presents a case study in Town of Oakville.

5.0 CONCLUSION

The Comprehensive Infill Guideline reflects consideration for the needs and desires of a municipality to assess new, low-rise residential infill development located within an existing community.

The services provided by BS Partnership in the preparation of this guideline were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,

Sarah Krapez
Sarah Krapez, Project Manager
Prepared by: BS Partnership
Reviewed By: Joe Quain, Project Advisor

ACKNOWLEDGEMENT
BS Partnership would like to acknowledge the participation of Dr. Zhu (Joe) Qian in the development of this document.
6.0 GLOSSARY OF TERMS

Active Transportation: Any mode of transportation by which people use their own energy to power their motion and includes walking, running, cycling, cross-country skiing, skateboarding, snowshoeing, roller blading, and use of a manual wheelchair.

Biodiversity: The number and variability of organisms found within a specified geographic region; this includes diversity within species, between species and of ecosystems.

Character: Neighbourhood character is essentially the combination of public and private realms, and how the features and characteristics of an area physically relate on the ground.

Brownfield Sites: Undeveloped or previously developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict or vacant.

Compact Urban Form: A land-use pattern that encourages efficient use of land, walkable neighbourhoods, mixed land uses (residential, retail, workplace and institutional all within one neighbourhood), proximity to transit and reduced need for infrastructure. Compact urban form can include detached and semi-detached houses on small lots as well as townhouses and walk-up apartments, multi-storey commercial developments, and apartments or offices above retail.

Compatibility: A subjective measure of how well new construction or substantial rehabilitation fits into the existing community structure. Pattern, alignment, size and shape are the essential elements of compatibility. These elements define the basic relationships between new and old buildings without referencing the specific style of architecture.

Complete Communities: Complete communities meet people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided.

Built Heritage: Built heritage consists of all aspects of the man-made historic environment such as houses, factories, commercial buildings, places of worship, cemeteries, monuments and built infrastructure such as roads, railways and bridges; physically created places such as gardens, mining sites and stock routes; and other places of historical significance such as archaeological sites.

Density: Density is calculated as a percentage of a certain measure of activity (i.e., population, employment, or households) to a land area base, such as gross, developable or net area.

Dwelling Unit: A unit, whether detached or attached to another such unit, that houses a single family and that can be sold in fee simple ownership.

Infill: The practice of development or redevelopment of vacant, bypassed, and underutilized land within built-up areas of existing communities, where infrastructure is already in place in the surrounding area. Infill developments do not include renovations or other rehabilitative works to existing housing stock.

Intensification: The development of a property, site or area at a higher density than currently exists through the redevelopment, including the reuse of brownfield sites; the development of vacant and/or underutilized lots within previously developed areas; infill development; or the expansion or conversion of existing buildings.

Lot Frontage: The length of a lot’s front property line abutting a street.

Low-Rise Development: Includes secondary suites, garage suites, single-detached, duplex, semi-detached, fourplex, row housing, stacked row housing, low-rise apartments up to 4-storeys.

Plan of Subdivision: The legal division of land into two or more parcels. Plans of subdivision are commonly used for the larger parcels of land, where public streets, parks or other public land may be identified and conveyed.

Priority Lots: Special lots in prominent public view that contribute to neighbourhood identity, character or image such as corner lots, lots next to, or facing park spaces, or terminating vista lots at the end of street intersection.

Redevelopment: The creation of new units, uses or lots on previously developed land in existing communities, including brownfield sites.

Severance: The authorized separation of a piece of land to form two new adjoining properties. Severances are commonly used within established neighbourhoods where a larger lot is divided to create a new infill lot or lots.

Tear-Downs: Demolishing an existing home on a lot and building a larger home incorporating an additional residential unit.

Utilities: Uses that provide the transfer or delivery of power, water, sewage, storm water runoff, information, and telephone services.

Watershed: An area that is drained by a lake or river, and its tributaries.
REFERENCES

Government Policy Documents


Ontario Municipal Board Decisions


Non-Government Documents


Journal Articles


Ontario Municipal Board Decisions

APPENDIX A -

Interactive Assessment Tool User Manual

2015 INTERACTIVE ASSESSMENT TOOL USER MANUAL FOR LOW-RISE RESIDENTIAL DEVELOPMENTS IN MUNICIPALITIES ACROSS THE PROVINCE OF ONTARIO

PREPARED BY BS PARTNERSHIP

In partnership with MARK L. DORFMAN, PLANNER INC.
How to Use the Interactive Assessment Tool?

The interactive assessment tool is built into an electronic spreadsheet program. To be used in conjunction with the Comprehensive Infill Guideline, this interactive assessment tool seeks to quantify qualitative elements associated with infill development proposals in order to analyze the success of an infill development project for both residents and the surrounding neighbourhood.

What is Multiple Account Evaluation?

Multiple Assessment Evaluation (MAE) quantifies qualitative variables in the form of accounts to measure the benefits and consequences that an infill development would have on the local context. This type of evaluation assesses the complex aspects of any investment decision, in this case being an infill development application. To assess the functionality of each infill proposal in relation to the local context, five accounts have been established to evaluate the associated costs and benefits of a proposed infill project; here, the five accounts are: Natural Environment, Transportation & Infrastructure, Culture & Society, Economic Development, and Land-use & Built Form.

**STEP 1:**
Review the Comprehensive Infill Guideline

**STEP 2:**
Review the application for the infill development and conduct a site visit

**STEP 3:**
Identify the “Study Areas” to be used in the MAE assessment (TAB 0)

**STEP 4:**
Assess proposed infill development in relation to the “Natural Environment” (TAB 1)

**STEP 5:**
Assess proposed infill development in relation to “Transportation & Infrastructure” (TAB 2)

**STEP 6:**
Assess proposed infill development in relation to “Culture & Society” (TAB 3)

**STEP 7:**
Assess proposed infill development in relation to “Economic Development” (TAB 4)

**STEP 8:**
Assess proposed infill development in relation to “Land-use & Built Form” (TAB 5)

**STEP 9:**
View the “Summary” tab to review final score
- (0-65) Unsatisfactory
- (66-80) Satisfactory
- (81-100) Optimal

**STEP 10:**
Provide recommendations on the status of the infill development and its impacts on the relevant Study Areas
Purpose:

Account Study Area: Yes “Site Level” Study Area

Applicable Variables:

Yes “Visible” Study Area

Yes 1. Existing Vegetation

Yes 2. Environmental Features

No “Surrounding SocioEconomic” Study Area

Yes 3. Green Building Techniques

Total Account Weight

10

Account #1: Natural Environment

The natural environment encompasses all living and non-living things that exist naturally in the Earth’s ecosystems. The natural environment can be highly influenced by development of the built environment. Specifically, there are a number of variables within the natural environment that should be considered in relation to infill development.

Vegetation is a vital component of the natural environment as it provides a habitat to animals, and almost all potential development sites will have some form of existing vegetation. In terms of infill development in established neighbourhoods, the existing vegetation is typically composed of mature trees and shrubs, as well as plants and grasses that are often overgrown. Infill development should minimize possible negative impacts on the natural environment by preserving existing vegetation on site wherever possible.

Guideline 3.3.1

Infill development should minimize possible negative impacts on the natural environment by preserving existing vegetation on site wherever possible.

Description

Optimal

The proposed development preserves all existing vegetation, while also planting additional native species on the site.

Proposal Result:

Satisfactory

Score: 3.33

Satisfactory

The proposed development preserves some existing vegetation and removes some of the vegetation. The removed vegetation will be replaced with native species on site, or financially compensated to the local municipality.

Score: 2.20

Unacceptable

The proposed development removes all existing vegetation.

Score: 0.00

Variable Description and Shocks, as well as plants and grasses that are often overgrown.

Score achieved for variable

Dropdown menu to select appropriate result

Description to quantify success of achieving guideline

Tabs:


APPENDIX B -

Case Study
(City of Pickering)
1769 Woodview Avenue, Pickering, Ontario

The property 1769 Woodview Avenue is located in Pickering, Ontario (see Figure 1). The lot size is 30 x 116 meters (100 x 380 feet) and has frontage onto two municipal roads, Woodview Avenue and Oakburn Street. Marshall Homes is in the process of constructing an infill development at this property, consisting of four homes with lots approximately 50 x 190 feet in size (see Figure 2).

Surrounding the site, there is an established residential neighbourhood on Oakburn Street and a neighbourhood of older homes with some new construction along Woodview Avenue. A site visit was undertaken to establish the ‘visible study area’ for the property (see Figure 3). As there are no environmental features on the site, it is unnecessary to identify an environmental study area. An ‘economic study area’ was defined to take into account a significant commercial and retail area that is a centre for employment (see Figure 4).

References
Google Maps (2015). Property Search: 1769 Woodview Avenue, Pickering, Ontario. Retrieved from https://www.google.ca/maps/place/1769+Woodview+Ave,+Pickering,+ON+L1V+1L3/@43.817601,-79.144007,17z/data=!3m1!4b1!4m2!3m1!1s0x89d4d970240c16dd:0xa2e1a389b13876ba.

Neighbouring Properties:

North Neighbour: 1771 Woodview Avenue

East Neighbour: 1489 & 1487 Oakburn Street

South Neighbour: 1765 Woodview Avenue

West Neighbour: 1763 & 1761 Woodview Avenue

Note: Photography taken from property line on Oakburn Street

Photograph of Site as of March 7, 2015:

Proposed Development Elevations:
## Summary of Assessment Results

<table>
<thead>
<tr>
<th>Account #1: Natural Environment</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable 1.1 Existing Vegetation</td>
<td>3.30</td>
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<tr>
<td>Variable 1.2 Environmental Features</td>
<td>0.00</td>
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<tr>
<td>Variable 1.3 Green Building Techniques</td>
<td>3.30</td>
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<tr>
<td><strong>Account #1 (Final Score)</strong></td>
<td><strong>6.60</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Account #2: Transportation &amp; Infrastructure</th>
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</thead>
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<tr>
<td>Variable 2.1 Access to Public Transit</td>
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<tr>
<td>Variable 2.2 Active Transportation Connections</td>
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<td>Variable 2.3 Stormwater &amp; Sewage Infrastructure</td>
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<table>
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<th>Account #3: Culture &amp; Society</th>
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<tr>
<td>Variable 3.1 Safety</td>
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<td>Variable 4.1 Access to Areas of Interest</td>
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<table>
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<td>Variable 5.4 Lotting Pattern</td>
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<tr>
<td>Variable 5.5 Setbacks</td>
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<td>Variable 5.6 Garages &amp; Driveways</td>
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<td>Variable 5.7 Lot Area</td>
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<td>Variable 5.8 Lot Frontage</td>
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<td>Variable 5.9 Shadowing</td>
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**FINAL SCORE (Entire MAE Assessment Result)**

<table>
<thead>
<tr>
<th>Score (out of 100 possible points):</th>
<th>84.89</th>
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**Case Study (Town of Oakville)**

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**Scoring Key:**

<table>
<thead>
<tr>
<th>Final Score</th>
<th>Description</th>
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<tr>
<td>0 - 65</td>
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<tr>
<td>66-80</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>81-100</td>
<td>Optimal</td>
</tr>
</tbody>
</table>

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**Account #1 (Final Score):**

- Variable 1.1 Existing Vegetation: 3.30
- Variable 1.2 Environmental Features: 0.00
- Variable 1.3 Green Building Techniques: 3.30

**Account #2 (Final Score):**

- Variable 2.1 Access to Public Transit: 2.50
- Variable 2.2 Active Transportation Connections: 0.00
- Variable 2.3 Stormwater & Sewage Infrastructure: 2.50

**Account #3 (Final Score):**

- Variable 3.1 Safety: 6.67
- Variable 3.2 Neighbourhood Impacts: 6.67
- Variable 3.3 Heritage Impacts & Preservation: 0.00
- Variable 3.4 Housing Choice: 0.00
- Variable 3.5 Suitability of Location: 5.91

**Account #4 (Final Score):**

- Variable 4.1 Access to Areas of Interest: 0.83
- Variable 4.2 Objectives: 0.83

**Account #5 (Final Score):**

- Variable 5.1 Character: 4.80
- Variable 5.2 Scale & Massing: 4.80
- Variable 5.3 Height: 6.00
- Variable 5.4 Lotting Pattern: 6.00
- Variable 5.5 Setbacks: 4.40
- Variable 5.6 Garages & Driveways: 6.00
- Variable 5.7 Lot Area: 6.00
- Variable 5.8 Lot Frontage: 6.00
- Variable 5.9 Shadowing: 3.60
- Variable 5.10 Privacy & Overlook: 4.80

**Final Score:** 84.89
The subject property, located at 54 Raymar Place, is situated in an established neighbourhood in South Oakville. The dwelling which had existed on the subject property was torn down and a new single-detached dwelling, as seen in the pictures below, was constructed. The surrounding neighbourhood consists mainly of large, older single-detached dwellings. The infill development carried out on the subject property is in contrast with the surrounding neighbourhood’s character. This site was chosen as a case study to test the Assessment Tool. The final score of 64.88/100 for this development reflects the importance of achieving a desirable level of compatibility within the Land Use and Built Form account of the Interactive Assessment Tool.

54 Raymar Place, Oakville, Ontario

Character of the Surrounding Area:
## Summary of Assessment Results

### Scoring Key:
- **Final Score:** 64.88
- 51-100 = Optimal
- 46-60 = Satisfactory
- 0 - 45 = Unsatisfactory

### Account #1: Natural Environment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>1.1 Existing Vegetation</td>
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<tr>
<td>1.2 Environmental Features</td>
<td>0.00</td>
</tr>
<tr>
<td>1.3 Green Building Techniques</td>
<td>1.65</td>
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</table>

Account #1 (Final Score): **4.95**

### Account #2: Transportation & Infrastructure

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<tr>
<th>Variable</th>
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</thead>
<tbody>
<tr>
<td>2.1 Access to Public Transit</td>
<td>1.67</td>
</tr>
<tr>
<td>2.2 Active Transportation Connections</td>
<td>1.67</td>
</tr>
<tr>
<td>2.3 Stormwater &amp; Sewage Infrastructure</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Account #2 (Final Score): **5.00**

### Account #3: Culture & Society

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3.1 Safety</td>
<td>5.53</td>
</tr>
<tr>
<td>3.2 Neighbourhood Impacts</td>
<td>6.67</td>
</tr>
<tr>
<td>3.3 Heritage Impacts &amp; Preservation</td>
<td>0.00</td>
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<tr>
<td>3.4 Housing Choice</td>
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<tr>
<td>3.5 Suitability of Location</td>
<td>2.93</td>
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Account #3 (Final Score): **15.13**

### Account #4: Economic Development

<table>
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</thead>
<tbody>
<tr>
<td>4.1 Access to Areas of Interest</td>
<td>1.65</td>
</tr>
<tr>
<td>4.2 Local Economic Strategies &amp; Official Plan Objectives</td>
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</tr>
</tbody>
</table>

Account #4 (Final Score): **3.30**

### Account #5: Land Use & Built Form

<table>
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<th>Score</th>
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</thead>
<tbody>
<tr>
<td>5.1 Character</td>
<td>1.50</td>
</tr>
<tr>
<td>5.2 Scale &amp; Massing</td>
<td>4.50</td>
</tr>
<tr>
<td>5.3 Height</td>
<td>6.00</td>
</tr>
<tr>
<td>5.4 Lotting Pattern</td>
<td>6.00</td>
</tr>
<tr>
<td>5.5 Setbacks</td>
<td>5.00</td>
</tr>
<tr>
<td>5.6 Garages &amp; Driveways</td>
<td>7.50</td>
</tr>
<tr>
<td>5.7 Lot Area</td>
<td>0.00</td>
</tr>
<tr>
<td>5.8 Lot Frontage</td>
<td>0.00</td>
</tr>
<tr>
<td>5.9 Shadowing</td>
<td>4.50</td>
</tr>
<tr>
<td>5.10 Privacy &amp; Overlook</td>
<td>1.50</td>
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</tbody>
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Account #5 (Final Score): **36.50**

**FINAL SCORE (Entire MAE Assessment Result):** 64.88