

Technical Memorandum

Environment, Sustainability and Parks

1 Introduction

The purpose of this memo is to:

1. Identify a zoning approach to implement the Natural Heritage System (NHS), including natural hazards, as contemplated by Brampton Plan, in the new Zoning By-law;
2. Recommend a zoning approach to implement the parks and open space policy, as contemplated by the Brampton Plan, in the new Zoning By-law; and
3. Explore opportunities to implement various sustainability objectives of Brampton Plan and other related City-led initiatives through the new Zoning By-law.

2 Natural Heritage System and Open Space Implementation

2.1 OBJECTIVE

The objective of this analysis is to identify a recommended approach to implement the NHS designation and the parks and open space policy through the new zoning by-law. The analysis has been undertaken to inform zone structure, mapping implementation, and general use permissions to align with Brampton Plan. The following analysis includes:

1. A review of Brampton Plan policy;
2. Conformity between the existing zoning and the NHS as delineated by Brampton Plan;
3. Options and analysis on various zoning approaches to implement the NHS; and
4. A recommended approach based on the aforementioned.

Other zoning considerations, such as definitions, general provisions, and specific use requirements, for example, will be addressed through preparation of the new zoning by-law.

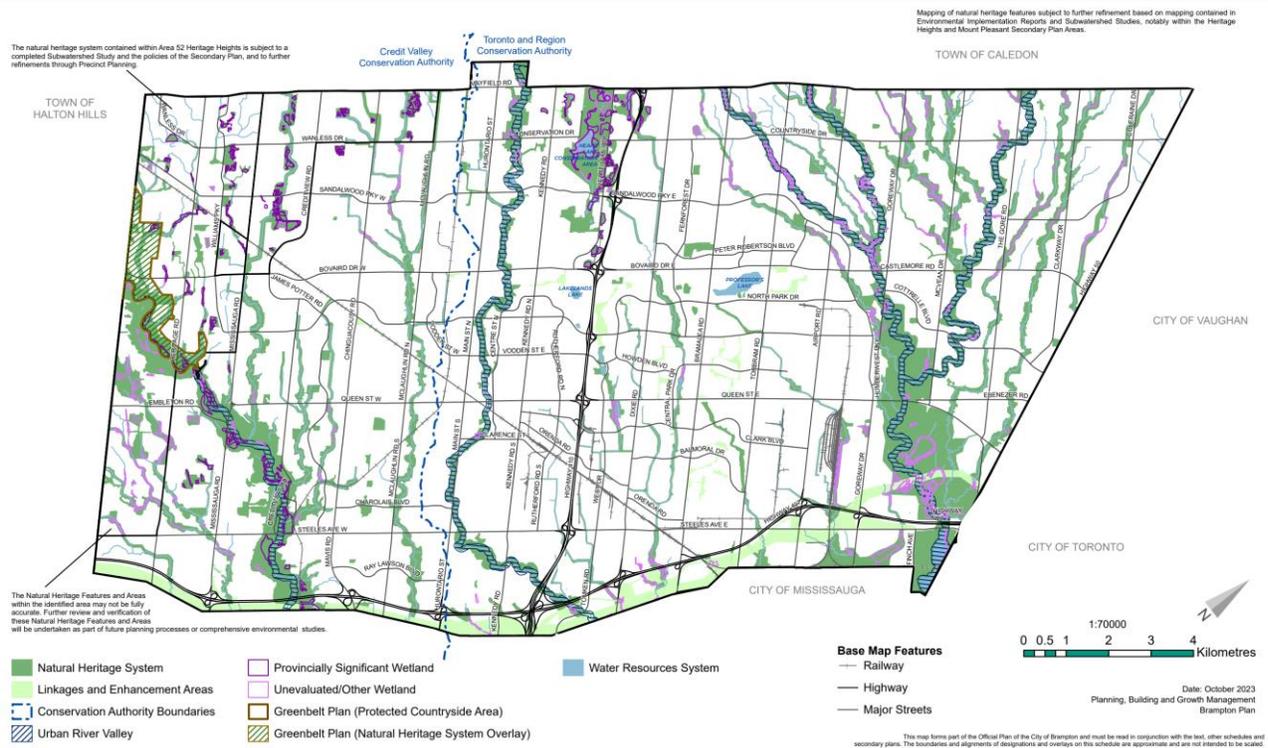
2.2 POLICY CONTEXT

The following sections summarize key policy of Brampton Plan regarding the NHS, natural hazards, and parks and open spaces.

2.2.1 Natural Heritage System

The NHS land use designation is a component of the Natural System as per Brampton Plan. The overall Natural System, consisting of the NHS and Water Resource System, are shown on Schedule 6A of Brampton Plan, as shown in **Figure 1**, below.

Figure 1: Schedule 6A – Natural System



SCHEDULE 6A | NATURAL SYSTEM



The following is a summary of key policies:

- The delineation of the NHS appears to be largely carried over from the 2006 Official Plan. It is understood that the City undertook a detailed review of tablelands that are currently designated NHS by the 2006 Official Plan and redesignated some of these lands to Open Space under Brampton Plan.
- Policy 2.2.9 directs that the NHS and its supporting features are identified as a key component of the City structure, directly benefiting the overall wellbeing of the City. The NHS is envisioned as lands that will be maintained, restored, and enhanced for long-term sustainability. The policy generally prohibits or otherwise restricts the encroachment of non-compatible development or redevelopment within the NHS.
- Policy 2.2.9 establishes that the NHS is comprised of various components, including provincially, regionally, and locally significant woodlands, rivers, valleylands, wetlands and ecological linkages. These various features that comprise the NHS and the overall Natural System are shown on Schedule 6B of Brampton Plan.
- Certain lands within NHS are subject to the Greenbelt Plan Natural Heritage System or Urban River Valley. Lands subject to the Natural Heritage System under the Greenbelt Plan are largely concentrated in an area adjacent to the Credit River, north of Embleton Road and west of Heritage Road. Policy 2.2.9.67 defers to the policies of the Greenbelt Plan for

these lands. Regarding lands subject to the Urban River Valley policy, new development, with the exception of expanded or new infrastructure (subject to criteria), is not permitted.

- The policies establish that the precise boundaries of the NHS as shown on Schedule 6A will be determined on a site-specific basis, and in consultation with Conservation Authorities and other applicable public agencies. The policy directs that the extent of the NHS will be evaluated through various studies required under the planning and development review process. Therefore, the extent of the NHS as shown on Schedule 6B may be refined over time.
- The policies direct that natural heritage features, areas, and linkages, including associated buffers, will be zoned as a separate, appropriate classification. Further, existing uses will be recognized as legal non-conforming, where appropriate.
- The policies expressly prohibits development and site alteration and only permits a restricted range of land uses, including: passive recreational uses, natural heritage restoration or enhancement, flood, and erosion control management, existing uses, building or structures, and essential infrastructure. New active recreational uses, or the expansion of existing active recreational uses, including golf courses, are generally not permitted. Active recreational uses are defined by Brampton Plan as those that result in significant modification to the landscape, development of building and structures, and include uses such as golf courses, sports facilities, and swimming pools.

2.2.2 Natural Hazards

Brampton Plan contemplates natural hazards as representing imminent risk to public health and safety, as well as risk to private property and critical infrastructure. Natural hazards include flood plains, stability hazards of valley slope, erosion, and meander belt hazards of watercourse channels. The identification of natural hazards is based on data and mapping provided by various agencies, including the Toronto and Region Conservation Authority, as well Credit Valley Conservation, among others. Brampton Plan does not delineate natural hazards, but the policy establishes that that floodplains are generally located within the valleylands and watercourse corridors, as shown on Schedule 6B.

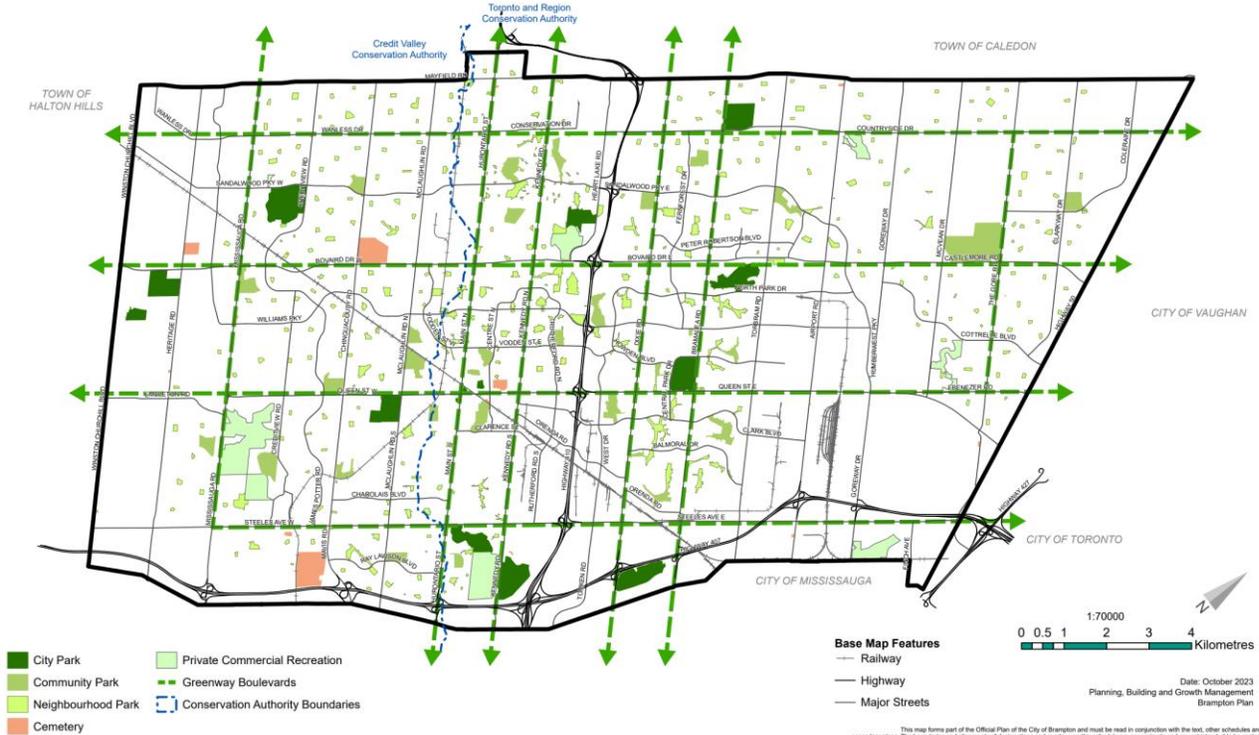
- The Plan further recognizes that the boundaries of natural hazards may be subject to refinement through additional study, including study that is prepared as part of the planning and development application process.
- The Plan establishes that the City will regulate land uses within and adjacent to flood plains, hazardous lands, hazardous sites, and hazards and lands that are regulated under the Conservation Authorities Act.
- The Plan establishes that development or site alteration will be directed to areas outside of hazardous lands adjacent to river, stream, valley corridors and inland lake systems and wetlands. Development and site alteration within the flood plain and hazardous lands is prohibited, while redevelopment within these areas is restricted. The exception to this is where development or site alteration is otherwise permitted by an approved Special Policy Area, or where uses by their very nature are required to be located in these areas (e.g., flood and/or erosion control).

- New site alteration and development within the flood plain and hazardous lands requires approval from the appropriate Conservation Authority.
- The policies prohibit certain uses outright in flood plains and hazardous lands, including a range of institutional uses (e.g., hospitals, nursing homes, schools, etc.), essential emergency services and any uses associated with hazardous substances.

2.2.3 Parks and Open Spaces

Open spaces, including public and private parks, are recognized by Brampton Plan as valuable community assets that provide opportunities for social interaction, recreation, and leisure activities. Parks and open spaces are delineated on Schedule 7 of Brampton Plan, as shown in **Figure 2**, below. The policies for Parks and Open Space are contained in Section 3.5.1 of Brampton Plan.

Figure 2: Schedule 7 – Parks and Open Space



SCHEDULE 7 | PARKS AND OPEN SPACE

The following offers a summary of key parks and open space policy:

- The policy establishes that the distribution of parks will be determined through Secondary Plans, Precinct Plans, Block Plans, or other planning programs to determine the distribution and classification of parks throughout the City.
- Brampton Plan contemplates a broad range of permitted uses under the parks and open space policy framework. These uses are further detailed in Table 2 under Section 2.4.1 of this Memo, but generally include conservation uses, active and passive recreational uses,

park related infrastructure such as playgrounds and associated equipment, and community facilities.

- The policy establishes a hierarchy of parks including Brampton Eco-Park, City Parks, Community Parks, Neighbourhood Parks, and Urban Parks.
- The Plan directs that different types of parks be distributed throughout the City to ensure that all neighbourhoods are well served with park and open space amenities. Parks and open spaces are broadly permitted throughout the City’s various land use designations, including Centres, Boulevards, Corridors, Community Areas, Employment Areas and subject to certain criteria, the Natural Heritage System.
- The Plan envisions a system of parks and open spaces that is comprised of both public and private lands, with an emphasis on maintaining and expanding public open spaces and parks.
- The Parks and Recreation Master Plan is to be used as a guideline to provide direction for future planning purposes.
- Development within parks and open spaces identified on Schedule 7 is prohibited, with the exception of community facilities, conservation projects, public transit, and essential infrastructure, including utilities.
- The Plan contemplates of the role of design quality to promote comfort, safety, accessibility, and year-round uses. More specific direction on design is established under policy 3.5.1.7.

Overall, the policies of Brampton Plan establish broad direction on the envisioned form and function of parks and open spaces within the City. The new zoning by-law will therefore need to establish appropriate zone(s) that can be applied to existing uses and through future development applications and land use planning studies.

2.3 NATURAL HERITAGE SYSTEM

2.3.1 Zoning Analysis

The following analysis assesses the composition of existing zoning within the NHS designation of Brampton Plan. **Table 1**, below, identifies the range of zones currently comprising the NHS designation. There are a broad range of zones that currently apply within the NHS designation, but lands are mostly zoned Floodplain (F), Open Space (OS) or Agricultural (A). The following is a summary of the **Table 1**:

- The predominant zoning is Floodplain (F), comprising approximately 43% of the NHS designation. The Floodplain (F) zone is a highly restrictive zone that generally prohibits any kind of development. Only a limited range of land uses are permitted, including flood and erosion control, conversation areas, public parks, and golf courses. Uses permitted under the Floodplain (F) zone generally align with the NHS designation of Brampton Plan. The exception to this is golf courses, which do not meet the intent of the NHS policy.
- The Open Space (OS) zone comprises about 26% of the NHS designation. The Open Space (OS) zone is more permissive than the Floodplain (F) zone by permitting a broader range of development oriented land uses. It permits indoor and outdoor recreation facilities

(subject to being operated by, licensed by, leased from, or managed under an agreement with a public authority or conservation authority), conservation areas, and accessory uses such as lounges or restaurants. Some uses within the Open Space (OS) zone may meet the intent of the NHS designation, such as conservation areas or more passive recreational uses. Other uses may not meet the intent of the NHS designation depending on the intensity or scale of the use, such as indoor recreation uses which would necessarily require a more intense form of development.

- The Agricultural (A) zone comprises about 20% of the NHS designation. A limited range of uses are permitted under the Agricultural (A) zone, including agriculture, single detached dwellings, group homes, cemeteries, animal hospitals, kennels, and home occupations. Uses deemed accessory to principal uses are also permitted.
- Approximately 3% of the NHS designation is comprised of various Residential (R) zones. This largely includes Residential (R) zones that permit single detached dwellings on a range of lot sizes, including the Residential Hamlet (RHM) and Rural Estate (RE) zones. Generally, uses permitted under the Residential (R) zone do not meet the intent of the NHS designation as they permit development that is not contemplated by the policy.
- Public Ownership and Utilities accounts for approximately 3% of lands within the NHS.
- The Commercial (C) zone comprises of 2% of the NHS designation. It is likely that a portion of these lands are comprised of the Recreation Commercial (RC) zone, which permits golf courses. Otherwise, the Commercial (C) zones permit a broad range of commercial, service commercial and retail oriented uses, and accessory uses. Overall, the Commercial (C) zones do not meet the intent of the NHS designation as they permit a broad range of development oriented uses.
- Approximately 2% of the NHS designation is zoned Industrial (I). Of this 1%, the predominant zone is the Industrial One (M1) zone, which permits a range of industrial and non-industrial uses. Some lands are also zoned Industrial Three (M3), which in addition to other industrial oriented uses, also permits non-hazardous processing, hazardous waste processing, and thermal degradation. Uses permitted under the Industrial (I) zone category do not meet the intent of the NHS designation, particularly some uses permitted under the Industrial Three (M3) zone.
- The Institutional One (I1) and Institutional Two (I2) zones comprise 1% of the NHS designation. The Institutional (I1) zone permits institutional and non-institutional uses, including schools, nurseries, group homes, and parks (provided they are operated by a public authority). The Institutional Two (I2) zone permits a broader range of uses, including recreational facilities, college or university, community centres, fairgrounds, hospitals, libraries, and nursing homes, among others. Parks, group homes and places of worship are also permitted in the Institutional Two (I2) zone. While some uses may meet the intent of the NHS designation, such as parks, most uses do not as they permit development oriented uses. Further, some uses permitted in the Institutional zones are outright prohibited by Brampton Plan if they are located within lands identified as natural hazard, such as hospitals and nurseries, for example.

Table 1: Composition of Existing Zoning within the Natural Heritage System

Zone	Area (Ha)	Total of Designation (%)
Floodplain (F)	1,963.86	43
Open Space (OS)	1,193.97	26
Agricultural (A)	901.14	20
Public Ownership and Utilities	159.29	3
Residential (R)	127.73	3
Industrial (I)	88.83	2
Institutional (I1 & I2)	44.53	1
Commercial (C)	75.34	2

Overall, there appears to be reasonable alignment between the NHS designation and existing zoning, with some exceptions. Most lands are either zoned Floodplain (F), Open Space (OS) or Agricultural (A), which, with the exception of certain permitted land uses, meets the intent of the NHS designation. The following additional observations are noted:

- Certain zones within the NHS designation do not meet the intent of the policy and are therefore generally not aligned with Brampton Plan. These zones include Residential (R), Industrial (I), and Commercial (C). This could be a function of updated mapping through Brampton Plan which has resulted in an expansion of the NHS in some areas of the City. It could also be that these are legacy zones that have been in-effect prior to the last zoning by-law review or established through an amendment to the current zoning by-law but not reflected in Brampton Plan mapping.
- Some uses permitted in the Institutional (I) zones do not appear to meet the intent of the NHS policy, particularly where certain uses are prohibited by the policy but otherwise permitted through current zoning (e.g., certain uses located within a natural hazard, such as a nursery). However, some uses permitted under the Institutional (I) zone are public uses or publicly owned due to their nature, and therefore meet the underlying intent of the NHS policy framework.
- There appears to be circumstances where the NHS designation applies but there is no apparent natural heritage or water resource feature. This could highlight the challenge of delineating an NHS through a City-wide exercise that may not have otherwise benefited from site specific study. Alternatively, this could be represent a delineated floodplain where a portion of the subject lands are located within an area regulated by a Conservation Authority.
- The NHS is feature based, and therefore does not necessarily follow the parcel fabric. As a result, there are properties throughout the City that are split designated, but currently only

subject to one zone. In some cases, the current zoning does not align with the intent of the NHS policy (e.g., Residential zone located in the NHS).

- Some lands within the NHS designations are subject to a special section of the zoning by-law permitting development that does not align with the policy. Where the existing zoning was amended, the site specific development application may have included additional studies or reports to support the proposed uses and/or further delineate the NHS (e.g., Environmental Implementation Report). In these cases, the existing zoning may align with the policy and will need to be considered when the special section are reviewed for conformity.

Based on the characterization of the current zoning within the NHS presented above, the following section identifies several options for implementation through the new zoning by-law.

2.3.2 Zoning Options

There are several options to implement the NHS designation under Brampton based on municipal practice within Ontario. The following is an overview of these options:

1. Option 1: Carry forward the existing zoning (“status quo”). This option involves carrying forward the existing zoning that comprises the NHS designation. It would effectively mean that zoning within the NHS would not be updated but instead would remain “status quo” and therefore reflect the existing zoning composition as previously reviewed. However, there is an opportunity to introduce modest modifications to some of the existing zones including land use permissions under this approach, as explored in the discussion of this Option under Section 2.3.3.
2. Option 2: Rezone the delineated NHS – This option involves a wholesale rezone of the NHS to an appropriate zone (or zones) to implement the designation. The implementing zone structure would be highly restrictive to achieve alignment with the policy and would therefore function to protect the NHS and its comprising features. The zone mapping would be based on Brampton Plan, or more recent data or information, as the policy may contemplate or permit (e.g., Conservation Authority mapping).
3. Option 3: “Case-by-case” review of zoning inconsistencies – This option would involve reviewing identified zoning inconsistencies on a case-by-case basis. An example of this is where a zone that permits urban uses (e.g., residential) is located within the NHS. The outcome of this review would provide direction on how to treat existing zoning, either by rezoning to implement Brampton Plan or carry forward the existing zoning. Where rezoning is proposed, it should be based on where more detailed study has been undertaken (e.g., development applications or block plans). This approach would also benefit from consultation with staff and potentially external stakeholders such as the Conservation Authorities. Some updates to the existing zones that comprise the NHS designation would be considered under this approach to further advance the policy.
4. Option 4: Apply a Holding “H” Symbol – Some municipalities in Ontario apply a Holding “H” Symbol through the zoning by-law review process to lands where there is a zoning inconsistency as identified through Option 3. The Holding “H” Symbol is typically tied to

conditions established as general provisions that require completion of additional study, such as an Environmental Implementation Report, before the Holding “H” Symbol is released. The principal intent of this is to provide an opportunity for the boundaries of the NHS, including any required buffers, to be delineated through more detailed study before the holding is released. The zoning is then implemented on a site-specific basis. This approach generally freezes any change in use that would otherwise be permitted by the underlying parent zone until the additional study is approved by the City or applicable agencies. Existing uses are typically recognized as those uses existing at the time the zoning by-law was enacted.

5. Option 5: Overlay – A further approach is to apply an “overlay” through the mapping to lands where there is a zoning inconsistency as observed through Option 3. The overlay would have the effect of only permitting existing uses until such time that additional study was undertaken to precisely delineate the NHS, including associated buffers, and subsequently rezoned accordingly. The overlay may be established as a separate schedule to the new zoning by-law, and for additional clarity, would only apply to lands where there is a mapping inconsistency as identified through Option 3.

A discussion of each option within the context of the new zoning by-law is presented in the following section.

2.3.3 Discussion

Each zoning approach above has benefits and disadvantages, including different risks. Further, there is no widely endorsed approach amongst Ontario municipalities to implement NHS policy through a new or updated zoning framework. Each municipality is different, and therefore each approach must be context sensitive and based on various contextual inputs.

The following offers a summary of the four approaches within the Brampton context:

1. Carry forward the existing zoning (“status quo”): This option should be considered because there is reasonable alignment between the existing zoning and the NHS designation. This option would also better capture existing as-of-right development permissions, which could precipitate less risk of challenge from landowners. However, modest updates to the Floodplain (F) and Open Space (OS) zones should be considered to further restrict the range of uses and their associated definitions in order to better align with the NHS policy. This option would also require a review of existing land uses that have been permitted through an amendment to the existing zoning by-law (i.e., permitted by a special section). There are also additional tools available to the City that are administered separately from the zoning by-law that can be used to further augment this approach. These include, for example, subdivision control, site plan control, tree cutting by-laws, and the regulatory authority of Conservation Authorities among others.
2. Rezone the delineated NHS: This option requires a high degree of confidence in the data and information used to delineate the NHS. More specifically in regard to how accurately the various features comprising the NHS have been mapped, and the extent and composition of those features. Where there may be errors or discrepancies between the

mapping and actual conditions, it not only frustrates implementation of the broader policy framework but could also result in unjustified impacts to as-of-right development permissions that may be challenged by landowners. Alternatively, this option is most appropriate where the NHS mapping has been subject to a robust City-wide review process and rigorously vetted. Further, the policies of Brampton Plan clearly establish that the NHS will be refined through development application processes, so there is limited policy basis to support this option.

3. Review of zoning inconsistencies: This approach requires the evaluation of identified zoning inconsistencies on a case-by-case basis. Identified zoning inconsistencies need to be assessed against the policy for alignment. Principally the evaluation should assess uses permitted by the current zoning against uses permitted by the NHS designation. The evaluation should also consider if the lands are subject to a special section, which would likely have been supported by a development application and associated studies to justify the proposal. This approach should be supported by City staff who can provide additional context to ultimately inform site-specific recommendations under this approach.
4. Holding “H” Symbol: This approach is likely not desirable given that it may unjustifiably restrict development (that is otherwise permitted as-of-right by the parent zone) where there is an observed zoning inconsistency until such time that the NHS is delineated through additional study. The effect of this is that development permissions are “frozen” and would not allow a change in use until the conditions are satisfied. existing as-of-right development permissions while also burdening landowners with undertaking additional study where any change in land use is proposed regardless of actual conditions.
5. Overlay: Similar considerations apply to the overlay approach as the Holding “H” Symbol by having a similar effect of “freezing” any change in use, and only permitting existing uses and expansion thereof, thereby restricting as-of-right development permitted by the underlying parent zone.

The treatment of lawfully existing uses that no longer conform to the policies of the NHS designation is an important consideration for all options outlined above. This is an inherent challenge when introducing an updated zoning framework to implement a new official plan. The approach should strive to achieve a balance between updating the zoning by-law to align with Brampton Plan while recognizing existing development permissions where appropriate and supported by the policy. In some cases, the zoning by-law may not be the appropriate land use planning tool to implement every policy of the NHS designation. For example, lands with a floodplain are subject to the regulatory powers of the Conservation Authorities, which are subject to separate applicable law.

2.3.4 Recommendations

The following recommendations are offered based on the preceding analysis and discussion:

1. The first recommendation is that the Floodplain (F) zone be carried forward, subject to the following:

- a. The zone name should be updated to better reflect the intent of the zone. For example, many municipalities in Ontario apply an “Environmental Protection” or “Conservation” zone. Alternatively, the zone name could be aligned with the NHS designation, and simply called “Natural Heritage” or “Natural System” for example. This nomenclature represents an intuitive name that clearly communicates the function of the zone.
 - b. There is a need to evaluate the range of land uses that are currently permitted under the existing Floodplain (F) zone to align with Brampton Plan. Brampton Plan contemplates a broader range of low intensity land uses that are not defined or permitted under the current zoning by-law. The policy does not permit new active recreational uses or the expansion of active recreational uses, including golf courses. It is therefore recommended that the updated zone only permit a restrictive range of land uses to better align with the policy. The permitted use terms and associated definitions as specified by Brampton Plan are likely sufficient to be incorporated into the new zoning by-law.
 - c. The new zone would not permit development except that permitted by the NHS policy. This achieves the dual purpose of recognizing the intent of protecting natural heritage features and water resources, while also prohibiting development within natural hazards. This approach meets the intent of the NHS designation and is an effective way of advancing the policy since development will generally not be permitted on lands subject to this zone.
2. It is also recommended that the updated zone framework be informed by undertaking a case-by-case evaluation of identified zoning inconsistencies and assess those against the policy. This offers an important step forward in advancing the NHS designation, while balancing recognition for existing development permissions and potential risk of landowner challenge that would otherwise be heightened under the “rezoning” or Holding “H” Symbol approach. It is noted that this approach would benefit from staff input who likely have important institutional knowledge and context that can be used to further augment the assessment.
3. A review of the mapping shows multiple instances of existing active recreational uses located within the NHS, including golf courses and parks. The policy permits existing uses, buildings and structures in the NHS, and therefore it is recommended that existing uses be recognized through the implementing zone to align with the policy.
4. There are many instances of the Open Space (OS) zone located within the NHS designation. Some uses currently permitted under the Open Space (OS) zone do not align with the NHS designation, which could represent a conformity challenge. However, it may be that certain land uses are lawfully existing. Further, Brampton Plan recognizes that open spaces can represent important connections and linkages between and within NHS. Therefore, it may not be appropriate in every circumstance to simply rezone lands currently zoned Open Space (OS) to the updated zone where they are located within the NHS

designation. Alternatively, it is recommended that the existing Open Space (OS) zoning be carried forward where located within the NHS designation.

5. Some lands within the NHS are located within the natural heritage system of the Greenbelt Plan and are therefore subject to provincial policy. Brampton Plan defers to the policies of the Greenbelt Plan for these lands (policy 2.2.9.67). No updates to the existing zoning is proposed for these areas, provided a restrictive zoning approach for the NHS, as outlined above, is implemented.
6. Lastly, it is not recommended that the “rezoning” or the Holding “H” Symbol approach be implemented exclusively. As previously discussed, a high degree of accuracy in the mapping of development constraints is needed to support the “rezoning” approach. In the absence of this, there is risk that the zoning may unjustifiably remove existing development permissions which could precipitate challenge from landowners. A similar rationale applies to the Holding “H” Symbol approach, which in addition to potentially removing existing development rights, would also require heightened costs and administrative effort from both landowners and the City to release the Holding “(H)” Symbol. In both cases, the approaches might frustrate broader implementation of Brampton Plan.

In summary, it is recommended that a combination of carrying forward the existing zoning (i.e., “status quo”) and a review of zoning inconsistencies be implemented. The review of zoning inconsistencies would assess lands on a case-by-case basis that are located within the NHS but where the zoning does not align with the policy. Therefore, updates to the current zoning would only be implemented where there is a clear alignment with Brampton Plan, largely based on existing or permitted uses.

2.4 PARKS AND OPEN SPACES

2.4.1 Zoning Analysis

The parks and open space designation is recognized by Brampton Plan as distinct from the NHS, although there are instances of open spaces located within the NHS. The parks and open space designation permits more intensive forms of land uses when compared to the NHS, including active recreational uses, programming, and associated development to support the range of permitted uses. Conservation uses and passive recreational uses are also broadly permitted within the parks and open space designation.

Section 3.5.1 of Brampton Plan establishes a hierarchy of parks and open spaces. A summary of the key policy directions and associated zoning considerations are presented in **Table 2**.

Table 2: Zoning Considerations for the Parks and Open Space Hierarchy

Park Hierarchy	Policy Characterization	Zoning Considerations
Brampton Eco Park	City-wide network of interconnected “eco spaces”. Varies in function and size and includes naturalized and	Land use permissions include a mix of lower intensity uses. Some development is permitted in the form of active recreational uses and

Park Hierarchy	Policy Characterization	Zoning Considerations
	socialized landscapes. Intended to provide opportunities for passive, social, and community activities, including programming.	programming. The size, location and physical characteristics of Brampton Eco Parks are likely to vary considerably throughout the City depending on the context.
City Parks	Principally function as a location for active recreation and a focal point for community gathering and activities, including community facilities.	Range of community oriented uses, including passive recreational uses, are permitted. The size of City Parks are intended to be scaled relative to their planned function and location within the City.
Community Parks	Smaller scale parks intended to serve areas within a 3 km radius. Contemplated as providing for a range of opportunities for both outdoor and indoor active and passive recreational uses. Recreational complexes such as arenas and indoor courts, are also permitted.	Similar to City Parks, a range of community oriented uses are permitted. The size of Community Parks are intended to be scaled relative to their planned function and location within the City.
Neighbourhood Parks	Contemplated as the smallest park type, servicing the immediate local neighbourhood. Outdoor passive and active recreational uses are permitted. Indoor recreational uses, including recreational complexes, are not contemplated as being permitted.	A more restricted range of permitted uses, generally including outdoor passive and active recreational uses. Development, including indoor active recreational complexes or facilities, are not permitted. The size of Neighbourhood Parks is smallest park type of the park hierarchy.
Urban Parks	Contemplated as specialized parks that are generally located within the City’s intensification areas, including Centres, Boulevards, and Corridors. The policy contemplates that Urban Parks will generally be publicly owned, between 0.1 ha and 0.8 ha in size, and planned and designed to accommodate a	Similar to Neighbourhood Parks in scale and function, except primarily intended to be located within the City’s intensification areas. Permitted uses include passive recreational uses, programming, and social amenities

Park Hierarchy	Policy Characterization	Zoning Considerations
	range of programming and activities.	
Linear Connector	Generally contemplated by the policy as providing active transportation links between the City’s various open spaces and parks.	This component of the hierarchy contemplates connections and trails. The new zoning by-law will need to recognize trails as a component of the open space and parks system.

The following additional policies are noted:

- **Cemeteries:** Schedule 7 delineates areas within the City where cemeteries are permitted. The policy directs that new cemeteries are discouraged within the built-up area with the intent of enlarging existing cemeteries. The enlarging of existing cemeteries may be permitted subject to specific development criteria and applicable law.
- **Private Open Space:** The location of existing private open space is shown on Schedule 7. Private open spaces include major outdoor private commercial recreation uses, such as golf courses, diving ranges, swimming pools, sports courts, and other similar uses that are not publicly owned. The policy directs that existing private open space with an existing Secondary Plan designation other than commercial recreation may develop in accordance with that designation.

2.4.2 Discussion

The following discussion evaluates various zoning considerations for implementing the parks and open space designation:

- **Zone structure:** There are several different options regarding the zone structure for implementing the parks and open space policy. Alignment with Brampton Plan is a key consideration to inform the zoning framework. The zone structure needs to appropriately implement the planned function of parks and open spaces, taking into consideration the range of permitted uses and specific policy criteria. To that end, determining zone structure is typically driven by a need to separate permitted uses or certain development typologies when each require distinct zoning provisions, such as permitted uses or lot and building requirements. As summarized previously, there is reasonable consistency within the parks hierarchy with regards to the range of permitted uses, with some differences regarding the scale of development envisioned (e.g., community facilities). The exceptions to this are cemeteries, and private open space, which are discussed further below.
- **Relationship to the NHS:** The intent of the policy is clear that a key function of parks and open spaces is to advance the broader NHS policies of Brampton Plan. Further, the planned use of parks and open spaces will need to be considerate of its spatial relationship to the NHS. In some cases, these areas are located within the NHS itself, or immediately adjacent, and therefore integrated into the broader NHS system by consisting of complementary uses. In other cases, the policy contemplates that parks and open spaces

form important linkages between otherwise disparate components of the NHS. Ensuring an appropriate range of land uses are permitted through the implementing zoning framework is therefore critical to ensure alignment with these policy objectives.

- **Ownership:** Ownership is not a criterion that necessarily informs zone structure. However, the policy distinguishes private open space by identifying a range of permitted uses that are not otherwise explicitly contemplated as being permitted within the open space and parks hierarchy. It can therefore be interpreted that an intent of the policy is for private open space to be distinctly regulated through the zoning by-law, while otherwise the components comprising of the hierarchy are contemplated as largely being held in public ownership. The policy also directs heightened requirements to mitigate uses permitted in private open space from adjacent land uses, and this should be reflected in the zoning. There are no comparable policy criteria applying to the publicly owned parks and open space hierarchy.
- **Major outdoor private recreation:** This is a category of uses that is specifically contemplated as only being permitted in private open spaces. In addition to being privately owned, they are uses that precipitate more intensive forms of development due to the nature of the use, such as golf courses, for example.
- **Cemeteries:** There is variation in cemetery zoning throughout the City, including Agricultural (A), Institutional (I) and Residential (R). Brampton Plan does not permit new cemeteries, instead encouraging the expansion of existing cemeteries within the built-up area of the City. Where there is a proposal for a new cemetery or the expansion of an existing cemetery, the policy requires an application made under various applicable laws, including the *Planning Act*. On this basis, the zoning by-law will need to establish an approach for permitting cemeteries that is aligned with the policy, including that existing cemeteries should be permitted. Further, it is likely that the current zoning of cemeteries has largely been through an amendment to the parent zone and therefore established as a special section. There may be an opportunity to rezone the cemeteries to a single zone, provided the special sections are carried forward where they conform to the policy.

2.4.3 Recommendations

It is recommended that a single Open Space (OS) zone be established to implement the parks and open space policy of Brampton Plan. More specifically:

- **Zone structure:** There is no clear need to establish multiple Open Space (OS) zones. There is sufficient consistency between the various hierarchies in regard to permitted uses and intended function of parks and open space lands to justify a single zone approach. Generally, implementation of the Open Space (OS) zone can be guided by policy that establishes the hierarchy. This approach also contributes to a streamlined zoning structure for implementing Brampton Plan, which is consistent with an objective of the zoning by-law review process. Additional considerations are noted below regarding major outdoor private commercial uses, and cemeteries.
- **Permitted principal uses:** It is recommended that the implementing Open Space (OS) zone permit community oriented uses to align with the function of these lands as envisioned by the policy. The permitted uses are proposed to include conservation uses, passive recreational uses, active recreational uses (including parks), and community facilities. The

associated definitions would be sufficiently broad enough to capture the intent of the policy (e.g., programming) and be able to be scaled to reflect the intended hierarchy of parks and open space throughout the City. Major outdoor private commercial uses, including golf courses, would not be permitted. This is further discussed below.

- Small scale recreational uses: The implementing zone structure will need to permit a range of small scale recreational uses to align with the policy. For example, this includes trails, walkways, and boardwalks. These uses would function to establish linkages between open spaces and the NHS, as contemplated by the policy. Further, these uses would also be permitted in the proposed Natural Heritage zone to further support this objective, as previously discussed.
- Lot and building requirements: It is recommended that lot and building requirements from the current zoning by-law be generally carried forward. The requirements will need to be sufficiently permissive to accommodate the hierarchy of parks and open spaces contemplated by the policy, taking into consideration the various sizes, functions, and locations throughout the City.
- Major outdoor private commercial uses: It is not recommended that major outdoor private commercial uses, including golf courses, be permitted in the Open Space (OS) zone. The policy contemplates major outdoor private commercial uses as being of higher intensity, commercial oriented uses that often require significant modification to existing landscapes. This characterization does not meet the intent of the parks and open space policy. These uses are also subject to more prescriptive policy criteria than those permitted in parks and open spaces. Permitting major outdoor private commercial uses as-of-right in the proposed implementing Open Space (OS) zone could frustrate implementation of Brampton Plan by permitting development within the parks and open space designation that is not envisioned by the policy. Instead, the existing Recreation Commercial (RC) zone would be carried forward from the current zoning by-law for this purpose. The existing Recreation Commercial (RC) zone aligns well with the policy for major private outdoor commercial uses.
- Cemeteries: Cemeteries are currently zoned differently throughout the City as noted previously. It is recommended that all cemeteries be rezoned to the proposed Open Space (OS) zone or an Institutional (I) zone. Cemeteries might only be permitted as “existing” or could be permitted as-of-right. However, there may be risk with permitting cemeteries as-of-right where open space lands are held in private ownership. Permitting cemeteries as “existing” also meets the intent of the policy in that cemeteries function as part of the City’s open space network, while also discouraging new cemeteries within the built-up area. Further, the policy contemplates that the expansion of existing cemeteries will be subject an application made under the *Planning Act* and applicable law.

3 Sustainable Zoning

The City has identified several sustainability related priorities within the context of the Zoning By-law Review. The objective of this section is therefore to further explore opportunities to advance these priorities through the new Zoning By-law.

3.1 SUSTAINABLE NEW COMMUNITIES

3.1.1 Overview

The Sustainable New Communities is a joint initiative between the cities of Brampton, Markham, Richmond Hill, and Vaughan. It is a tool that is used by the City and applicants to evaluate the sustainability performance of new development. The Program functions as a point-based system where development proposals are assigned points when evaluated against certain sustainability related performance indicators.

The Program is being reviewed in the context of the Zoning By-law Review to assess opportunities where the metrics can be enshrined through the new zoning by-law, therefore further supporting implementation of the Program. The metrics are organized into five themes: Built Environment, Mobility, Natural Environment & Parks, and Infrastructure and Buildings. The assessment presented below is similarly organized into tables around the five themes and includes a brief zoning analysis.

3.1.2 Built Environment

An analysis of the built environment performance indicators is presented below in **Table 3**.

Table 3: Zoning Analysis of Built Environment Performance Indicators

Performance Indicator	Description	Zoning Implementation
BE-1: Proximity to Amenities	To encourage development within and near existing amenities, create more walkable communities, and reduce auto dependency.	The zoning by-law will permit a broad range of permitted uses, while facilitating more compact communities that promote active transportation.
BE-2: Mixed-Use Development	To support locating housing, services, recreation, schools, shopping, jobs, workspace, and other amenities on the same lot or block to facilitate wise use of land, make it easier for people to walk or cycle to these destinations, and reduce auto dependency.	The zoning by-law will permit, and in some cases require, mixed-use development within different contexts of the City. This will facilitate the efficient use of land and more compact communities that reduce automobile dependency.
BE-3: Housing Diversity	To encourage a range of housing options and facilitate aging in place.	Ensure the new zoning by-law permits a broad range of dwelling typologies through the City, as well as housing opportunities that reflect the full continuum of the housing spectrum.

Performance Indicator	Description	Zoning Implementation
BE-4: Community and Neighbourhood Scale	To focus retail, personal, and community services within community core areas (neighbourhood centre and mixed-use node) so that people can meet their daily needs within their communities.	The zoning by-law is likely to permit neighbourhood oriented commercial and personal service uses that are located through the City to ensure communities have convenient access and that their everyday needs are met.
BE-5: Cultural Heritage Conservation	To conserve cultural heritage resources, including built heritage resources (listed or designated), cultural heritage landscapes (listed or designated), and archaeological resources.	Ensure the new zoning by-law does not inhibit or otherwise conflict with cultural heritage policies or implementing land use plans.
BE-6: Urban Tree Canopy and Shaded Walkways/Sidewalks	To provide street trees that create a more pleasant pedestrian environment and mitigate the urban heat island effect. Street trees provide ecosystem services and health benefits.	While the composition of trees cannot be regulated through zoning, the zoning by-law may contribute to advancing this indicator by establishing minimum landscape requirements.
BE-7: Salt Management	To reduce the use of salt and its negative impacts on water bodies, soils, vegetation, wildlife, buildings, and vehicles.	There is limited opportunity for the new zoning by-law to implement this indicator, however permitting stormwater management facilities can contribute to a broader comprehensive approach for managing and treating stormwater runoff.
BE-8: Carshare and Carpool Parking	To encourage carpooling and reduce dependence on single-occupant vehicle trips. Carpooling contributes to GHG emission reduction, less air pollution, less congestion, and improved social connections.	Consider regulating carpooling through the new zoning by-law. This can be achieved by establishing an associated definition and minimum carpool parking space requirement, for example.

Performance Indicator	Description	Zoning Implementation
BE-9: Surface Parking Footprint	To promote efficient use of land and support on-street retail and pedestrian-oriented built environments. Surface parking can block access and visibility to homes and businesses. Minimizing or carefully locating surface parking can result in more pedestrian-friendly and valuable streetscapes.	Consider regulating surface parking through the new zoning by-law, provided it does not create conflict with the zone standards. Zoning regulations associated with surface parking can also function to achieve desirable built form and urban design objectives, such as prohibiting surface parking in front yards or exterior side yards.
BE-10: Electric Vehicle Charging Stations	To facilitate the uptake and use of electric vehicles.	Explore an opportunity to establish minimum requirements for EV parking stations and associated infrastructure (e.g., charging stations) through the new zoning by-law for residential and non-residential development. The new zoning by-law should also permit encroachments of EV infrastructure into required parking spaces, provided it does not obstruct the parking of a motor vehicle.

3.1.3 Mobility

An analysis of the infrastructure and buildings performance indicators is presented below in **Table 4**.

Table 4: Zoning Analysis of Mobility Performance Indicators

Performance Indicator	Description	Zoning Implementation
MB-1: Block Length	To develop shorter blocks that increase permeability, offering pedestrians and cyclists multiple routes to reach their destination(s), and to allow blocks with the flexibility to accommodate both residential	Ensure the new zoning by-law requires active frontages and greater building articulation which encourages a more activated and engaging public realm and streetscape.

Performance Indicator	Description	Zoning Implementation
	and commercial lot sizes. Walkable blocks improve connectivity and reduce dependence on vehicles.	
MB-2: School Proximity to Transit and Cycling Network	To encourage students to walk, cycle, and/or take transit to school to reduce vehicle use and decrease traffic congestion at school sites. Walking, cycling, and transit use result in GHG emissions savings and less air pollution. Walking and cycle also provide health benefits.	Ensure the new zoning by-law establishes minimum bicycle parking requirements, including minimum number of bicycle parking spaces and associated structures, such as bicycle racks. Further, public uses, such as transit stops, are generally permitted broadly through the implementing zoning framework as a public use.
MB-3: Intersection Density	To encourage shorter blocks and increase permeability and connectivity offering pedestrians and cyclists multiple routes to reach their destination(s). Walkable blocks improve connectivity and reduce dependence on vehicles.	There is limited opportunity to implement this indicator through the zoning by-law, but the regulations can contribute to a greater mix of uses and more compact built form.
MB-4: Walkable Streets	To encourage walking through the provision of safe and comfortable street environments. Walkable streets reduce the dependence on vehicles, improve safety, enhance connectivity, and are an important component for healthy and complete communities.	Ensure the new zoning by-law requires active frontages to encourage a more activated and engaging public realm and streetscape, thereby promoting active transportation activities. Small scale features (such as benches and bicycle racks) should also be defined and broadly permitted in all zones.
MB-5: Pedestrian Amenities	To promote amenities that contribute to a positive pedestrian experience and ensure destinations in communities are connected	Ensure the new zoning by-law requires active frontages to encourage a more activated and engaging public realm and streetscape, thereby

Performance Indicator	Description	Zoning Implementation
	through convenient, safe, and accessible pedestrian connections. Walkable connections can contribute to the wellbeing of residents of all ages and abilities, help to reduce dependence on vehicles.	promoting active transportation activities.
MB-6: Bicycle Parking	To facilitate cycling and reduce dependence on vehicle use.	The zoning by-law may establish bicycle parking requirements, including minimum number of bicycle parking spaces. Further, public uses, such as transit stops, are generally permitted broadly through the implementing zoning framework.
MB-7: Trails and Cycling Infrastructure	To implement pedestrian and cycling infrastructure that further promotes active forms of transportation. Walking and cycling results in GHG emissions savings and less air pollution, as well as health benefits.	The zoning by-law will establish a zone(s) for parks and open spaces, where opportunity for active transportation linkages, including trails, can be advanced.
MB-8: Active Transportation Network	To promote active transportation through the provision of public multi-purpose trails/paths and cycling infrastructure. Cycling results in less vehicle dependence, and associated reduction in GHG emissions and air pollution. It also provides health benefits.	The zoning by-law will establish a zone(s) for parks and open spaces, where opportunity for active transportation linkages, including trails, can be advanced.
MB-8: Distance to Public Transit	To promote and support alternative transportation modes to personal automotive vehicle use. Transit-oriented communities reduce vehicle-	The zoning by-law will permit a broad range of permitted uses, while facilitating more compact communities that promote active transportation.

Performance Indicator	Description	Zoning Implementation
	kilometres traveled and associated emissions, have reduced traffic casualty rates, and support walking and cycling which improves community health.	
MB-10: Traffic Calming	To encourage active transportation through the provision of safe, walkable streets by reducing car speeds. Walkable streets and traffic calming measures can provide a safer and more comfortable streetscape to cyclists and pedestrians, and help to reduce traffic speeds, volumes, and related emissions.	Ensure the new zoning by-law broadly permits passive recreational uses (such as trails) to provide opportunity for a City-wide, integrated active transportation network. Associated smaller scale features to augment passive recreational uses are also recommended, as previously discussed in this memo.

3.1.4 Natural Environment and Parks

An analysis of the natural environment and parks performance indicators is presented below in **Table 5**.

Table 5: Zoning Analysis of Natural Environment and Parks

Performance Indicator	Description	Zoning Analysis
NE-1: Tree Conservation	To support the conservation of healthy mature trees and the associated ecological, economic, and healthy benefits. Preserving trees can be a cost-effective method to improve the overall appearance of a community while providing ecological and climate change benefits.	Ensure the new zoning by-law establishes minimum landscape requirements which contributes to providing dedicated areas for soft landscaping features, including plants. Further, the zoning by-law will recognize natural heritage system by applying a development restrictive zone to ensure the long-term integrity and function of these areas.

Performance Indicator	Description	Zoning Analysis
NE-2: Soil Quantity and Quality for New Trees	To provide soil quantity and quality that enables new trees to thrive. Higher amounts of good quality soil help ensure the success of vegetation.	There is limited opportunity for the new zoning by-law to address this indicator.
NE-3: Healthy Soils	To ensure that new development contains healthy soil quality and quantity to help restore the natural functions of soils and vegetation and to help ensure the soil is appropriate for the proposed plantings. To reduce disturbance of healthy soil to protect soil horizons and maintain soil structure, as well as to support biological communities (above-ground and below-ground).	There is no direct opportunity for the new zoning by-law to address this indicator.
NE-4: Natural Heritage Connections	To provide connections to nature and green spaces to benefit human health through proximity or access, and to minimize the amount of the natural heritage that is backlotted by residential development.	The zoning by-law will establish a zone that recognizes natural heritage assets within the City, and in doing so, meaningfully advance this indicator by protecting those areas from non-compatible development.
NE-5: Heritage System Enhancements	To improve natural heritage system, particularly with respect to wildlife habitat and/or ecological functions.	The zoning by-law will establish a zone that recognizes natural heritage assets within the City, and in doing so, meaningfully advance this indicator by protecting those areas from non-compatible development.
NE-6: Supporting Pollinators	To provide landscape materials that support and provide habitat for pollinators (e.g. birds, bees, butterflies). Without pollinators, much of the food we eat and the	There is no direct opportunity for the zoning by-law to implement this indicator. However, the zoning by-law will protect natural heritage assets within the City through

Performance Indicator	Description	Zoning Analysis
	natural habitats we enjoy would not exist. Pollinators are under increasing stress due to habitat loss, invasive species, diseases, pesticides, and climate change.	a development restrictive zone (as discussed previously in the memo), and through other considerations noted below, including minimum landscape requirements and green roofs.
NE-7: Dedicated Fruit/Vegetable Garden Space	To promote locally grown food, improve physical and mental wellbeing, and to encourage social interaction.	The zoning by-law may permit community garden which can meaningfully contribute to advancing this indicator.
NE-8: Park Access	To promote visual and physical access to public parks and to make it easier for people of all ages and abilities to integrate physical activity and social interaction into their daily activity.	The zoning by-law will establish a zone structure to permit parks, as well as complementary land uses to promote physical activity and social interaction.
NE-9: Stormwater Quantity	To support a treatment-train approach to stormwater management, emphasizing source and conveyance controls to promote infiltration, evaporation, and/or re-use of runoff and/or rainwater. Managing stormwater at the early stages of the treatment-train can provide more resilient communities and reduce risks of downstream flooding and erosion.	There is limited opportunity for the zoning by-law to implement this indicator, however the topic of stormwater management and impervious surface cover is discussed later in this memo.
NE-11: Potable Water Use	To facilitate the conservation and efficient use of potable water.	The new zoning by-law will protect natural heritage and water resource assets within the City through a development restrictive zone.
NE-12: Multi-Purpose Stormwater Management	To enhance the public use value of stormwater management ponds.	Ensure the new zoning by-law does not inhibit stormwater management ponds by permitting in open spaces and parks.

3.1.5 Infrastructure and Buildings

An analysis of the infrastructure and buildings performance indicators is presented below in **Table 6**.

Table 6: Zoning Analysis of Infrastructure and Buildings

Performance Indicator	Description	Zoning Analysis
<p>IB-1: Buildings Designed/Certified Under Accredited “Green” Rating System</p>	<p>To recognize leadership and efforts to achieve independent third-party green certification systems that demonstrates high sustainability performance. Sustainability certification systems provide recognizable and verified certifications demonstrating to the public a high degree of sustainability performance is being achieved.</p>	<p>There is no direct opportunity for the new zoning by-law to implement this indicator.</p>
<p>IB-2: Accessibility for Multi-Unit Dwellings</p>	<p>To enable a wide spectrum of people to live within and access new buildings, regardless of ability. To provide accessibility to occupants beyond the Ontario Building Code (OBC), which mandates a barrier-free path of travel in 15% of Multi-Residential Units.</p>	<p>Ensure the new zoning by-law provides relief for encroachments associated with accessible structures. For example, relief could be provided for accessible ramp for exterior access to encroach into a minimum required yard.</p>
<p>IB-3: Building Accessibility (Barrier Free Entry/Egress)</p>	<p>To enable a wide spectrum of people to live within and access new buildings, regardless of ability. To provide accessibility to occupants beyond the Ontario Building Code (OBC), which mandates a barrier-free path of travel in 15% of Multi-Residential Units.</p>	<p>Ensure the new zoning by-law does not inhibit exterior building accessibility by considering minimum requirements for exterior entries or walkways.</p>
<p>IB-4: Embodied Carbon of Building Materials:</p>	<p>To increase the growing awareness of the importance of addressing the embodied carbon and other GHG</p>	<p>There is no direct opportunity for the new zoning by-law to implement this indicator.</p>

Performance Indicator	Description	Zoning Analysis
Supplementary Cementitious Materials	emissions associated with building materials. Materials can account for significant impact from their production, and reductions are available through selection and design. Often, lower impact materials are also more cost-effective.	
IB-5: Embodied Carbon of Building Materials: Life Cycle Assessment	To increase the growing awareness of the importance of addressing the embodied carbon and other GHG emissions associated with building materials. Materials can account for significant GHG emissions from their production, and reductions are available through careful selection and design. Lower impact materials can also more cost effective.	There is no direct opportunity for the new zoning by-law to implement this indicator.
IB-6: Embodied Carbon of Building Materials: Life Cycle Assessment	To increase awareness of the importance of addressing the embodied carbon and other GHG emissions associated with building materials.	There is no direct opportunity for the new zoning by-law to implement this indicator.
IB-7: Heat Island Reduction: Non-Roof	To reduce ambient surface temperatures and reduce the urban heat island effect.	Ensure that the new zoning by-law permits green roofs and provides relief to exceed the maximum building height in all zones.
IB-8: Heat Island Reduction: Roof	To reduce ambient surface temperatures and reduce the urban heat island effect.	Ensure the new zoning by-law requires minimum landscape area requirements with a minimum percentage of soft landscaping and include a definition of soft landscaping that excludes impermeable surfaces. Permeable surfaces should also be excluded from

Performance Indicator	Description	Zoning Analysis
		any maximum lot coverage requirement.
IB-9: Solar Gain Control	To control solar heat gains through east and west facing windows.	There is limited opportunity for the new zoning by-law to implement this indicator.
IB-10: Solar Readiness	To encourage the use of renewable energy and reduce reliance on fossil fuel-based energy. Solar energy can provide cost-effective methods to reduce energy use and will have strong climate change benefits.	Ensure the new zoning by-law provides relief for certain renewable energy resources in all zones (including solar energy/panels) by permitting these facilities to exceed the maximum height requirement of the parent zone.
IB-11: Energy Strategy	To encourage the early consideration and incorporation of sustainable design features in the planning process relating to improved building energy efficiency, carbon reduction, and resilience, as well as to take advantage of district-scale opportunities in the case of multi-building developments.	Ensure the new zoning by-law does not inhibit the construction of facilities associated with the development and/or implementation of an energy strategy. For example, this could include associated definitions, or additional relief to permit encroachments into minimum required yards or maximum height.
IB-12: Building Energy Efficiency, Greenhouse Gas Reduction, and Resilience	To promote buildings that are designed to be energy-efficient with reduced operating costs and greenhouse gas emissions associated with building operations, while improving the thermal comfort of occupants and enhancing building resilience. Well-designed buildings that are energy-efficient can improve indoor and outdoor air quality and reduce greenhouse gas emissions.	There is no direct opportunity for the new zoning by-law to implement this indicator.

Performance Indicator	Description	Zoning Analysis
IB-13: Rainwater and Greywater Use	To reduce potable water use for interior building functions.	Ensure the new zoning by-law provides relief for encroachments associated with rainwater catchment, such as rain barrels, for example.
IB-14: Back-Up Power	To encourage the provision of back-up power that enables the functioning of key utilities/building functions during power failures resulting from extreme weather events.	Ensure the new zoning by-law provides relief for mechanical equipment associated with backup power generation, such as through permitted encroachments or exceptions to the maximum building height, for example.
IB-15: Extreme Wind Protection for Ground-Oriented Development	To increase the resistance of homes to the impacts of high wind events, and make them more resilience to the impacts of climate change	There is no direct opportunity for the new zoning by-law to implement this indicator.
IB-16: Sub-Metering of Thermal Energy and Water	To include sub-metering that allows measurement of individual unit consumption, which helps residents understand how their behaviour drives energy costs, and motivates change in behaviour, often resulting in reductions in energy consumption.	There is no direct opportunity for the new zoning by-law to implement this indicator.
IB-17: Light Pollution Reduction	To reduce nighttime glare and light trespass from the building and the site. Light pollution can be perceived as an inefficient use of energy in addition to its negative impacts on neighbors and nighttime animals.	There is no direct opportunity for the new zoning by-law to implement this indicator.

Performance Indicator	Description	Zoning Analysis
IB-18: Bird-Friendly Design	To reduce the incidents of bird collisions and provide an urban environment where birds can thrive. The built environment can have strong negative impacts on birds. Design and system selection can result in fewer bird collisions and deaths.	There is no direct opportunity for the new zoning by-law to implement this indicator.
IB-19: Solid Waste	To promote waste reduction and diversion of materials from landfills. A reduction in waste can be a very cost-effective method for material savings and results in fewer contributions to landfills and lower carbon emissions due to savings in materials.	Ensure the new zoning by-law does not inhibit waste management structures that can function to effectively and efficiently divert waste from the landfill. This can be achieved through regulations that permit encroachments for waste/recycling into private garages or require waste management structures for certain residential and non-residential development typologies.

3.2 OTHER SUSTAINABILITY PRIORITIES

The City has identified interest in opportunities to advance several other sustainability priorities through the new zoning by-law, where feasible. To inform the research, zoning by-laws from the municipalities of Ottawa, Toronto, Mississauga, Oakville, Hamilton, Kitchener, and Guelph were reviewed. The following sections document the findings of this review. These municipalities were selected based on being in comparable size to the City of Brampton or having more recently enacted comprehensive zoning by-laws.

3.2.1 Energy Systems

Energy systems broadly refers to shared energy resources between buildings or clusters of buildings for climate control purposes (e.g., heat). Several municipalities in Ontario have recognized these uses through zoning. Some of these municipalities include:

- City of Toronto: Zoning By-law 569-2013 defines “district heating and cooling plant” and “geo-energy” and establishes provisions to regulate the location of these uses on lots in certain zones.

- Town of Oakville: Zoning By-law 2014-014 defines “alternative energy system”, “district energy system”, and “renewable energy system”. The uses are defined but there are not associated definitions or provisions established by the zoning by-law.
- City of Hamilton: Zoning By-law 05-200 defines “renewable energy System”. An associated provision establishes that renewable energy undertaking are exempted from the *Planning Act*, and instead subject to the *Green Energy and Economy Act*, 2009, and other provision approvals.

Amongst the municipalities reviewed, only three zoning by-laws recognized energy systems. Generally, this included defined terms and in two cases, there were associated provisions. There does not appear to be significant precedence for recognizing energy systems through zoning by-laws in Ontario.

3.2.2 Impervious Surface Cover

Impervious surface cover relates to surface treatments that do not allow precipitation to pass through to the underlying substrate. Thus, impervious surface cover can significantly contribute to increased stormwater runoff that would otherwise be absorbed by the substrate. In high volume precipitation events, which are becoming increasingly common due to climate change, this is commonly leading to localized flooding, increased erosion, and degradation of surface water quality.

Many municipalities throughout Ontario are seeking innovative practices to address this challenge, which is being further exacerbated by certain trends in built form such as larger driveways, and increased hardscaping in backyards, for example. Staff have noted that this is a particular challenge in Brampton and have sought opportunities to mitigate this through regulatory measures enacted under the zoning by-law.

Traditionally, impervious surface cover has been implicitly regulated through maximum lot coverage, minimum yard requirements, and landscape requirements. More recently, some municipalities have introduced additional provisions to regulate impervious surface cover by introducing a definition for the term and establishing a maximum requirement as a percentage of the lot area. However, this has resulted in heightened administrative effort to both regulate and enforce these requirements. In some cases, it has also precipitated an increase in minor variances where there is a deviation from the maximum permitted requirement.

Amongst the municipalities reviewed, only the City of Hamilton and City of Ottawa zoning by-laws specifically recognized impervious surface cover through their regulations:

- City of Hamilton: Zoning By-law 05-200 includes a definition for “low impact development”. The term is used in a provision that permits green infrastructure, including low impact development, to manage stormwater runoff. There is no maximum requirement for impervious surface established by the Zoning By-law.
- City of Ottawa: Zoning By-law 2008-250 defines “soft landscaping” and applies that term to regulate and interpret maximum lot coverage. The maximum permitted lot coverage varies by zone and is in proportion the minimum lot area.

- Township of King: Zoning By-laws 2016-71 and 2017-66 define “pervious cover” meaning an “uncovered area of land that is permeable and permits the infiltration of water”. A minimum “pervious surface” requirement is established as a percentage of the total lot area in a range of Residential zones.

In summary, there appears to be little precedence for regulating stormwater runoff through zoning by-laws in Ontario, with the exception of King Township where a pervious surface is regulated through the zoning by-laws. However, it is understood through discussion with City staff that a number of initiatives are currently underway to address this challenge. Amongst those initiatives is the Impervious Cover Study, scheduled to be complete in late-2023. Should there be direction to incorporate impervious surface requirements into the new zoning by-law, the Study would be required to consider zoning recommendations that are supported through scientific/engineering analysis.

3.2.3 Green Roofs

Green roofs are often identified as an opportunity to mitigate the urban heat island effect and promote hyper-localized food production. Generally, regulating green roofs would not occur through zoning but rather the Ontario Building Code (OBC) or potentially the City’s development standards. However, the review of Ontario zoning practice found that both the City of Toronto and the City of Guelph recognize green roofs through their respective zoning by-laws:

- City of Toronto: Zoning By-law 569-2013 includes a definition of “green roof” and permits certain height exception for them in various zones.
- City of Guelph: Zoning By-law 2023-20790 includes a definition of “green roof” and establishes that a green roof may contribute up to 30% of the required landscape requirement.

There does not appear to be significant precedence for directly regulating green roofs through zoning by-laws in Ontario. However, the notion of green roofs contributing to the minimum landscape requirement, as is established in Guelph, is an interesting approach that could be explored further.

4 Conclusion

This Memo has recommended a zoning approach for the NHS and open space and parks policies of Brampton Plan. It has also analysed a range of sustainability related topics, including the Sustainable New Communities initiative, energy systems, impervious surface cover, and green roofs. The following is a summary of the recommendations:

- NHS: Establish a highly restrictive zone to implement the NHS as contemplated by Brampton Plan. It is recommended that the approach includes carrying forward the existing equivalent zoning (i.e., the Floodplain (F) zone), while undertaking a case-by-case review of zoning inconsistencies. Caution will be applied to avoid creating instances of legal non-conformity as much as possible. It is recommended that any such zone changes be associated with a direct consultation process with affected landowners.

- **Open space and parks:** It is recommended that a singular Open Space (OS) zone be established to implement the open space and parks hierarchy as contemplated by Brampton Plan. The range of uses would be oriented to passive recreational uses, active recreational uses (including parks), and conservation uses. It is also recommended that cemeteries be permitted as an “existing” use or permitted as-of right, and that cemeteries within the City be rezoned to Open Space (OS) or an appropriate Institutional (I) zone. A separate zone to permit major private outdoor recreation uses is proposed given the intended form and function of these uses. Generally, mapping the Open Space (OS) zone should be carried forward from the current zoning by-law.
- **Sustainability measures:** There appears to be considerable opportunity to advance various sustainability priorities within the City. This should continue to be monitored as the new zoning by-law is developed and informed by subsequent consultation with staff and the public. Specifically, the topic of impervious surface cover should be revisited when the Impervious Cover Study is complete.