



Special Policy Area Justification Report

for the Woodbridge Centre Secondary Plan

April 2014

Prepared by:

City of Vaughan

(Policy Planning,
Emergency Planning,
Development Planning,
Information and Technology Management, and
Development/Transportation Engineering)

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Executive Summary

A comprehensive Special Policy Area (SPA) review has been undertaken by the City of Vaughan in cooperation with the Toronto and Region Conservation Authority (TRCA) and the Province of Ontario. The SPA review is a component of the Woodbridge Focused Area Study, a product of which has been the Woodbridge Centre Secondary Plan. The Secondary Plan is one of five new secondary plans in Volume 2 of the new City of Vaughan Official Plan (VOP 2010, adopted by the Council of the City of Vaughan in September 2010). City-wide policies comprise Volume 1 of the new City of Vaughan Official Plan. The Woodbridge Centre Secondary Plan includes the proposed SPA boundaries, revised land use designations affecting the SPA, land use policies and SPA policies.

Direction to undertake the comprehensive SPA review is provided in three primary policy documents:

- Section 3 of the Provincial Policy Statement (PPS) and relevant parts of the Definitions section regarding SPAs;
- The recent *“Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas”* (MNR 2009); and
- The Terms of Reference specific to the study (see Appendix A).

The two main components of the SPA review are (1) undertaking a review of the SPA boundary, land use and policies, and (2) a flood risk assessment. The risk assessment was undertaken within the context of the City-wide Emergency Management Plan and considered aspects of geographic risk (i.e. avoiding risk) and operational risk (i.e. hazard response).

Summary of SPA Boundary and Land Use Policy Changes

The proposed SPA boundaries result largely from an update of the floodplain modelling provided by the TRCA. The minor adjustments proposed to the existing SPA boundaries as set out in the Woodbridge Centre Secondary Plan are a result of the following changes, which results in a decrease of the overall SPA area from 40.1 hectares to 29.8 hectares.

- Parcels designated Natural Areas, including property owned by TRCA, are removed from the SPA as development is not intended to occur on these lands.
- Parcels designated Parks in SPA #1 are removed from the SPA as development is not intended to occur on these lands, although the proposed SPA boundary includes the long-standing structures (e.g. concrete silos) of the former Hayhoe Mills site if it is determined that these structures can be re-used for ancillary park uses. The Park designation for a public square in the Market Lane area is not removed from the SPA as the precise location of the public square is not yet determined.
- Lands located inside the previous regulatory floodplain but outside of the updated floodplain were removed from the SPA as development is no longer restricted by provincial or TRCA floodplain management policy in these areas, though they still remain subject to TRCA’s Regulation (Ontario Regulation 166/06). New boundaries follow property lines, where applicable, such that select properties no longer straddle the boundary between the SPA and the one-zone floodplain area.

The SPA policies from previous Official Plan Amendments are largely brought forward in the Council-adopted (September 2010) Woodbridge Centre Secondary Plan. Recommended changes to the SPA policies in Section 7.3 of the Woodbridge Centre Secondary Plan as a result of the SPA review and in response to the Province's comments of December 17, 2013 can be summarized as follows:

- Given the TRCA mandate under Regulation 166/06 for the management of floodplain lands and river valleys, any action taken as a result of development applications within the TRCA regulated area shall be to the satisfaction of the TRCA rather than in consultation with the TRCA.
- The floodproofing standard is specified in one clear policy. This is consistent with the policy in OPA 440, but replaces suggested policies in the Council-adopted (September 2010) Secondary Plan in which floodproofing standards varied for several different designations.
- Given that the Low-Rise Residential designation permits townhouse development (see policy 9.2.2.1.c in Volume 1 of VOP 2010), "notwithstanding" policies are added to ensure that single-detached units are not converted to townhouse developments in the Low-Rise Residential designation in the SPA, which would otherwise be a form of intensification in the SPA.
- Clarification of safe access with respect to pedestrian and vehicular traffic and reference to the City's emergency management approach.

Land use designations in the SPA are intended to match previous approvals, with the exception of the low risk part of the SPA in the Woodbridge Commercial Core (see discussion in the section, "Summary of Flood Risk Assessment" below), despite all designations being renamed to match those of the VOP 2010. Over half of all parcels in the SPA change from the Low Density Residential designation in either OPA 240 or OPA 440 to the Low-Rise Residential designation in the Secondary Plan. The other main designation changes include:

- 15 parcels change from Mixed Use Commercial to either Low-Rise Mixed-Use or Mid-Rise Mixed-Use in the Woodbridge Commercial Core;
- 7 parcels change from either Community Commercial or General Commercial to Commercial Mixed-Use (1); and
- 10 parcels change from Medium Density Residential to Low-Rise Residential (1).

Summary of the Flood Risk Assessment

Three main data types are used to quantify flood risk: (1) dwelling unit counts associated with various development scenarios; (2) flood depths; and (3) flow velocities. The risk assessment indicates that only one part of the SPA with potential for residential redevelopment can be categorized as low risk consistent with the Province’s “risk to life” thresholds in the Natural Hazards Technical Guides. This is the area to the northwest of Clarence Street and Woodbridge Avenue. Furthermore, existing and future development provided for in current Ministry-approved policies allows for development in higher risk areas, but generally directs development to the less sensitive parts of the SPA.

There are two main recommendations from the flood risk assessment.

- Increasing residential units in the SPA along Islington Avenue as outlined in OPA 597, the Islington Avenue Corridor Secondary Plan, is not recommended. As a result, these areas have a Low-Rise Residential designation in the Woodbridge Centre Secondary Plan, or an appropriate designation that reflects past Ministerial development approvals.
- The northwest corner of Woodbridge Avenue and Clarence Street, the only low risk part of the SPA with redevelopment potential for residential units, in which the “risk to life” thresholds are not exceeded and ingress/egress is achievable, is recommended for modest additional dwelling units. The Mixed Use Commercial designation in OPA 440 is proposed to change to Mid-Rise Mixed-Use and Low-Rise Mixed-Use designations in the Woodbridge Centre Secondary Plan.

Summary of change in residential dwelling units based on changes to SPA boundaries and land use designations in the Woodbridge Centre Secondary Plan.

	Existing SPA Condition			Proposed SPA Condition		
	Existing SPA Boundary	Estimated Development Potential from Approved Official Plans ^b		Proposed SPA Boundary	Estimated Development Potential from the Proposed Woodbridge Centre Secondary Plan ^c	
		Additional Units	Cumulative Total		Additional Units	Cumulative Total
Dwelling Units ^a	1020	253	1273	962	355	1317
Parcels	300			240		
Area (ha)	40.1			29.8		

^a Includes existing buildings plus development applications with Site Plan approval.

^b Includes development, in addition to existing and approved development, that is provided for in OPA 440.

^c Includes additional development provided for in the land use plan (Schedule 2) and density plan (Schedule 3) of the Woodbridge Centre Secondary Plan.

In total, the Woodbridge Centre Secondary Plan provides for 102 additional units in the SPA, directed to the Woodbridge Commercial Core, in addition to densities provided for in OPA 440. Of this, 83% or 85 units are directed to the low risk part of the SPA (i.e. SPA #9a2). The remaining 17% or 17 units reflect a modest increase resulting from attempts to match the density provisions in previous approvals with the density provisions specified as Floor Space Index (FSI) in the Vaughan Official Plan and Woodbridge Centre Secondary Plan.

Development according to current approved policies is estimated to result in 1,273 residential units in the SPA (see table above). Removing parcels and buildings from the SPA as a result of SPA boundary changes together with the land use changes in the Woodbridge Centre Secondary Plan is estimated to provide 1,317 residential dwelling units in the SPA. The overall increase of 44 dwelling units, or about 3% from the build-out provided for in current approved policies, is directed primarily to the low risk part of the SPA. Meanwhile, the Woodbridge Centre Secondary Plan maintains the key characteristics of the three prominent corridors:

- Kipling Avenue, subject to a stand-alone secondary plan, is the focus of residential intensification outside of the floodplain and regulated area;
- the mixed-use character of Woodbridge Avenue is strengthened, with most of the added residential units occurring outside of the SPA; and
- modest residential intensification outside of the SPA along Islington Avenue maintains the primarily rural residential character of this corridor.

Assessing geographic risk considers the more predictable aspects of flood events at an appropriate scale to inform land use designations. Comprehensively addressing operational risk considers the less predictable aspects of flood events through preparedness, response and recovery. A hierarchy of risk addressed by the City is articulated in the points below:

- Much of the SPA, including almost the entire part of the SPA that permits higher densities in the Woodbridge Commercial Core, has a frequency of flooding less than 1 in 350 years;
- Flooding is ranked 12th out of 24 identified hazards in the City's overall Hazard Identification Risk Assessment (HIRA);
- A higher population density is directed to areas where risk of flooding is a less frequent event (a conservative approach to estimating flood return period estimates the annual risk of exceedance for SPA Sub-areas #9a2, #9a3 and #9a4 to be 0.22%, 0.51% and 0.28%, respectively);
- Parcels that can redevelop in the SPA in the Woodbridge Commercial Core either have dry access for vehicles and pedestrians, safe access (i.e. vehicular access), or street frontages are in the low risk part of the SPA providing pedestrian access;
- New policy in the Woodbridge Centre Secondary Plan requires individual emergency plans coordinated with municipal procedures be submitted and approved prior to development approval for new multi-unit structures;
- The use of forecasting and available lead times allows for effective action in advance of flooding, which in turn will lead to a minimization in the risk to life;
- Emergency preparedness, implemented through the City's Emergency Management Plan, includes an Emergency Operations Centre in a permanent state of readiness;
- Mitigation measures used in relation to flood emergencies include public education and awareness on actions to take when flood bulletins are issued, issuing notices to evacuate in advance of flooding, and passive and active flood proofing of all structures as a requirement of development approvals;

- Emergency response is addressed through the City's all-hazards emergency response plan, including the deployment of the Emergency Management Team; and
- The Emergency Planning Program and the VFRS have reviewed the Woodbridge Centre Secondary Plan and the Woodbridge Special Policy Area Justification Report and are confident that the emergency management standards and practices currently in place will support the proposed development as described in the Secondary Plan.

The Special Policy Area Justification Report represents a comprehensive review of the SPA boundaries, SPA policies and related land use policies in accordance with the Provincially-approved Terms of Reference for the study (see Appendix A). The SPA review is undertaken within a comprehensive risk management approach that has considered land use and risk response. The Woodbridge Centre Secondary Plan demonstrates general consistency with the Provincial Policy Statement regarding SPAs in that (a) additional dwelling units are directed only to the low risk area of the SPA which (b) is located in the historic village centre of Woodbridge, being the local downtown that has historically existed in the floodplain.

1.0 Introduction

1.1 Purpose and Scope of the SPA Review

There are two primary reasons for conducting the comprehensive Special Policy Area (SPA) review: (1) incorporating revised flood data as a result of land use changes in the watershed and (2) pressure to change land use designations, mainly in the Woodbridge Commercial Core, for higher densities.

The SPA review is a component of the Woodbridge Focused Area Study, one of five focused areas studies as part of the Vaughan Official Plan review. Land use and policy recommendations from the SPA review are incorporated into the Woodbridge Centre Secondary Plan, which forms part of Volume 2 of the City of Vaughan Official Plan - 2010 (VOP 2010). The Woodbridge Centre Secondary Plan, adopted by Council of the City of Vaughan in September 2010 and further modifications adopted by Council of the City of Vaughan on March 19, 2013, is provided as part of the SPA package to the Province for Ministerial approval.

The SPA review consists of the flood risk assessment and SPA justification report. The flood risk assessment provides the technical information as the basis for any recommended changes to land use or boundaries affecting the Special Policy Area. Information related to potential build-out, flood depths, and flow velocities is quantified to assess potential risk. Three documents comprise the flood risk assessment and are provided as Appendices to this report:

- Appendix E – Capacity Analysis Results;
- Appendix F – Residential Development Capacity Analysis for the Woodbridge Focused Area Study – Approach and Methodology; and
- Appendix G – Flood Risk Assessment.

The purpose of this report is to:

- document the changes to SPA boundaries based on revised flood data provided by the Toronto and Region Conservation Authority (TRCA);
- summarize the main findings of the flood risk assessment; and
- discuss the recommended changes to land use designations and policies affecting the Special Policy Area with respect to risk to life.

The existing SPA boundaries are shown in Figure 1-1. Appendix D provides a map illustrating additions and deletions to the SPA.

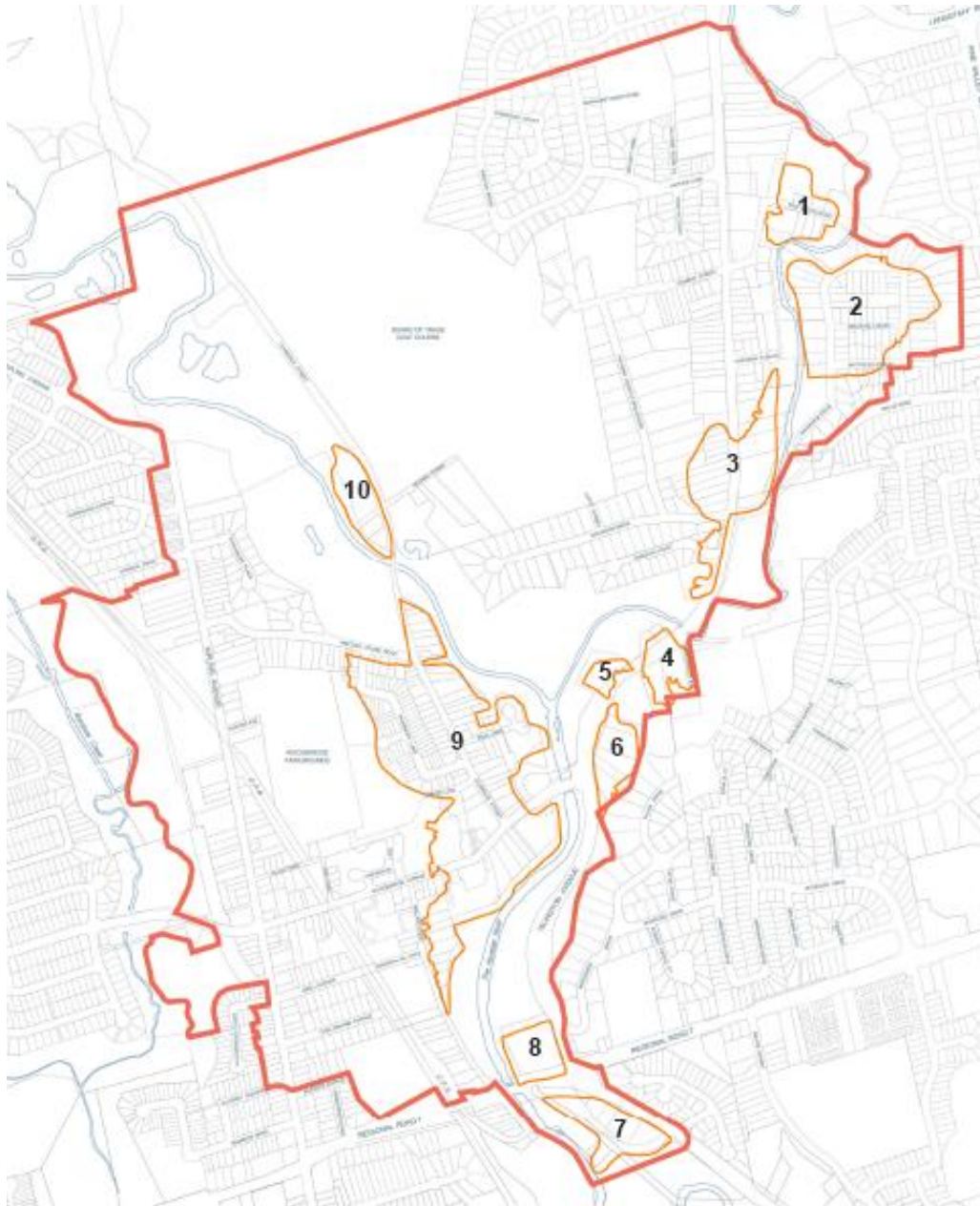


Figure 1-1 Existing SPA boundaries in the Woodbridge Area. Number codes are for the purposes of the flood risk assessment. Outer boundary defines the study area for the Woodbridge Focused Area Study.

1.2 Land Use Planning Context

The study boundary of the Woodbridge Focused Area Study is based on the study areas of three previous Official Plan Amendments. Relevant schedules depicting plan boundaries and a composite map are provided in Figures 1-2 to 1-4.

- a. Official Plan Amendment #695 (OPA 695), the Kipling Avenue Corridor Secondary Plan, is the most recent plan and remains a stand-alone plan as part of the VOP. The policies and land use designations of OPA 695 are not updated as a result of this study.
- b. Official Plan Amendment #240 (OPA 240), the Woodbridge Community Plan, was adopted by the Council of the Corporation of the Town of Vaughan in 1987. Final approvals from the Province are recorded as of 1995.
- c. Official Plan Amendment #440 (OPA 440), currently in effect, amends Official Plan Amendment #240, the Woodbridge Community Plan, and was approved by the Province in 1995.

Official Plan Amendment #661, the Avenue Seven Land Use Futures Study, does not include any parcels adjacent to Regional Road 7 in the Woodbridge Focused Area Study. Hence, policies of OPA 661 do not directly have an impact on the study, but are used to identify development scenarios for the flood risk assessment as described in Appendix E.

A history of the SPA is summarized in Section 3.0 of this report. Past SPA policies and boundary changes are provided in Appendix B.

While Official Plan Amendment #145 (OPA 145) provides the first justification for the SPA in the Woodbridge area, the current urban structure of the Woodbridge community was set by OPA 240, as amended by OPA 440. OPA 240 defined the Woodbridge Core, as depicted on Schedule 'B' of the Plan (see Figure 1-4 below), as the area along Woodbridge Avenue from Kipling Avenue to Islington Avenue, and including Wallace Street and parts of Clarence Street. This is amended in OPA 440 as shown in Schedule 'I' of the Plan (See Figure 1-3 below).

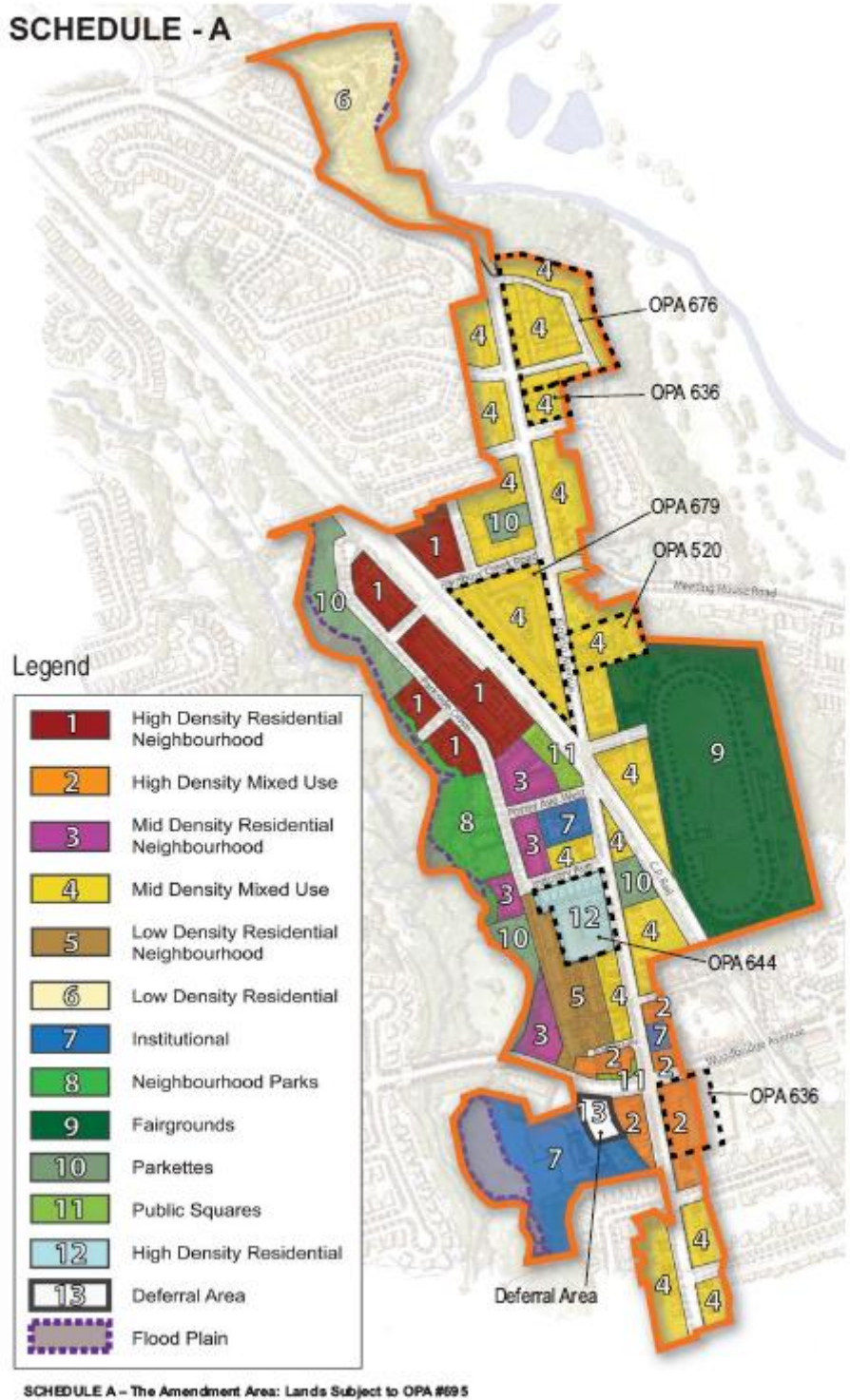


Figure 1-2 Plan area and land use for OPA 695, the Kipling Avenue Corridor Plan.

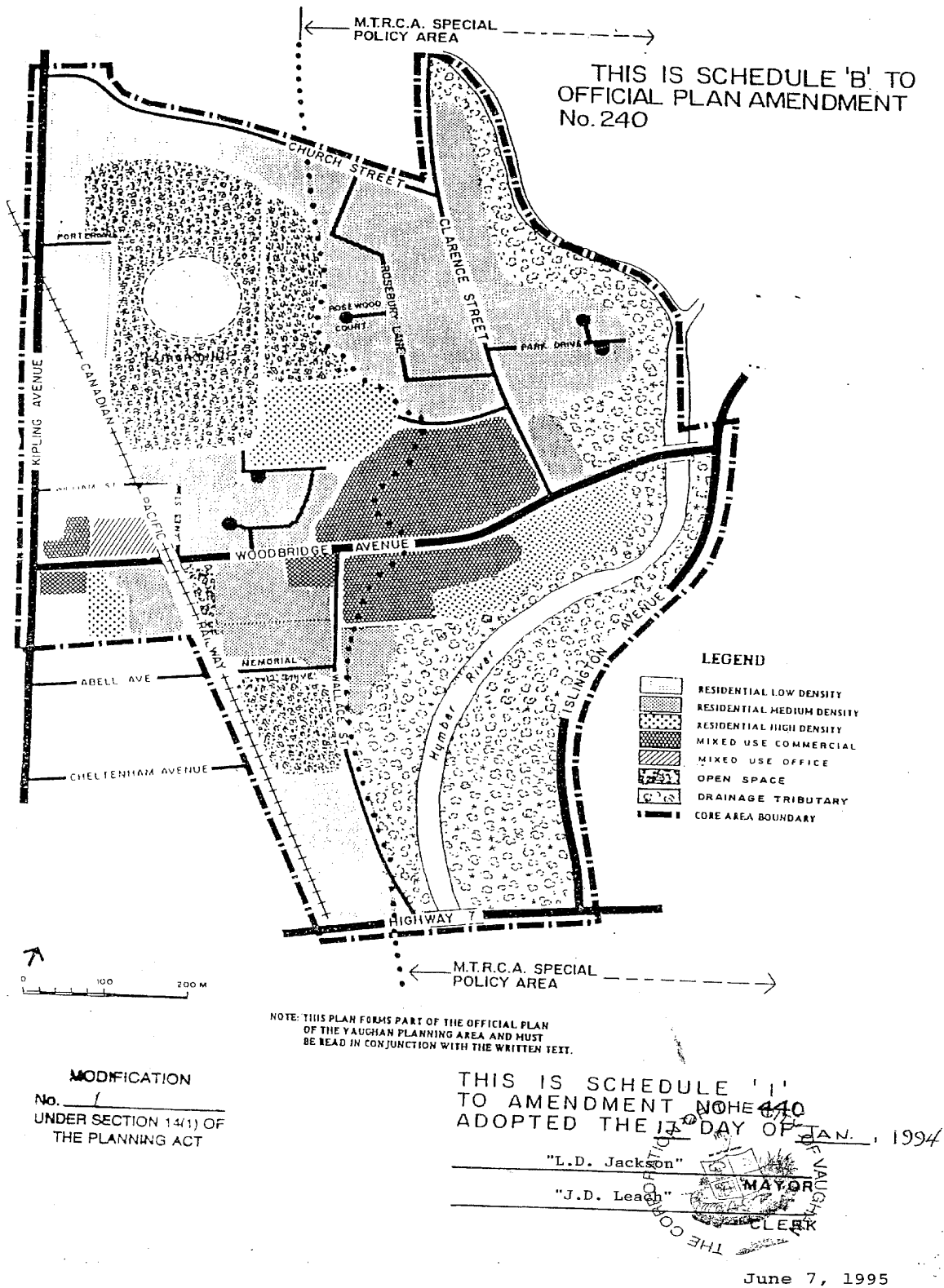


Figure 1-3 Woodbridge Core area as shown on Schedule 'I' of OPA 440.

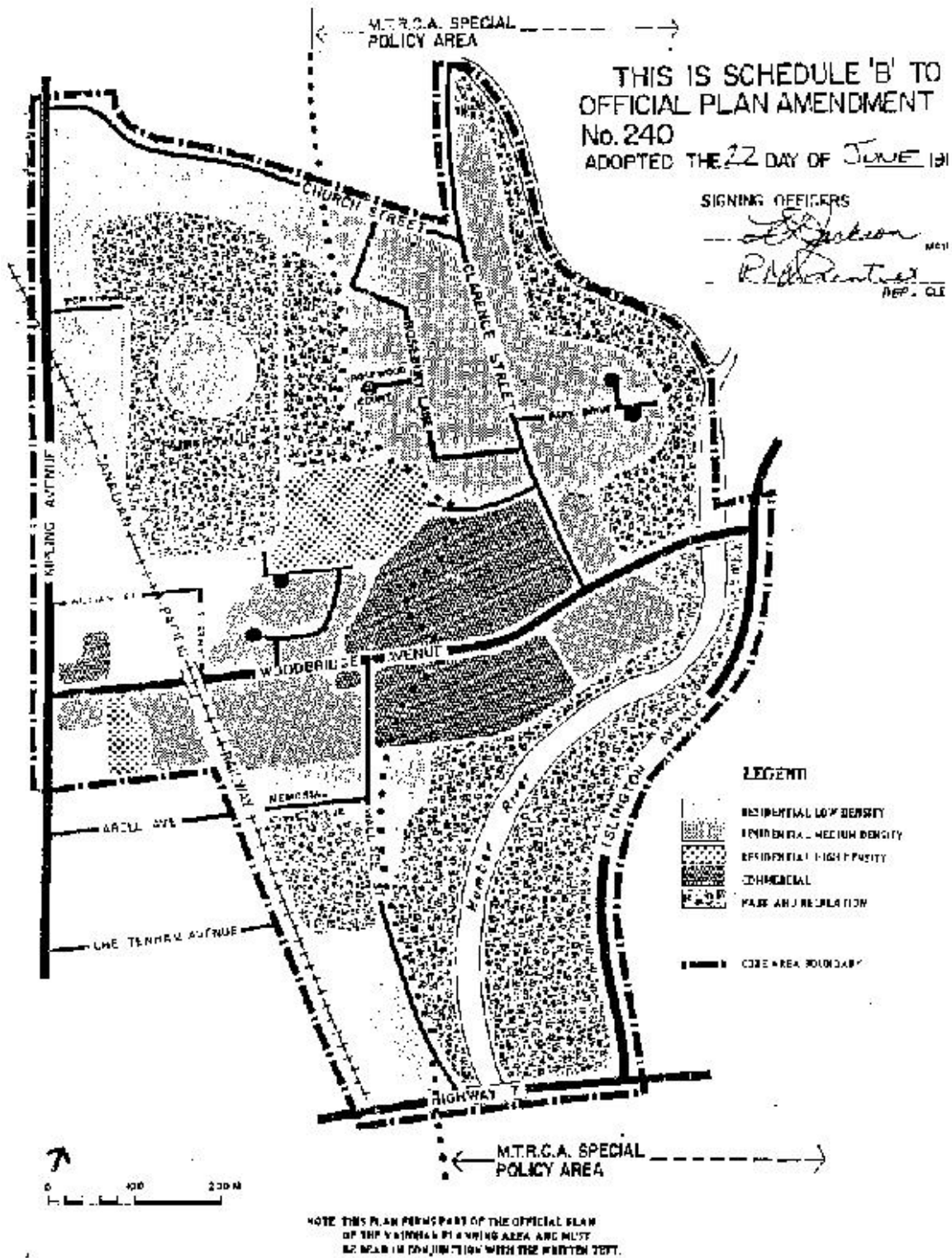


Figure 1-4 Woodbridge Core and land use as shown in Schedule 'B' of OPA 240.

The approved change in density from OPA 240 to OPA 440 is documented below. The change in area of the Residential Low Density designation does not significantly alter the dwelling unit count. The major land use changes from OPA 240 to OPA 440 are listed below.

- The Commercial designation in OPA 240 changed to Mixed Use Commercial, allowing residential units in this designation.
- Redesignation of a portion of the Residential Medium Density to Residential High Density, and an increase in the boundary and area of lands designated Residential High Density, including in the SPA.
- The redesignation of lands from Residential Low Density to Residential Medium Density in three specific areas: one area east of Wallace Street close to Woodbridge Avenue; one area west of Wallace Street near Highway 7; and one area northeast of James Street and Williams Street.

For the SPA portion of the Woodbridge Commercial Core, the main land use changes from OPA 240 to OPA 440 were (a) the change to the Mixed Use Commercial designation and (b) the increase in area of the Residential High Density designation. It is estimated that these changes to OPA 440 provided for an additional 400 to 500 dwelling units in the SPA. The estimate is based on an approximation of the area of lands in each designation and taking into consideration the density provided for in OPA 440 as expressed in units per hectare. As residential density is not noted for the Mixed Use Commercial designation in OPA 440, a value of 90 units per hectare was used (see Appendix E for a discussion of this estimated value).

It should be noted that Section 2.7 of OPA 597 (Islington Avenue Corridor Study) addressing the SPA policies was deferred by the Region of York, such that the Ministry of Municipal Affairs and Housing and Ministry of Natural Resources did not approve the SPA designations or policies in OPA 597. Hence, OPA 597 has no status.

The discussion above helps to set the context for the risk assessment carried out as part of the comprehensive SPA review. First, the Kipling Avenue Corridor Plan provides for approximately 1,022 additional dwelling units outside of the SPA and outside of the regulated area of the TRCA. This meets the target for the Woodbridge area in the “Where and How to Grow” report prepared as part of the Growth Plan conformity exercise under the City of Vaughan Growth Management Strategy. Second, it should be noted that OPA 661, while not affecting the Woodbridge Focused Area Study, nonetheless provides for intensification along the Highway 7 corridor outside of the SPA.

1.3 Policy Context

Policy direction for undertaking the comprehensive SPA review is provided in three main documents:

- the Provincial Policy Statement (PPS), 2014;
- the “*Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas*” (MNR 2009); and
- the Terms of Reference for the Woodbridge Focused Area Study, which was approved by the Province in January 2010 (Appendix A).

Relevant sections of the PPS (2014) regarding SPAs are provided below. Emphasis in the policy is placed on the need for Provincial approval. Emphasis in the definitions section of the PPS is on the direction that the SPA is not intended for new development if feasible alternatives are available elsewhere outside the floodplain.

Section 3 of the PPS

3.1.2 *Development and site alteration* shall not be permitted within:

- c) areas that would be rendered inaccessible to people and vehicles during times of *flooding hazards, erosion hazards and/or dynamic beach hazards*, unless it has been demonstrated that the site has safe access appropriate for the nature of the *development* and the natural hazard;

3.1.4 Despite policy 3.1.2, *development and site alteration* may be permitted in certain areas associated with the *flooding hazard along river, stream and small inland lake systems*:

- a) in those exceptional situations where a *Special Policy Area* has been approved. The designation of a *Special Policy Area*, and any change or modification to the official plan policies, land use designations or boundaries applying to *Special Policy Area* lands, must be approved by the Ministers of Municipal Affairs and Housing and Natural Resources prior to the approval authority approving such changes or modifications; or
- b) where the *development* is limited to uses which by their nature must locate within the *floodway*, including flood and/or erosion control works or minor additions or passive non-structural uses which do not affect flood flows.

Definitions section of the PPS

Special policy area: means an area within a community that has historically existed in the *flood plain* and where site-specific policies, approved by both the Ministers of Natural Resources and Municipal Affairs and Housing, are intended to provide for the continued viability of existing uses (which are generally on a small scale) and address the significant social and economic hardships to the community that would result from strict adherence to provincial policies concerning *development*. The criteria and procedures for approval are established by the Province.

A *Special Policy Area* is not intended to allow for new or intensified development and site alteration, if a community has feasible opportunities for *development* outside the *flood plain*.

Appendix 5 of the Adaptive Management of Stream Corridors in Ontario - Natural Hazards Technical Guides (MNR and Watershed Science Centre 2002) addresses the SPA. Part B of Appendix 5 has been replaced by the "*Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas*" (MNR 2009). Five scenarios for changes to SPA boundaries and/or policies are identified in the document:

- Deletions due to permanent flood plain reduction;
- Deletions due to flood depth reduction;
- Major adjustments due to flood plain enlargement;
- Minor adjustments (minor increase in risk to public health and safety and minimal property damage); and
- Boundary the same but increase in flood depth/velocities.

The *Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas*" (MNR 2009) also lists the information requirements for a change to SPA policies. This can include any proposed changes to the existing land use designations/densities as well as policies specific to the SPA requirements. The information requirements are listed as follows:

Technical (flood related)

- documentation on any new flood information for the SPA (flood lines, flood depths, flow velocities, access/egress);
- if there have been changes, explain why and whether there are any opportunities for remediation;
- any changes to floodproofing measures;
- analysis of extent to which any flood risk has increased since the SPA was first approved and any subsequent formal reviews;
- explanation as to how emergency response will be provided;
- all mapping should include digital files in geographical information system (GIS) format and be georeferenced.

Land use planning

- a copy of the current SPA approvals by the Province along with OP policies and schedules;
- background information related to land uses in the SPA – how successful has the SPA been functioning – have issues arisen that need to be addressed?
- estimation of the range of any proposed population increases, and structural investment in the flood plain over the planning horizon of the OP;
- explanation of the proposed OPA policy changes to the SPA policies themselves and/or to the land use policies;
- justification report as to why any new or intensified uses need to be located in the SPA;
- demonstration of how the revised policies and land uses are consistent with the PPS and other provincial plans if applicable;
- draft OPA policies and/or revised OP schedule to be submitted;
- any necessary zoning by-law provisions;
- any relevant planning studies that may have been done for the area.

Finally, the Terms of Reference for the Woodbridge Focused Area Study provides further direction for the SPA review, as noted in the excerpt below from the approved Terms of Reference:

“It is the direction of the Province that land use changes within the approved SPA that would increase the threat to human health and property damage should be discouraged. A comprehensive review of the SPA taking into consideration planning and urban design factors relating to complete communities, compact form and heritage fabric may suggest the possible need for intensified land uses. An evaluation of increased risk will help to inform whether such intensive land uses should be directed to either less susceptible portions of the SPA or completely outside the SPA. Finally, the Ministers of Municipal Affairs and Housing and Natural Resources are required to approve any changes to the SPA, as directed in the Provincial Policy Statement (2005) policy 3.1.3.”

1.4 Public Process

The Woodbridge Focused Area Study, which addressed the SPA issues, has been the subject of several public meetings. Public consultation meetings were held on September 17th, 2009 and February 11th, 2010. Statutory Public Open Houses were held on April 7th, 2010 and April 14th, 2010. The Woodbridge Focused Area Study and Draft Secondary Plan were brought to a Public Hearing on June 14th, 2010. The Woodbridge Centre Secondary Plan was brought to a meeting of the Special Committee of the Whole on August 31st, 2010 and adopted by Council of the City of Vaughan on September 7th, 2010 as part of Volume 2 of the City of Vaughan Official Plan.

2.0 City of Vaughan Emergency Management Plan

The risk analysis for the Woodbridge Focused Area Study and review of the Special Policy Area includes consideration of geographic risk operational risk. Geographic risk is focused on the types of threats and probability of the threats manifesting in a specific or broader land area. Operational risk is focused on the consequences of the threat occurring in a specific or broader area. Operational risk management takes into consideration the five pillars of emergency management, which include prevention, mitigation, preparedness, response and recovery.

2.1 Geographic Risk

From the perspective of emergency management planning, the risk assessment emphasized flood and slope erosion within the specified geographic area. To determine the geographical area of impact and depth of flooding, the assessment team used flood plain maps from the TRCA, the City-wide Drainage and Stormwater Management Criteria Study (City of Vaughan 2009), past history of flooding, flood depth modelling, ingress/egress and site reconnaissance. A quantitative approach to geographic risk assessment, in accordance with the Natural Hazards Technical Guides, is described in Appendix G and considers dwelling unit build-out, flow velocities and flood depths.

2.2 Operational Risk

The criteria used in analyzing operational risk included potential impacts to life, mortality rates, casualty rates, loss of lifelines (fire, police, EMS, hospitals, power, water, sewer, telecommunications), damage to private property and vehicles, environmental damage, economic loss, damage to government infrastructure, reputation, and degree of media interest. Each criterion was given a numerical value between 1 and 4, with one being minimal impact to 4 being severe impact. The assessment team evaluated past flooding events in the area, the impact of intensification in the area and impacts of flooding in communities throughout the world with similar characteristics to the Woodbridge Core. It was noted in the analysis of the various flood events that the mortality and casualty rates were extremely low in developed nations while property and infrastructure damage costs were in the 100's of millions of dollars.

2.3 Pillars of Emergency Management

The City of Vaughan responds to all emergency situations in accordance with established legislation and standards. The City of Vaughan Emergency Management Response Plan is in compliance with the Emergency Management and Civil Protection Act and Regulations. The City of Vaughan Emergency Plan and Re-Entry Evacuation Plan are publically available on the Emergency Planning Department website (www.vaughan.ca/PrepE).

Consistent with the City of Vaughan all-hazards emergency management approach, the assessment team also took into consideration the five pillars of emergency management (prevention, mitigation, preparedness, response and recovery) to reduce risk. Operational risk of flood emergencies can be significantly decreased by applying the pillars of prevention and mitigation. Additional risk to life, safety and property can be prevented through land use planning strategies such as suspending all future development on the flood plain and removing existing structures on the flood plain and creating green space. Mitigation measures in particular can reduce the risk to life and safety. Mitigation measures that are used in relation to flood emergencies include public education and awareness on actions to take when flood

bulletins are issued; monitoring of weather conditions and water levels; issuing notices to evacuate in advance of flooding; passive and active flood proofing of all structures; owner-developed emergency plans for multi-unit dwellings, commercial and industrial structures; and sandbagging of vulnerable structures prior to flood onset.

It is important to note that every individual is responsible for being prepared for an emergency situation. The City implements the pillar of preparedness through public awareness, public education, emergency information, training and exercises annually for staff and having an Emergency Operations Centre in a permanent state of readiness. Information guides on personal emergency preparedness at the Vaughan City Hall are available at public events and on the website. Emergency Planning also makes emergency preparedness information available for those residents with special needs. The Provincial Emergency Preparedness Guide for People with Disabilities/Special Needs is available in the residents section of the Emergency Planning Department website (www.vaughan.ca/PrepE). The City uses several different mediums to communicate actions for citizens to promote emergency preparedness and rapid action by the public to potential emergency situations. These mediums include, radio, television, websites, door-to-door, recorded messages on the phone system and mobile signs.

The Emergency Management Team and support staff attend annual training and exercises to maintain an optimum level of preparedness to effectively, efficiently and rapidly respond to any emergency situation. Through training and exercises, City staff understand the possible impacts of the hazards and threats and are able to anticipate possible issues and resources required to respond to the emergency.

The pillar of response is specifically addressed through the City's all hazards emergency response plan. This establishes the City's authority to manage the situation, the eight strategic response goals, plan implementation, escalation, notification procedures, roles and responsibilities of the Emergency Management Team and external agencies, operation procedures, mutual assistance, emergency facilities, staff training, plan testing and maintenance.

The recovery pillar includes a comprehensive analysis of damage caused and development of remediation plans to mitigate future flood risks and impacts. Examples include a requirement that all structures include floodproofing measures as a component of the building permit, relocation of structures to areas outside of the flood plain, and creating green space.

The risk assessment is the basis of operational plans and strategies to effectively and efficiently manage the situation to decrease the impact upon the community. The flood vulnerability analysis involves calculation of the Flood Emergency Response Index (FERI). The FERI approach was developed to prioritize the planning and emergency response at Flood Vulnerable Areas (FVAs) and Flood Vulnerable Roads (FVRs) based on various vulnerability criteria. The FERI approach yields a priority list based on risk prior to and during large storm events.

2.4 Emergency Management and the Woodbridge Centre Secondary Plan

In addition to the City-wide, all-hazards approach described in the City of Vaughan Emergency Plan, section 7.3 of the Woodbridge Centre Secondary Plan (Natural Hazard and Special Policy Area Policies), includes specific policies to address emergency response and safe access through the development review process. The Emergency Planning Program and Vaughan Fire and Rescue Service (VFRS) are responsible for reviewing development applications in the

Woodbridge SPA. Each proposed future development is assessed based on its degree of risk, which is then included in the development review. Section 7.3.2 b) requires new residential apartment and/or commercial/institutional development applications to provide an emergency response plan specific to the proposed development. The application must also demonstrate to the satisfaction of the City and TRCA that safe access to the site is possible for all pedestrian and vehicular traffic (S. 7.3.2 c).

The Emergency Planning Program and the VFRS have reviewed the Woodbridge Centre Secondary Plan and the Woodbridge Special Policy Area Justification Report and are confident that the emergency management standards and practices currently in place will support the proposed development as described in the Secondary Plan. The City of Vaughan Emergency Plan, Evacuation Plan and department-specific response protocols are in accordance with existing legislation, regulations, standards and protocols that may be applicable to emergency conditions and will be implemented by all parties involved. The Woodbridge Special Policy Area Justification Report is accompanied by a transmittal letter signed by the Fire Chief.

3.0 History of Special Policy Area Approvals

The purpose of Official Plan Amendment 145, adopted by Council in 1982, was to establish the Special Policy Area in the Woodbridge Area of Vaughan. Lands designated in OPA 26 for residential, commercial, industrial and utility uses were recognized in the SPA. Some lands formerly designated as Drainage Tributary in OPA 26 were re-designated for residential purposes.

OPA 145 also established that there were only three structures in the floodway, which are located south of Highway 7. As a result, a specific policy for this area was included requiring remedial works for any development to occur in this area. This policy is carried through to the Woodbridge Centre Secondary Plan.

OPA 440 updated the mapping of the SPA in Schedule 'D' of the Plan and is recognized as the existing SPA boundaries in the City of Vaughan.

Many of the SPA policies introduced in OPA 145 have been carried through to OPA 240 and OPA 440. These policies require certain conditions of development related to floodproofing and safe access to the satisfaction of TRCA and the City of Vaughan. OPA 440 added policies prohibiting certain development based on changes to the Provincial Policy Statement and conformity with the Provincial Flood Plain Planning Policy Statement.

SPA policies and relevant schedules from OPA 145, OPA 240, and OPA 440 are provided in Appendix B. Provincial approvals for the OPAs are also provided in Appendix B.

4.0 Official Plan Amendment and Zoning By-Law Summary for SPA Parcels

Appendix C lists all parcels in the SPA and identifies current zoning according to Comprehensive Zoning By-Law 1-88 as well as designations according to OPA 240 and OPA 440. Site-specific amendments are also noted. Contribution of the site to heritage character according to the Woodbridge Heritage Conservation District Plan is noted where information is available.

5.0 Special Policy Area Boundary Adjustments and Policy Modifications

5.1 Technical Information Regarding Boundary Adjustments

The “*Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas*” (MNR 2009)” document notes the following technical information requirements for SPA boundary deletions due to permanent flood plain reductions:

- size of area that has been removed;
- percent reduction of overall SPA;
- flood plain mapping showing new and old flood lines;
- mapping showing new and old SPA boundary lines;
- explanation as to why a reduction in the flood plain has occurred.

The technical information requirements are met by the information provided below. A brief summary of the revised flood plain modelling undertaken by the TRCA is provided as well as the overall results of the proposed SPA boundary modifications. A table of SPA reductions and additions together with a map illustrating the additions and deletions are provided in Appendix D. Note that remedial measures to reduce the floodway and floodplain are not planned by the City of Vaughan.

In 2002, the TRCA commenced a project to update the hydrologic and hydraulic modeling for the Humber River watershed. This project was intended to update the existing flood plain mapping for the entire watershed, in accordance with provincial natural hazards policy, to reflect current and proposed land uses, and hydraulic conditions within the Humber River and its tributaries. The hydrologic modelling (Aquafor Beech 2002) calculated new Regional storm (Hurricane Hazel) flood flows which were subsequently incorporated into updated hydraulic models for the Humber River watershed (Greck and Associates Limited 2002, Acres & Associates 2003, Acres International 2004) for calculation of the water surface elevations in the Humber River and its tributaries that are associated with these flows. These water surface elevations were used to generate new floodplain maps that define the boundaries of the regulatory floodplain throughout the watershed. The resulting new floodplain boundaries are somewhat different than the previous boundaries in some areas due to changes in calculated Regional storm flows as well as to improved topographic mapping. Some of these differences are evident in the SPA within the City of Vaughan.

The changes to the flood plain necessitated a revision of the SPA boundaries to ensure the City’s policies and programs continue to correspond to the current TRCA floodplain mapping. The technical adjustment required to revise the Special Policy Area boundaries was minor in nature, as the changes to the regulatory floodplain were only the result of improved topographic mapping. The boundaries of the SPA were examined with respect to the extent of the revised flood lines as they relate to individual lots, land use, and property ownership.

The minor adjustments that were made to the existing SPA boundaries are a result of the following changes.

- Parcels designated Natural Areas, including property owned by TRCA, are removed from the SPA as development is not intended to occur on these lands.
- Parcels designated Parks in SPA #1 are removed from the SPA as development is not intended to occur on these lands, although the proposed SPA boundary includes the

long-lasting structures (e.g. concrete silos) of the former Hayhoe Mills site if it is determined that these structures can be re-used for ancillary park uses. The Park designation for a public square in the Market Lane area is not removed from the SPA as the precise location of the public square is not yet determined.

- Lands located inside the previous regulatory floodplain but outside of the updated floodplain were removed from the SPA as development is no longer restricted by provincial or TRCA floodplain management policy in these areas, though they still remain subject to TRCA's Regulation (Ontario Regulation 166/06).
- New boundaries follow property lines, where applicable, such that select properties no longer straddle the boundary between the SPA and the "one-zone" area¹.

These boundary modifications resulted in an overall decrease in the total land area within the proposed SPA. There are fewer existing residential properties located within the proposed SPA boundaries as a result of the changed floodplain, and fewer vacant properties within the SPA as a result of the removal of TRCA property.

The existing 40.1 hectare SPA comprises 10 separate areas and includes approximately 300 parcels. There are 1020 existing and approved (i.e. site plan approval in place) dwelling units in the SPA, of which about 700 units are in multi-residential buildings. A further breakdown of dwelling units by the SPA sub-areas is provided in the capacity assessment (Appendix E) and flood risk assessment (Appendix G).

The proposed SPA is 29.8 hectares and continues to comprise 10 separate sub-areas, although this has been further sub-divided by the TRCA into similar hydraulic zones in order to calculate flow velocities. There are 240 parcels and 962 existing and permitted dwelling units in the proposed SPA. The changes include 11.0 hectares of reductions and 0.7 hectares of additions at a parcel scale, resulting in an overall reduction of 10.3 hectares or 25.7% of the existing SPA. Note that the additions to the SPA constitute less than 10% of the overall SPA and are offset by the larger reductions.

Figure 5-1 illustrates the existing and proposed SPA in relation to flood depths associated with the Regulatory Flood. Figure 5-2 illustrates the existing and proposed SPA in relation to flow velocities associated with the Regulatory Flood.

The floodline used to delineate the existing SPA is considered by TRCA to be based on 1979 data. However, this information is no longer available in GIS format as the floodplain mapping is continually updated. As part of the SPA review, the TRCA has delivered signed and embossed updated floodline mapping to the Ministry of Natural Resources.

¹ The "one zone" approach to floodplain management is described in Chapter 3 of Volume 1 of the new City of Vaughan Official Plan. It is noted that development within the floodplains is regulated in accordance with Provincial floodplain management policies and the regulations of the Toronto and Region Conservation Authority and that specifically, new development within the floodplain of valley and stream corridors, which are included in *Core Features* of the Natural Heritage Network, is prohibited.

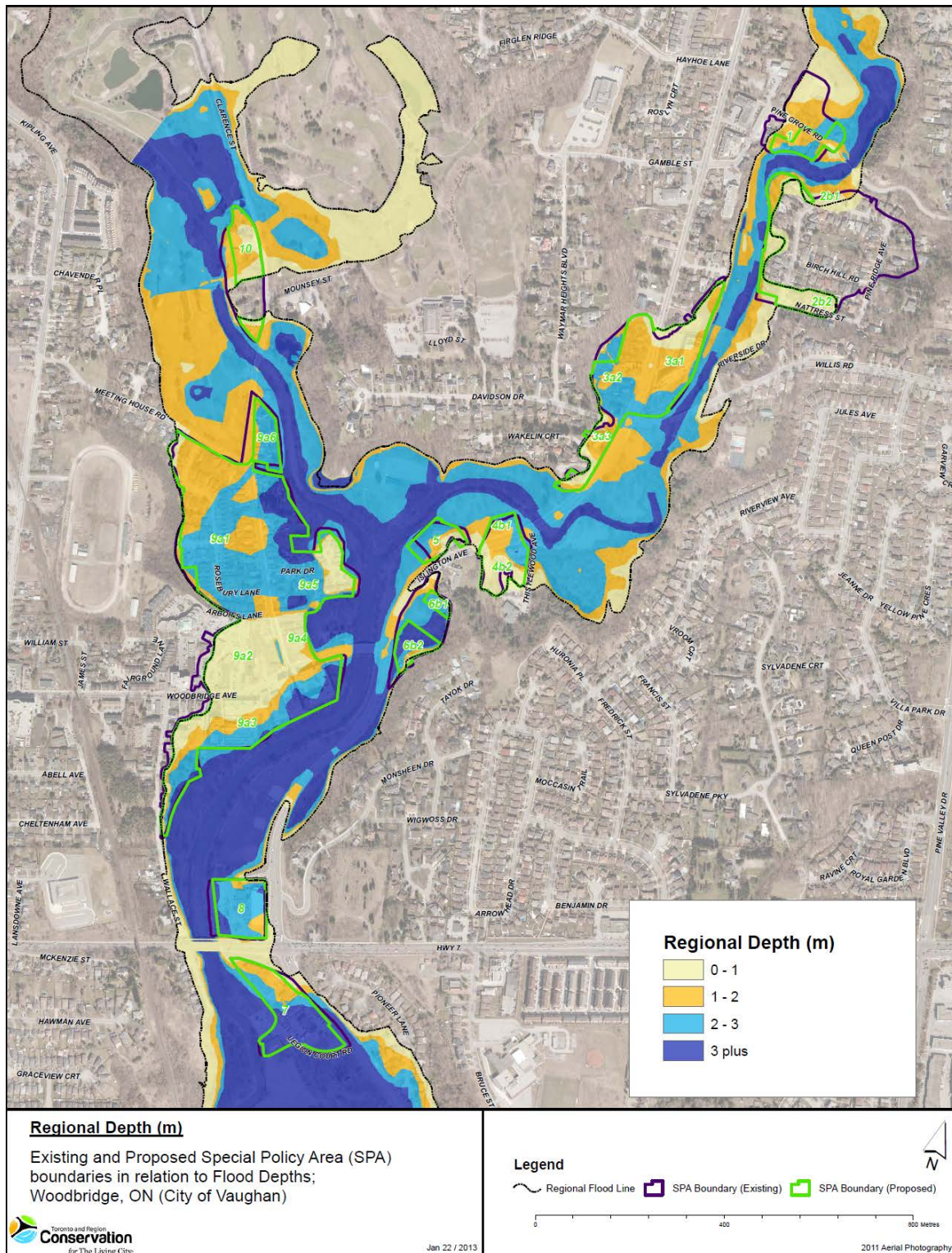


Figure 5-1 Existing and proposed Special Policy Area (SPA) in relation to the flood depths, at 1 metre intervals, from a Regulatory Flood event. Prepared By: TRCA. Data Source: TRCA, 2013.

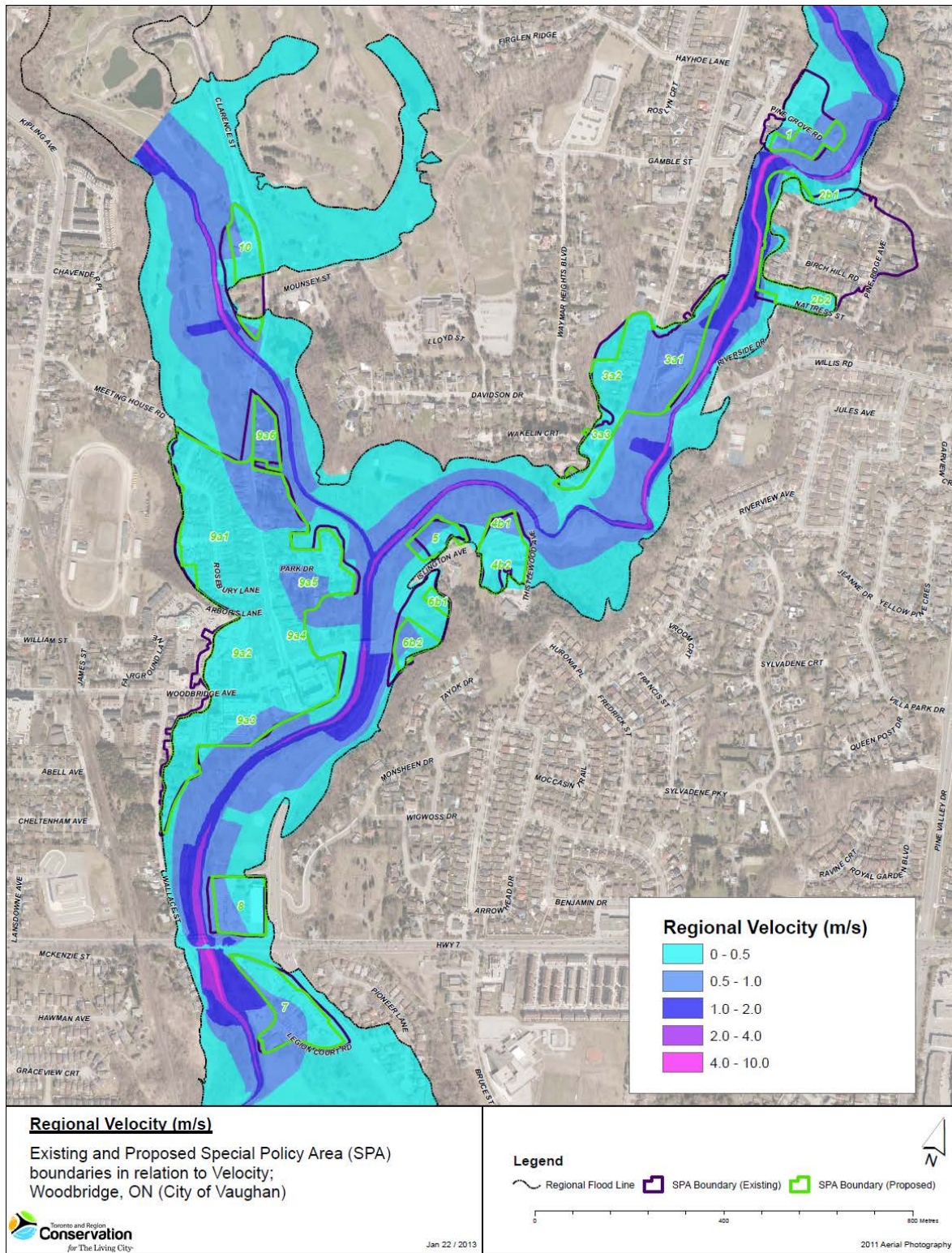


Figure 5-2 Existing and proposed Special Policy Area (SPA) in relation to flow velocities from a Regulatory Flood event. Prepared By: TRCA. Data Source: TRCA, 2013.

5.2 Land Use Planning Information Requirements

The “*Procedures for the Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas*” (MNR 2009) document also notes the following land use planning information requirements resulting from SPA boundary changes due to permanent flood plain reductions:

- a copy of the current SPA approvals by the Province along with the official plan (OP) policies and schedules and associated zoning by-law requirements;
- draft official plan amendment (OPA) changes and revised OP schedule to be submitted identifying the area to be removed with an indication of the proposed designation(s)/zoning for that area.

The history of SPA approvals by the Province, relevant OP policies and schedules are provided in Appendix B. The Woodbridge Centre Secondary Plan is provided as Attachment 1 to satisfy the information requirements noted above. In addition, Appendix H includes official plan designations from OPA 240 and OPA 440, where relevant, in comparison to the Woodbridge Centre Secondary Plan designations for each parcel in the SPA. The suggested process to implement the proposed land use changes, SPA boundary changes and SPA policies via the Woodbridge Centre Secondary Plan and City of Vaughan Official Plan is discussed in the Implementation section of this Report.

5.3 Information Requirements for SPA Policy Modifications and Land Use Changes

Information requirements for modifications to SPA policies are described in Section 3.1 of the “*Procedures*” document. The information requirements are addressed systematically below in subsection 5.3.2. Subsection 5.3.1 provides a brief summary of the land use designation changes between the approved policies (OPA 240 and OPA 440) and the Woodbridge Centre Secondary Plan.

5.3.1 Summary of Boundary Adjustments and Land Use Designation Changes

All potential dwelling unit increases provided for in the Woodbridge Centre Secondary Plan as compared with previous approvals (i.e. OPA 440) are directed primarily to SPA sub-area #9a2, with some of the dwelling unit increases also likely to occur in SPA #9a3 and #9a4. SPA #9a2 is a low risk part of the SPA as determined through the flood risk assessment described in Appendix G. Table 6-2a and Table 6-2b in Section 6.2 of this Report describe the unit count changes on a parcel basis in SPA #9a2, #9a3 and #9a4. In total, the Woodbridge Centre Secondary Plan provides for 102 additional units in the SPA in the Woodbridge Commercial Core. Of this, 83% or 85 units are directed to the low risk part of the SPA. The remaining 17% or 17 units reflect a modest increase resulting from attempts to match the density provisions in previous approvals with the density provisions specified as Floor Space Index (FSI) in the Vaughan Official Plan and Woodbridge Centre Secondary Plan.

Changes to the designations in the SPA along Islington Avenue generally reflect the designations in OPA 240 or existing development in instances of previous site-specific approvals. The designations along Islington Avenue in the Woodbridge Centre Secondary Plan are intended to match existing approvals. For example, stable residential areas designated as Low Density Residential in OPA 240 are recognized in the Low-Rise Residential designation of

the Woodbridge Centre Secondary Plan with a height of 2 storeys. The following breakdown summarizes the proposed development in the SPA sub-areas.

SPA #1 (Proposed SPA #1)

Existing SPA sub-area #1 is 1.9 hectares while the proposed SPA boundary totals 0.63 hectares for a reduction of 1.27 hectares.

The current approved boundary for SPA #1 includes all or part of 10 parcels and 4 single-detached residences (142, 155, 161 and 192 Pine Grove Road). The proposed boundary for SPA #1 includes 6 parcels, including the 3 single-detached residences (192 Pine Grove Road is removed from the SPA) as well as the silos associated with the former Hayhoe Mills. The boundary modifications to the SPA reflect the designation of a public park on parts of parcels originally designated as employment lands (201 and 229 Pine Grove Road) and/or Low Density Residential (165 and 180 Pine Grove Road).

Parts of parcels at 201 and 229 Pine Grove Road, designated Industrial in OPA 240, are redesignated as Commercial Mixed Use (1) and Parks in the Woodbridge Centre Secondary Plan. A height maximum of 3 storeys is provided for the lands with the Commercial Mixed Use (1) designation as shown on Schedule 4 of the Woodbridge Centre Secondary Plan.

SPA #2 (proposed SPA #2b1 and SPA #2b2)

As a result of the updated flood plain mapping, SPA sub-area #2 is reduced in size from 6.75 hectares to 1.2 hectares. All parcels in the existing boundary for SPA #2 reflect a stable residential area. Of the 71 parcels and single-detached residences in SPA #2, 21 parcels and 19 single-detached residences remain in the proposed boundaries for SPA #2b1 and SPA #2b2. For all parcels, the Low Density Residential designation in OPA 240 is changed to Low-Rise Residential in the Woodbridge Centre Secondary Plan.

SPA #3 (proposed SPA #3a1, SPA #3a2 and SPA #3a3)

The proposed boundaries for SPA #3 result in a slight reduction in size from 4.54 hectares to 4.51 hectares. The changes reflect minor flood plain reductions and better alignment of the SPA boundary to property lines. As a result, three properties and 2 single-detached residences are removed from the existing SPA.

The existing boundary for SPA #3 includes all or part of 24 parcels with 22 single-detached residences and 155 residential units in 1 multi-residential building. SPA sub-area #3a1 includes four parcels, yet two of these are the only parcels with designations other than Low-Rise Residential. The parcel at 8201 Islington Avenue has a Low-Rise Residential (3) designation to reflect the existing multi-residential building with 155 units. The parcel at 8265 Islington Avenue has a split designation: the Low-Rise Residential (2) designation occurs outside of the SPA along the Islington Avenue frontage and provides for a building to a height of 3.5 storeys and an FSI of 1.0 if density bonus provisions are met; and the Low-Rise Residential designation occupies the balance of the lands in the SPA and further east abutting the Humber River.

SPA #3a2 includes 13 parcels and single-detached residences while SPA #3a3 includes 3 parcels and single-detached residences. Hence, there is an overall reduction of 3 parcels and 2 single-detached residences from the existing boundaries of SPA #3.

SPA #4 (proposed SPA #4b1 and SPA #4b2)

The proposed boundaries for SPA #4 generally enlarge the SPA by 0.17 hectares from 1.15 hectares to 1.32 hectares to include more of the parcels already within the existing boundaries. The designation of the three commercial properties change from General Commercial in OPA 240 to Commercial Mixed Use (1) with a density of 0.5 FSI and heights between 2 to 3 storeys. The property identified as a Church in OPA 240 is designated as Private Open Space in the Woodbridge Centre Secondary Plan while a small portion of the property that includes the seniors' residence at 33 Thistlewood Avenue continues to be included in the proposed SPA. The building footprint of the seniors' residence is located outside of the SPA and the floodplain and only a small portion of the lot is within the SPA.

SPA #5 (proposed SPA #5)

The proposed boundary for SPA #5 enlarges the area of the SPA from 0.35 hectares to 0.62 hectares, yet is still intended to reflect the existing townhouse development at 8050 Islington Avenue. OPA 240 designates the parcel as Medium Density Residential with specific policies (Policy 3.4.g) indicating permitted development of en-bloc townhouses at a maximum density of 36 units per hectare. The Low-Rise Residential (1) designation in the Woodbridge Centre Secondary Plan technically allows for 33 units compared to the existing 24 units on the site. However, the FSI of the existing development is estimated to be between 0.6 to 0.9 FSI.

SPA #6 (proposed SPA #6b1 and SPA #6b2)

SPA #6 is proposed to be reduced in size from 1.58 hectares to 0.71 hectares. The existing boundary of SPA #6 included all or parts of 8 properties, but was effectively intended to recognize 6 properties with 4 single-detached residences and one Place of Worship. The proposed boundaries for SPA #6b1 and #6b2 include 4 parcels with single-detached residences and have a Low-Rise Residential designation in the Woodbridge Centre Secondary Plan. One of the parcels removed from the SPA is redesignated as Natural Areas and is owned by the TRCA.

SPA #7 (proposed SPA #7)

The existing SPA includes 5 parcels designated General Commercial and one property designated Drainage Tributary with a single-detached residence used for institutional purposes. The proposed boundaries decrease the SPA from 2.25 hectares to 1.97 hectares to align with the property boundaries. The General Commercial designation is changed to Commercial Mixed Use (1) providing for a density of 1.0 FSI and to a height of 2 storeys. The maximum lot coverage is 60% for the Commercial Mixed Use (1) designation. Estimated FSI of the existing commercial buildings range from 0.2 to 0.84. The property used for institutional uses has a Low-Rise Residential designation in the Woodbridge Centre Secondary Plan.

SPA #8 (proposed SPA #8)

SPA #8 includes the Woodbridge Pool and Memorial Arena. A decrease in the SPA area from 1.41 to 1.3 hectares reflects proposed SPA boundaries that better align with the property boundary.

SPA #9 (proposed SPA #9a1, SPA #9a2, SPA #9a3, SPA #9a4, SPA #9a5 and SPA #9a6)

While the proposed boundaries for SPA #9 are modified in many places to reflect better alignment with property lines, the overall net change is a decrease of approximately 1 hectare from 17.7 hectares to 16.68 hectares.

Proposed boundaries for SPA #9a1, SPA #9a5 and SPA #9a6 include stable residential areas. Designations of the parcels in this part of the SPA change from Residential Low Density in OPA 240 and OPA 440 to Low-Rise Residential. This part of the SPA includes 114 parcels and 112 single-detached residences.

Proposed boundaries for SPA #9a2, #9a3 and #9a4 are generally reduced from the existing SPA boundaries. The current approved land use designations for the area include Mixed Use Commercial (height maximum of 4 storeys), Residential Medium Density (density maximum of 35 units per hectare) and Residential High Density (density maximum of 99 units per hectare). The Woodbridge Centre Secondary Plan proposes to generally change the designations as follows:

- Residential Medium Density designation in OPA 440 is changed to Low-Rise Residential (1) with a density of 0.5 FSI to generally match the density of 35 units per hectare;
- Mixed Use Commercial designation in OPA 440 is generally changed to Low-Rise Mixed Use;
- Residential High Density in OPA 440 is generally changed to Mid-Rise Mixed-Use or Mid-Rise Residential to match the existing densities.

Table 6-2a and Table 6-2b provide further information for each parcel in SPA sub-areas #9a2, #9a3 and #9a4.

SPA #10 (Proposed SPA #10)

The existing boundaries for SPA #10 include 2 parcels with single-detached residences and parcels associated with the Board of Trade Country Club. The proposed SPA boundaries reduce the area of the SPA from 1.79 hectares to 0.93 hectares to reflect changes in the floodplain.

5.3.2 Information Requirements for SPA Policy Modifications

The information requirements are addressed systematically in the following table.

Information Requirement	Justification
Technical – Flood Information	Changes in flood lines and proposed SPA boundaries are documented in Appendix D. Section 5.1 describes the approach taken by TRCA to revise the flood limits.
Technical – Opportunities for Remediation	The City of Vaughan Development/Transportation Engineering department and Public Works department have not planned for further remedial works. Previous remedial works following the Hurricane Hazel flood have significantly reduced flood risk in the area.
Technical – Floodproofing Measures	The proposed policies do not reduce the minimum floodproofing standards from previous approved policies in OPA 440. Appendix I provides a comparison of SPA policies between approved policies in OPA 440 and proposed policies in the Woodbridge Centre Secondary Plan.
Technical – Emergency Response	<p>The City of Vaughan Evacuation Re-Entry Plan (http://www.city.vaughan.on.ca/vaughan/departments/fire_and_rescue/pdf/draft_evacuation_plan.pdf) comprises Appendix K of the Emergency Plan and is consistent with the National Fire Protection Association (NFPA) Standard 1006 (Standard for Technical Rescuer Professional Qualifications). Other relevant emergency response procedures are described in the standard operating guidelines for water rescue (SOP.OG.3302), water and ice rescue (SOP.OP.0032) and roadway safety (SOG.OP.0021) prepared by the department of Fire and Rescue Service.</p> <p>The City of Vaughan Emergency Plan and Re-Entry Evacuation Plan are publically available on the Emergency Planning Department website www.vaughan.ca/PrepE.</p>
Land Use Planning – Current SPA Approvals by the Province	Current provincial approvals for the SPA as described in OPA 145, OPA 240 and OPA 440 are documented in Appendix B.
Land Use Planning – Functioning of the SPA	<p>Three tests to assess the functioning of the SPA are described below: (1) the main justification for the SPA as articulated in the PPS regarding the need to maintain a vibrant community recognizing historic settlements; (2) the manner in which land uses changes, if any, are being directed and managed; and (3) the extent to which floodproofing standards are being met.</p> <p>(1) Vibrant Community. Woodbridge continues to be recognized as one of four main historic villages in Vaughan, together with Thornhill, Maple and Kleinburg-Nashville. A Heritage Conservation District Plan applies to each of these areas. The “central area” of the SPA as noted in OPA 145 is described as having “a variety of business offices and retail facilities together with some residential uses”. There are currently approximately 460 dwelling units in five existing and/or approved multi-residential buildings in the SPA in the commercial core. The growth in residential units has helped to maintain the retail and commercial uses along Woodbridge Avenue. The modest intensification provided for in the Woodbridge Centre Secondary Plan will add commercial space as well as approximately 102 additional dwelling units in the SPA of the commercial core. The vision of the Plan is one of an animated commercial avenue and a designated public square, with some residential</p>

Information Requirement	Justification
	<p>intensification, to enhance the mixed-use character of Woodbridge Avenue as an important social gathering area and commercial focus.</p> <p>(2) Directing land use changes. There continues to be pressure to re-develop along Islington Avenue and Woodbridge Avenue. With the exception of a multi-residential building at 8201 Islington Avenue, approved through the OMB, development in the SPA along Islington Avenue has been limited to single-detached homes. Little change has occurred in the SPA along Islington Avenue and the Woodbridge Centre Secondary Plan maintains the low rise and rural residential character of the SPA along Islington Avenue. Almost all of the change in the SPA has been directed to the Woodbridge commercial core. As noted in Section 1.2 above, the policies in OPA 440, amending OPA 240, likely resulted in the most significant change in urban form along Woodbridge Avenue. These policies permitted between 400 to 500 additional dwelling units in the SPA in the commercial core.</p> <p>(3) Floodproofing Standards. Policy 6.C.a(i) of OPA 440 requires all new development to be flood protected to the Regulatory Flood. However, Policy 6.C.a(iv) allows for a lower level of flood protection to a minimum of the 1:350 year flood where it is technically impractical to flood protect a building or structure to the Regulatory Flood. Permits recently approved by the TRCA demonstrates that floodproofing to the Regulatory Flood level is being achieved.</p>
Land Use Planning – Estimation of proposed population increases	Dwelling unit increases and population increases are documented in Section 6.
Land Use Planning – Structural investment	No new structural investment to bridges is anticipated for the Woodbridge area to 2031.
Land Use Planning – Description of SPA policy changes	<p>Appendix I provides a comparison of SPA policies between approved policies in OPA 440 and proposed policies in the Woodbridge Centre Secondary Plan. The following points summarize the policy changes:</p> <ul style="list-style-type: none"> - A policy is added to require an emergency response plan for multi-residential buildings. - A reference to “all pedestrian and vehicular traffic” is added to the policy regarding the requirement to demonstrate safe access. - The floodproofing standard is not changed, but more detailed language describes the option to meet a floodproofing standard between the Regulatory Flood Level and the 1:350 year Flood Level as permitted by the City and TRCA.

Information Requirement	Justification
Land Use Planning – Description of land use policy changes	As described in subsection 5.3.1, the permissions are not changed from previous approved policies for the land use designations in the Woodbridge Centre Secondary Plan affected by SPA sub-areas 1 to 8, 9a1, 9a4, 9a5, 9a6 and 10. Justification for additional dwelling units in the low risk part of the SPA (SPA sub-area 9a2) is summarized in Section 6. Only a small increase in dwelling units is provided for in the Woodbridge Centre Secondary Plan for SPA sub-areas 9a3 and 9a4 as a result of attempting the match the density provisions in OPA 440 expressed in units per hectare to FSI expressed in the Secondary Plan.
Land Use Planning – Consistency with PPS	<p>Two tests of consistency with the PPS are described below.</p> <p>1. “ ... not intended to allow for new or intensified development and site alteration, if a community has feasible opportunities for development outside the <i>flood plain</i>.”: The justification for additional dwelling units in the low risk part of the SPA (SPA sub-area 9a2) is summarized in Section 6 and based on the flood risk assessment in Appendix G.</p> <p>2. Policy 3.1.4 – Prohibited uses: SPA policies in the Woodbridge Centre Secondary Plan carried forward from OPA 440 prohibit the uses outlined in PPS Policy 3.1.4.</p>
Land Use Planning – Draft OPA policies and/or OP schedules	Relevant policies and schedules from the Woodbridge Centre Secondary Plan are provided in Appendix I. Proposed changes to the policies and schedules resulting from the TRCA review are tracked.
Zoning By-law provisions	<p>Parcels in the existing and proposed SPA in relation to the current zoning provisions are illustrated in Figures 5-3 and 5-4. Excerpts from Comprehensive Zoning By-Law 1-88 are provided in Appendix C for zones that overlap the SPA.</p> <p>The comprehensive zoning by-law will be revised following the approval of the City of Vaughan Official Plan, in accordance with the Planning Act.</p> <p>A draft zoning by-law amendment is provided as part of the SPA Package that identifies select parcels where the zoning permissions respecting dwelling units and/or overnight accommodation exceed the provisions in the Woodbridge Centre Secondary Plan. The draft zoning by-law amendment is intended as an interim measure until Comprehensive Zoning By-Law 1-88 is amended to be in conformity with VOP 2010 in accordance with ss. 26(9) of the Planning Act.</p>
Relevant Planning Studies	Relevant planning studies are noted in Section 1.2 (Land Use Planning Context).

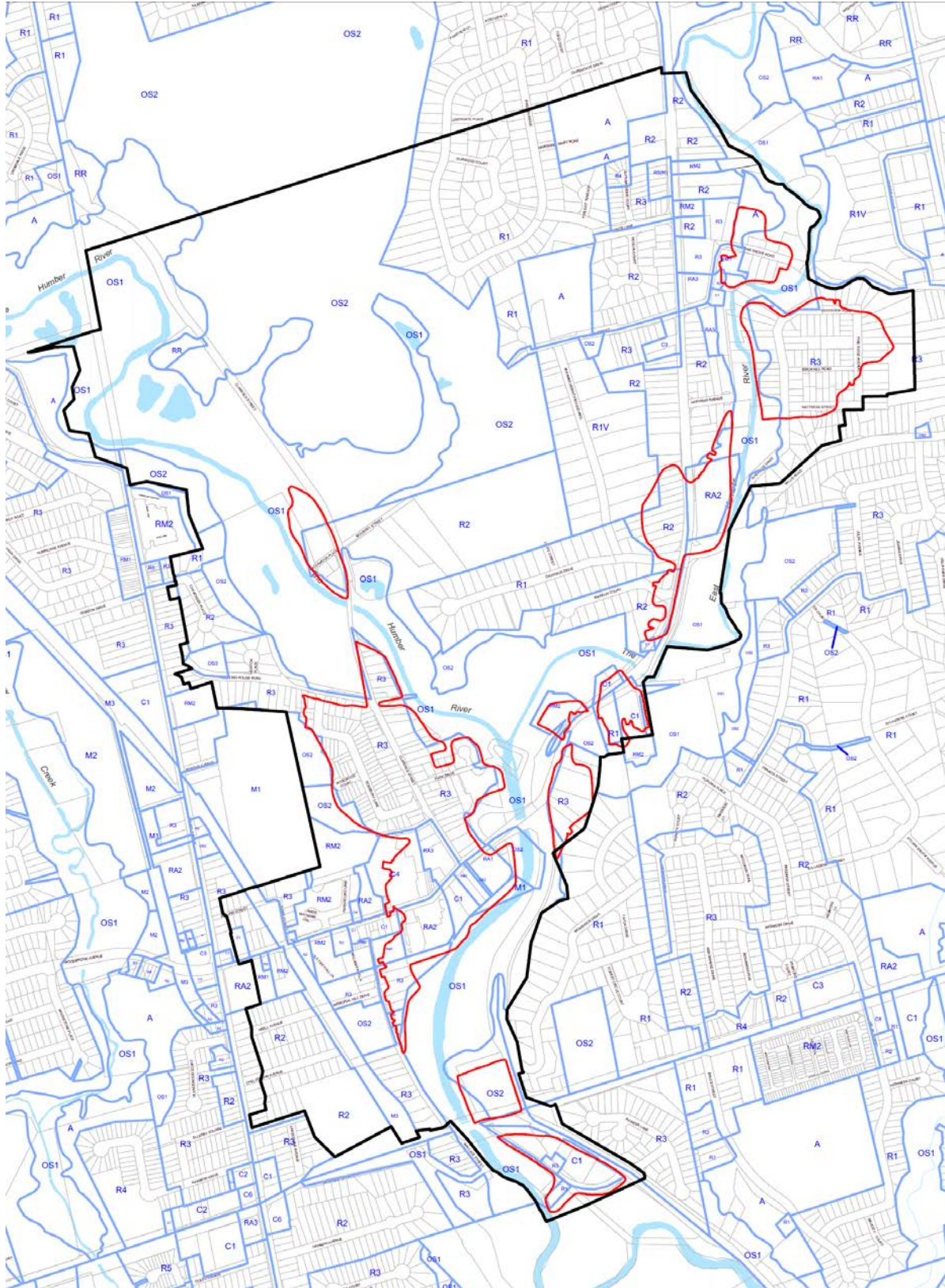


Figure 5-3 Existing SPA in relation to property boundaries and current zoning.

Prepared by City of Vaughan (Policy Planning, Emergency Planning, Development Planning, Information and Technology Management, and Development Engineering)

6.0 Summary of Flood Risk

6.1 Summary of Flood Risk Assessment and Main Recommendations

The assessment of risk to life provided in Appendix G considers both operational risk and geographic risk. Operational risk addresses issues of emergency preparedness and response to reduce risk in the event of a hazard under the City-wide Emergency Plan. Assessing geographic risk identifies areas to avoid to minimize placement of people and structures in harms way.

In the operational risk approach, flooding is ranked 12th out of 24 identified hazards in the City's overall Hazard Identification Risk Assessment (HIRA). Furthermore, an analysis of flooding events demonstrates that advanced warning and emergency response dramatically reduces loss of life, such that property damage is the more prevalent impact of flooding. Given that the spatial area of potential flooding is known and that early warning is available, the HIRA approach addresses operational risk and emergency preparedness with regards to flood risk.

The City of Vaughan "all hazards" emergency response plan and evacuation/re-entry plan are in compliance with provincial legislation and available at www.vaughan.ca/PrepE. The City has annually received notice from the Ministry of Community Safety and Correctional Services that the City-wide Emergency Plan and Program meet the provincial standards 2004 to present. The City's "all hazards" emergency response plan and evacuation/re-entry plan include a number of Standard Operating Procedures regularly reviewed as part of meeting the requirements of the Emergency Management Act.

Two main methods are taken to quantify geographic flood risk. First, a residential capacity analysis is used to quantify development scenarios within the SPA and within the flood depths zones of the SPA. The development scenarios are not intended as preferred land use options, but provide information regarding levels of risk across the SPA. Damage costs from flooding events can also be estimated based on the residential dwelling unit counts. The approach using dwelling units as the unit of quantification is described in subsections 2.2.1 and 2.2.2 of Appendix G. The results of this approach to the flood risk assessment demonstrates that future build-out to approved policies in OPA 440 and OPA 240 would add some dwelling units in areas of the SPA that experience deeper flood depths (> 1 metre depth) in a Regulatory Flood event, but generally directs build-out to areas outside of the SPA or to areas of lower flood depths in the SPA. This informs the land use designations determined for the Woodbridge Centre Secondary Plan.

The second method to assess geographic risk is described in subsection 2.2.3 of Appendix G and considers flood depth and flow velocity provided by TRCA. This allows for an assessment of risk thresholds in relation to safe access and flooding as a threat to life as defined in the Natural Hazards Technical Guides. Accordingly, areas of low risk are defined as areas where the product of depth and velocity is less than 0.37 m²/s providing that depth does not exceed 0.8 m and that the velocity does not exceed 1.2 m/s.

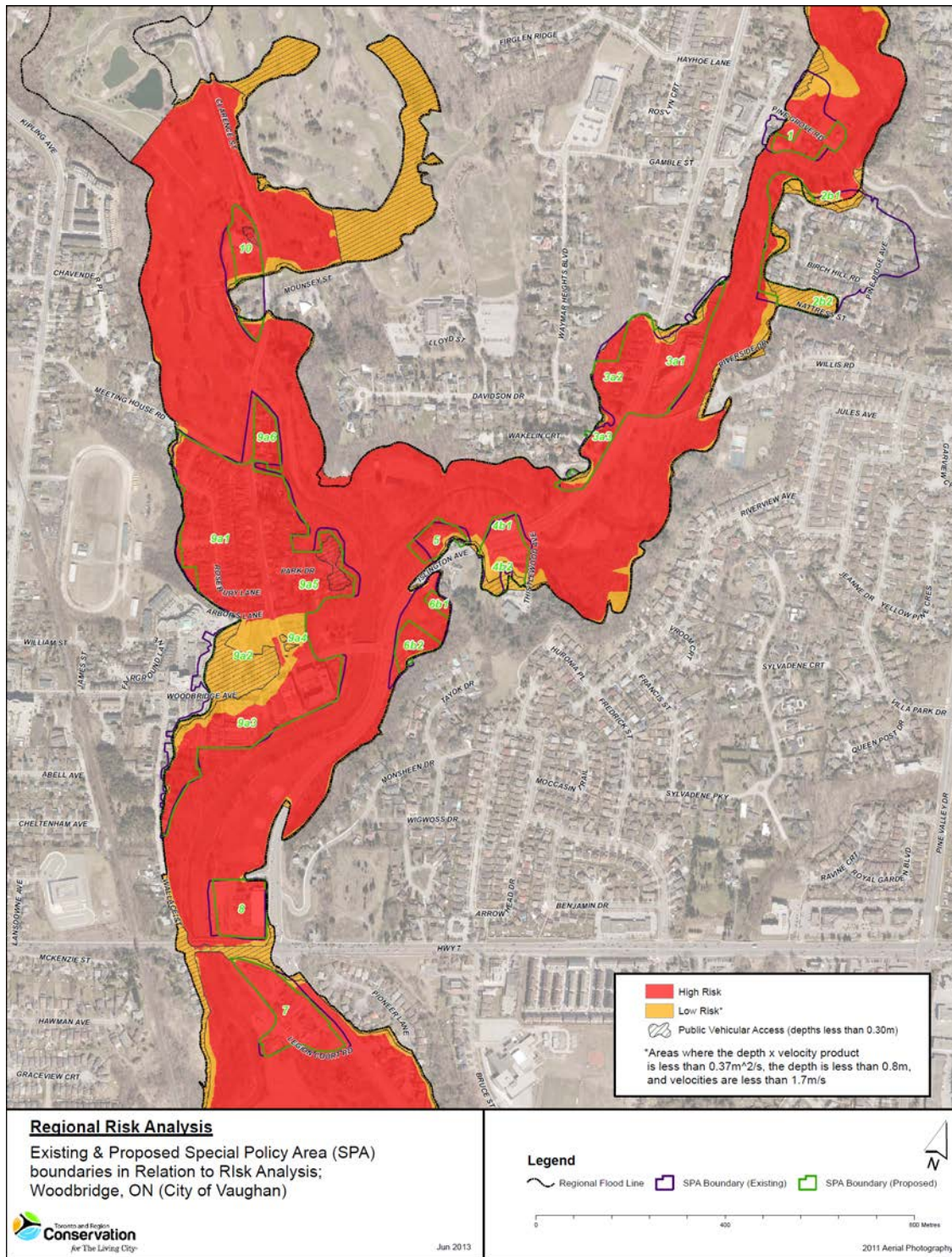


Figure 6-1 Thematic depiction of risk to life thresholds in the Natural Hazards Technical Guides. Areas of low risk are defined as areas where the product of depth and velocity is less than $0.37 \text{ m}^2/\text{s}$ providing that depth does not exceed 0.8 m and that the velocity does not exceed 1.2 m/s.

The results of the risk rating show that only three sub-areas of the SPA (sub-areas #2b2, #4b2 and #9a2 as denoted by the TRCA and noted on Figure 6-1 above) would generally experience a combination of flow velocities and flood depths that do not exceed the risk thresholds recommended in the Natural Hazards Technical Guides. Of the three areas, only the parcels bounded to the south by Woodbridge Avenue, to the north by Arbors Lane and to the east by Clarence Street include provisions for redevelopment for residential use in the existing policies of OPA 440 for redevelopment.

The flood risk assessment provided in Appendix G, and the risk to life thresholds summarized above, results in two main recommendations.

- Residential intensification outlined in OPA 597 for parts of the SPA along Islington Avenue, estimated to be about 187 dwelling units, cannot be recommended. As a result, these areas have a Low-Rise Residential designation in the Woodbridge Secondary Plan, or an appropriate designation that reflects past development approvals.
- The northwest corner of Woodbridge Avenue and Clarence Street is the only area with residential redevelopment potential in which the risk to life thresholds, as defined in the Natural Hazards Technical Guide, are generally not exceeded. This area is recommended for some additional density from the Mixed Use Commercial designation in OPA 440 to Mid-Rise Mixed-Use and Low-Rise Mixed-Use designations in the Woodbridge Centre Secondary Plan. The two designations reflect the influence on building height as expressed in the Woodbridge Heritage Conservation District Plan.

The only other significant land use change presented in the Woodbridge Centre Secondary Plan is a change from Employment to General Commercial for the lands that are the site of Hayhoe Mills (201 and 229 Pine Grove Road). However, this does not involve a change to residential uses.

6.2 Flood Risk Assessment – Designations in the Woodbridge Centre Secondary Plan

6.2.1 Overview

Figures 6-2 and 6-3 illustrate the existing and proposed SPA in relation to the land use designations in the Woodbridge Centre Secondary Plan. As summarized in subsection 5.1 and Table 6-1, there are 1020 existing and approved (i.e. site plan approval in place) dwelling units in the SPA, of which about 700 units are in multi-residential buildings. There are 240 parcels and 962 existing and approved dwelling units in the proposed SPA.

The Woodbridge Centre Secondary Plan provides for additional residential units in the SPA, which are generally directed to the low risk area of the SPA with safe access. This is the area shown as SPA sub-area #9a2 on Figure 6-1. As a result of attempting to match development permissions in OPA 440 (expressed in units per hectare) with densities in the Secondary Plan (expressed as Floor Space Index or FSI), some additional dwelling units are also provided in SPA sub-areas #9a3 and #9a4. The justification is provided in more detail in the sections below. No additional dwelling units are provided elsewhere in the SPA.

Land Use Plan - Schedule 2

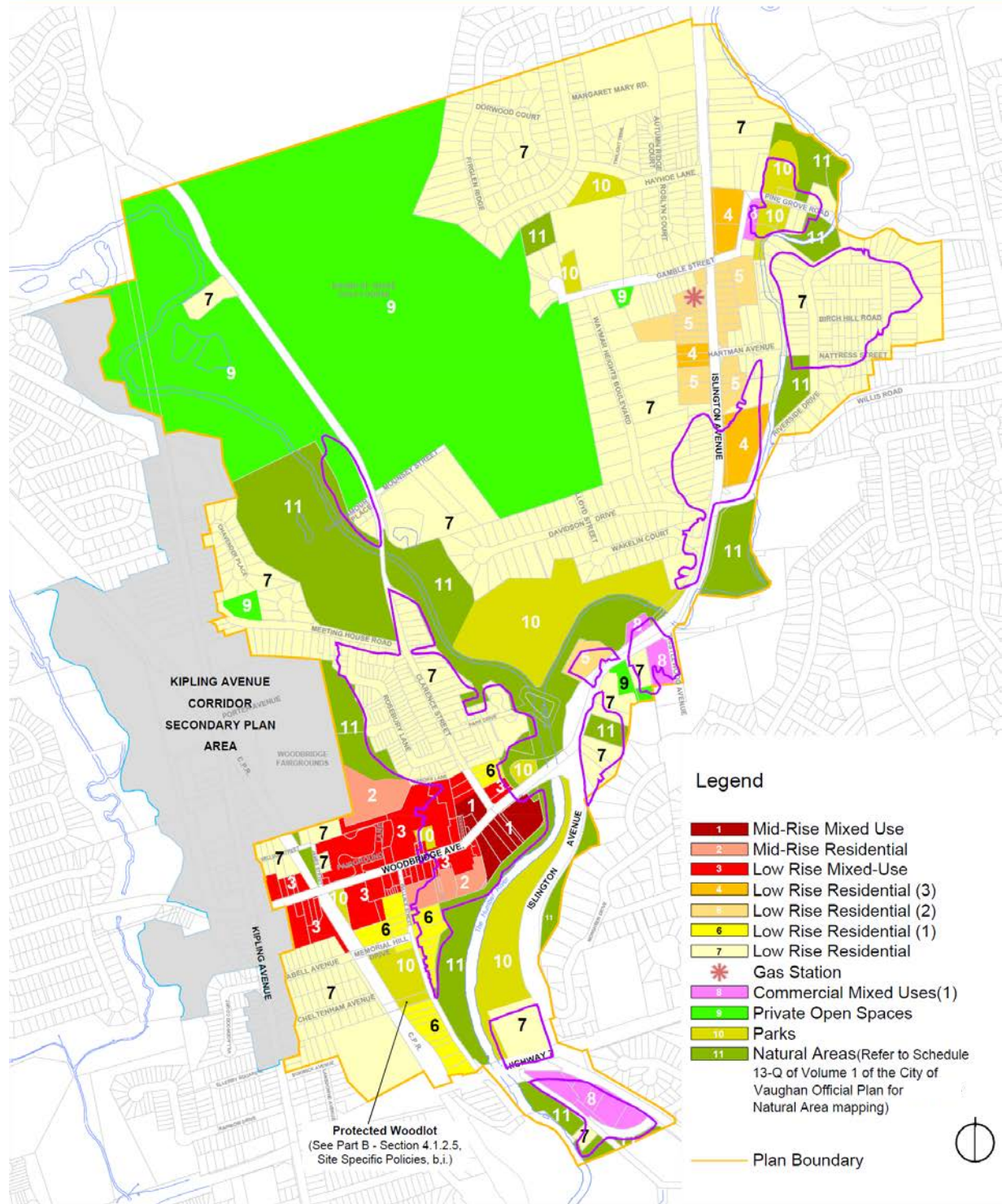


Figure 6-2 Existing SPA in relation to land use designations in the Woodbridge Centre Secondary Plan.

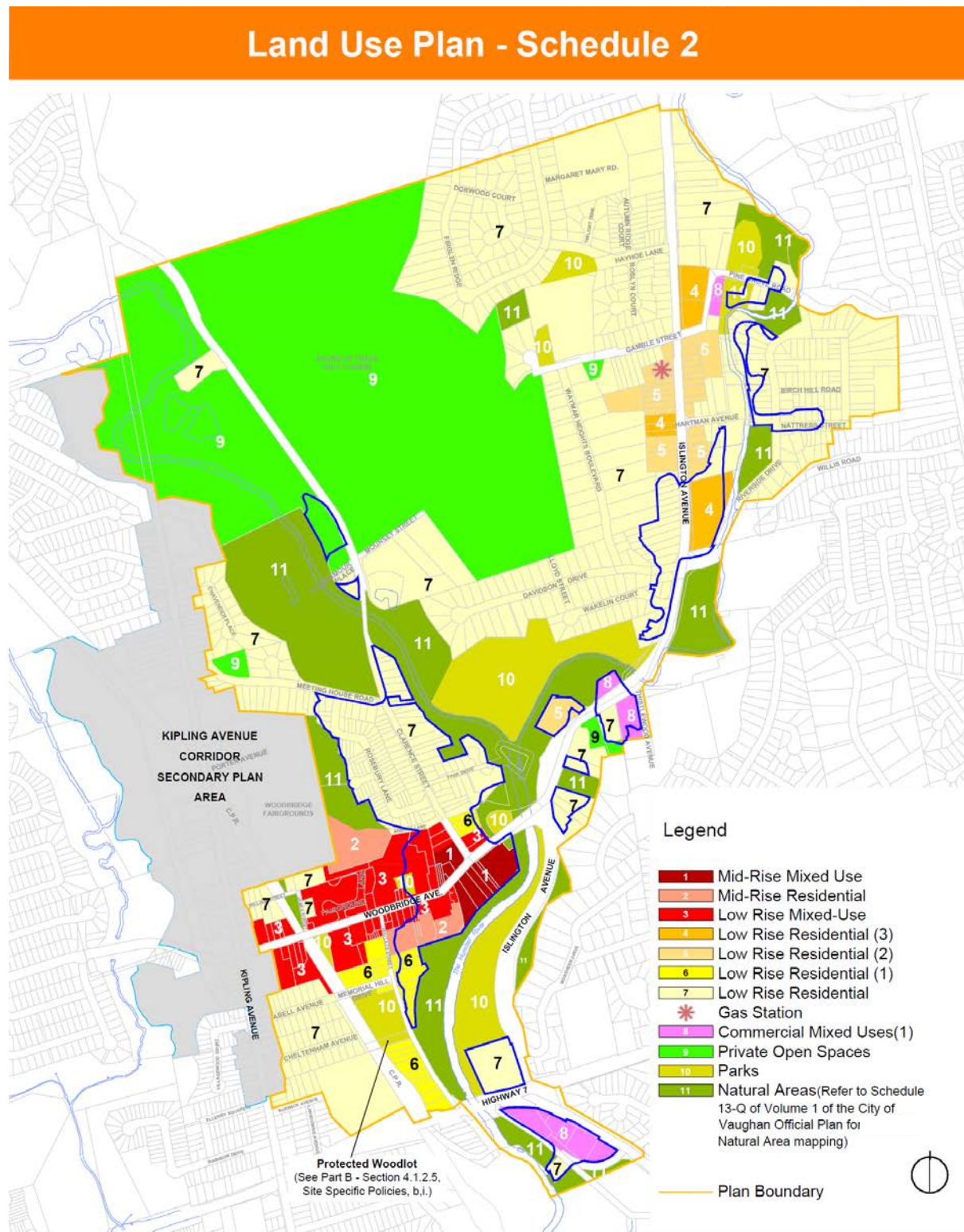


Figure 6-3 Proposed SPA in relation to land use designations in the Woodbridge Centre Secondary Plan.

Table 6-1 Comparison of existing and approved dwelling units for the existing and proposed Woodbridge Special Policy Area.

SPA ID	Predominant Land Uses	Existing SPA		Proposed SPA		
		Number of Parcels	Number of Existing Residential Units	Number of Parcels	Number of Existing Residential Units	Additional Proposed Units
1	Open Space, Rural Residential and Employment	10	4	7	3	-
2	Residential Single Detached	71	71	21	19	-
3	Mostly Residential Single Detached with 1 Multi-residential Building	24	177	21	175	-
4	Commercial	5	*	5	-	-
5	Townhomes	1	24	1	24	-
6	Residential Single Detached and Open Space	8	6	4	4	-
7	Commercial	6	-	6	-	-
8	Open Space – Community Centre	1	-	1	-	-
9	Stable Residential and Commercial Core	169	736	172	736	102
10	Open Space (Golf Course) and Residential Single Detached	5	2	2	1	-
TOTAL		300	1020	240	962	

* A small part of a parcel that includes a 30 unit seniors residence overlaps the SPA. The building footprint of the seniors residence is located outside of the SPA and the floodplain.

The land use changes between existing approved policies (OPA 240, OPA 440 and approved policies of OPA 597) and the Woodbridge Centre Secondary Plan are summarized in subsection 5.3. Briefly, the intent of the Secondary Plan is to maintain existing development permissions in the SPA along Islington Avenue as provided in OPA 240, namely, in SPA sub-areas #1 to #8. Land use designations for parcels in SPA #10 are also not intended to change approved permissions. Rather, additional units provided for in the Secondary Plan are directed to only one part of the SPA in the Woodbridge Commercial Core and is explained in more detail below.

6.2.2 Proposed Development in the Woodbridge Commercial Core in Relation to Safe Access, Low Flood Risk and High Flood Risk Areas

Development provided for in OPA 440 potentially adds 253 dwelling units in the SPA (see totals for columns “Estimated Dwelling Units Provided for in OPA 440” in Table 6-2a and Table 6-2b). This estimate is derived by multiplying the density associated with the land use designation in units per hectare (uph) by the parcel area, including the calculation of density bonus provisions provided in policy. As the metric of units per hectare is not noted for the Mixed Use Commercial designation in OPA 440, 90 uph is used to estimate dwelling units for lands in this designation.

The Woodbridge Centre Secondary Plan provides for 102 additional units in the SPA in the Woodbridge Commercial Core (SPA #9a2, #9a3 and #9a4). Of this, 83% or 85 units are directed to the low risk part of the SPA in sub-area #9a2 (see Table 6-2a, Figure 6-4a and Figure 6-6). The remaining 17% or 17 units (Table 6-2b) reflect a small increase resulting from attempts to match the density provisions in previous approvals with the density provisions specified as Floor Space Index (FSI) in the Vaughan Official Plan and Woodbridge Centre Secondary Plan.

Table 6-2a and Figure 6-4a can be cross-referenced to identify a parcel location in SPA sub-area #9a2 and the estimate of dwelling unit permissions in OPA 440 and the Woodbridge Centre Secondary Plan. Table 6-2b identifies parcel locations in SPA sub-area #9a3 (see also Figure 6-4b) or SPA sub-area #9a4 (see also Figure 6-4a) and the estimate of dwelling unit permissions. Figure 6-5 shows the area of safe access (< 0.3 metres flood depth) in relation to SPA sub-areas #9a2, #9a3 and #9a4 in the Woodbridge Commercial Core. Figures 6-6 and 6-7 illustrate the areas of low risk and high risk associated with a Regulatory Flood Event for the Woodbridge Commercial Core. These tables and figures can be referenced to illustrate aspects of the discussion below.

Table 6-2a Comparison of estimated dwelling unit counts for potential redevelopment parcels in SPA #9a2 provided for in current approved policy (i.e. OPA 440) and in the Woodbridge Centre Secondary Plan. Commercial floor area is estimated at 10% of gross floor area (GFA) for Mid-Rise Mixed-Use and Mid-Rise Residential designations to arrive at dwelling unit counts provided for in the Woodbridge Centre Secondary Plan.

Parcels	Development Area (square metres)	Estimated Dwelling Units Provided for in OPA 440	Existing Residential Units	Proposed FSI and Estimated Dwelling Units Provided for in Woodbridge Centre Secondary Plan (FSI/Unit Count)	Unit Count Change from OPA 440 to Proposed Secondary Plan
* 30 and 36 Clarence Street	2,126			1.5 FSI	-
* 86, 92 and 96 Woodbridge Avenue	4,774		125 (1.8 FSI)	2.0 FSI	-
106, 108, and 110 Woodbridge Avenue	813	7	-	2.0 FSI 15 Units	8
112 and 116 Woodbridge Avenue	1,242	11	-	1.8 FSI 22 Units	11
124/140 Woodbridge Avenue (i.e. Market Lane area)	6,675	60	-	1.8 FSI 108 Units	48
City-owned parking lot (Market Lane area)	2,844	26	-	1.8 FSI 46 Units	20
SUBTOTALS		104		189	85

- Development area for 124/140 Woodbridge Avenue, excluding the existing multi-residential building with 56 units, is 14,750 square metres. The SPA portion of this developable area is 6,675 square metres as noted in the table above.
- The SPA portion of the City-owned parking lot is 2,844 square metres and the gross site area is 3,229 square metres.

* A multi-residential building with 125 dwelling units, equivalent to 1.8 FSI, was approved by Council of the City of Vaughan on June 19, 2012 (Z.08.045, DA.11.071) at the lands at 30/36 Clarence Street and 86/92/96 Woodbridge Avenue.

Table 6-2b Comparison of estimated dwelling unit counts for potential redevelopment parcels in SPA #9a3 and SPA #9a4 provided for in current approved policy (i.e. OPA 440) and in the Woodbridge Centre Secondary Plan. Commercial floor area is estimated at 10% of gross floor area (GFA) for Mid-Rise Mixed-Use and Mid-Rise Residential designations to arrive at dwelling unit counts provided for in the Woodbridge Centre Secondary Plan.

Parcels	SPA Sub-area	Development Area (square metres)	Estimated Dwelling Units Provided for in OPA 440	Existing Residential Units	Proposed FSI and Estimated Dwelling Units Provided for in Woodbridge Centre Secondary Plan (FSI/Unit Count)	Unit Count Change from OPA 440 to Proposed Secondary Plan
23, 31 and 37 Clarence Street	9a4	3,344	11	2	0.5 FSI 17 Units	6
15 Clarence Street and 56 Woodbridge Avenue	9a4	2,447	19		0.7 FSI 17 Units	-2
93 and 97 Woodbridge Avenue	9a3	5,665	67		1.5 FSI 76 Units	9
137, 145, and 153 Woodbridge Avenue	9a3	2,121	19	1	1.0 FSI 19 Units	-
43, 49, 57, 65 and 73 Wallace Avenue	9a3	7,358	33	5	0.5 FSI 37 Units	4
SUBTOTALS			149		166	17

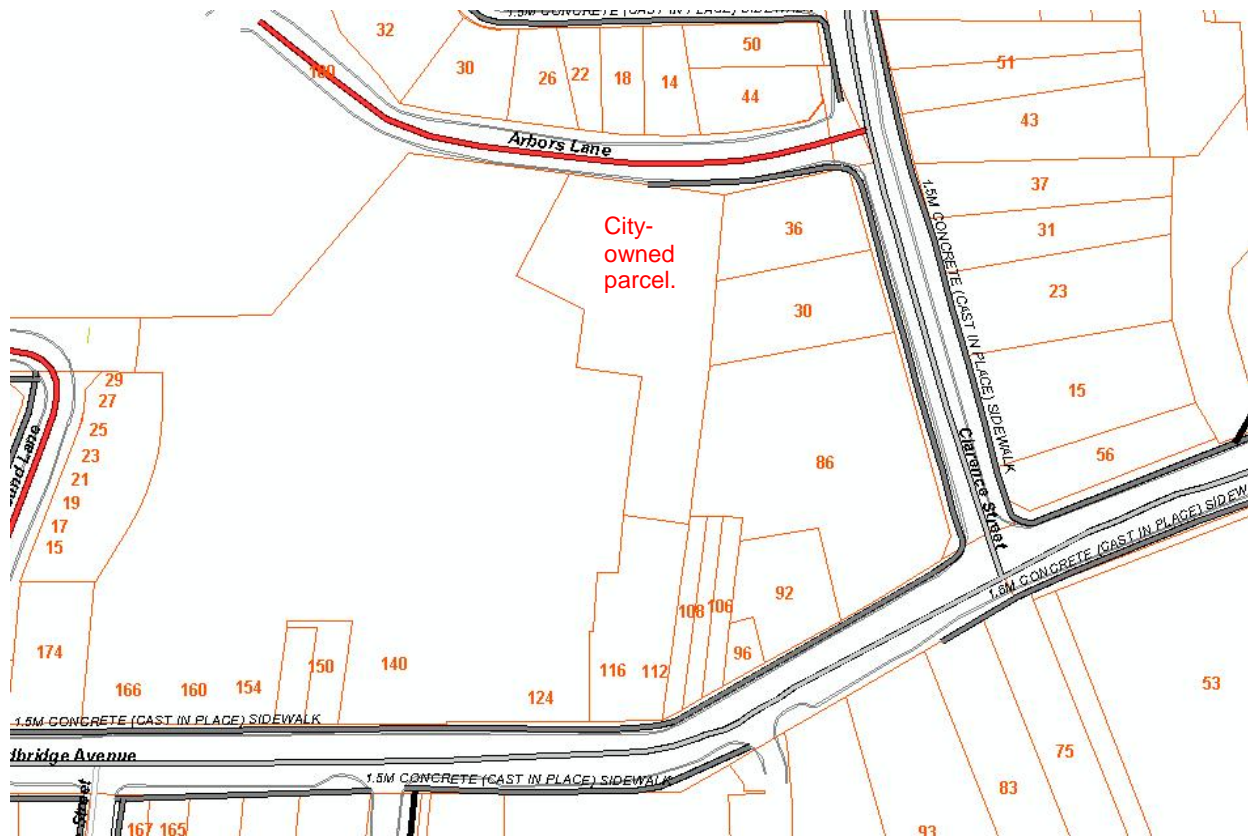


Figure 6-4a Street addresses for parcels on the north side of Woodbridge Avenue. NW corner of Woodbridge Avenue and Clarence Street is SPA sub-area #9a2. NE corner of Woodbridge Avenue and Clarence Street is SPA sub-area #9a4.

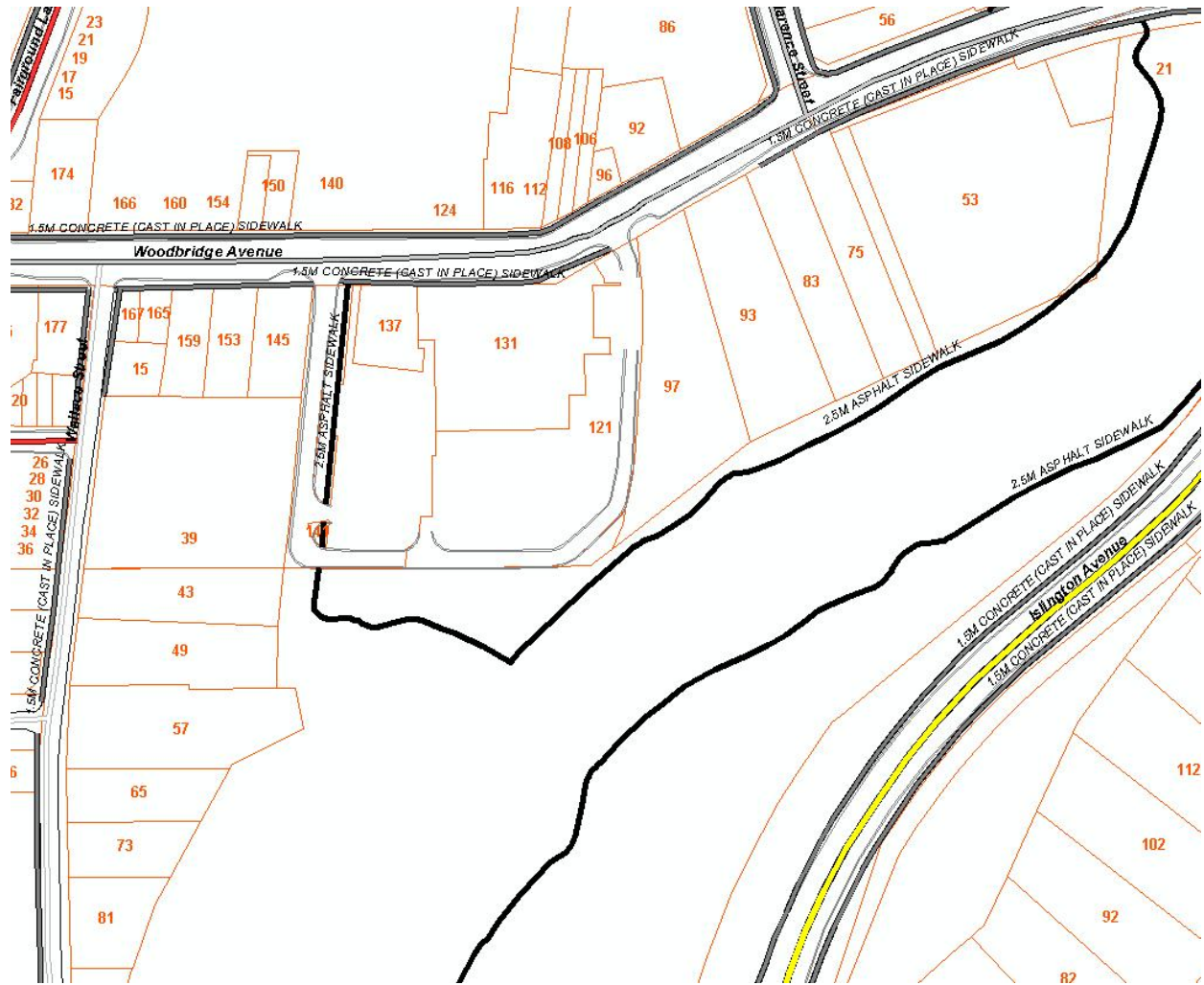


Figure 6-4b Street addresses for parcels on the south side of Woodbridge Avenue located in SPA sub-area #9a3.

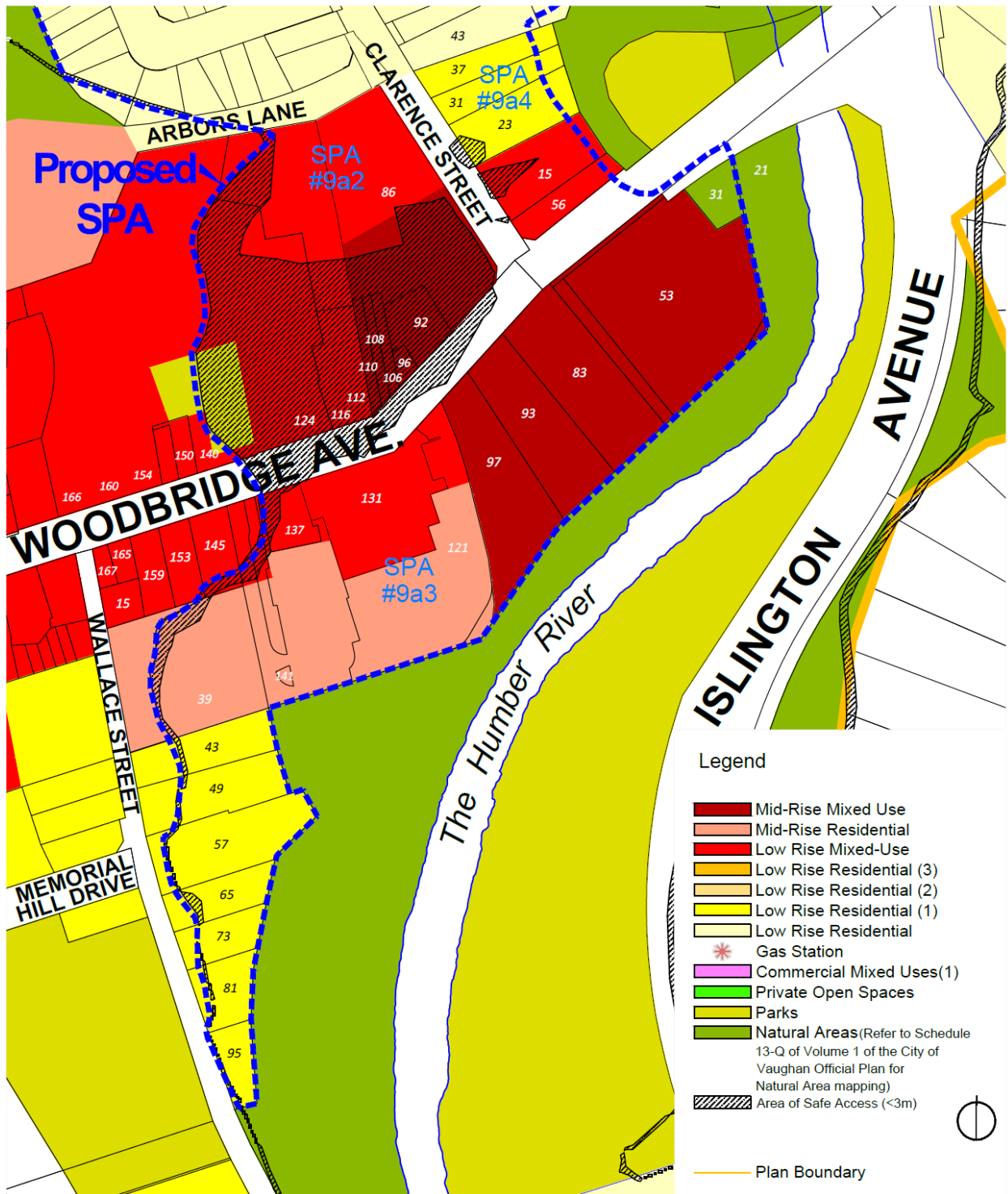


Figure 6-5 Area of safe access (hatched area: < 0.3 metres flood depth during a Regulatory Flood event) in the Woodbridge Commercial Core (SPA sub-areas #9a2, #9a3 and #9a4) in relation to the land use designations in the Woodbridge Centre Secondary Plan.

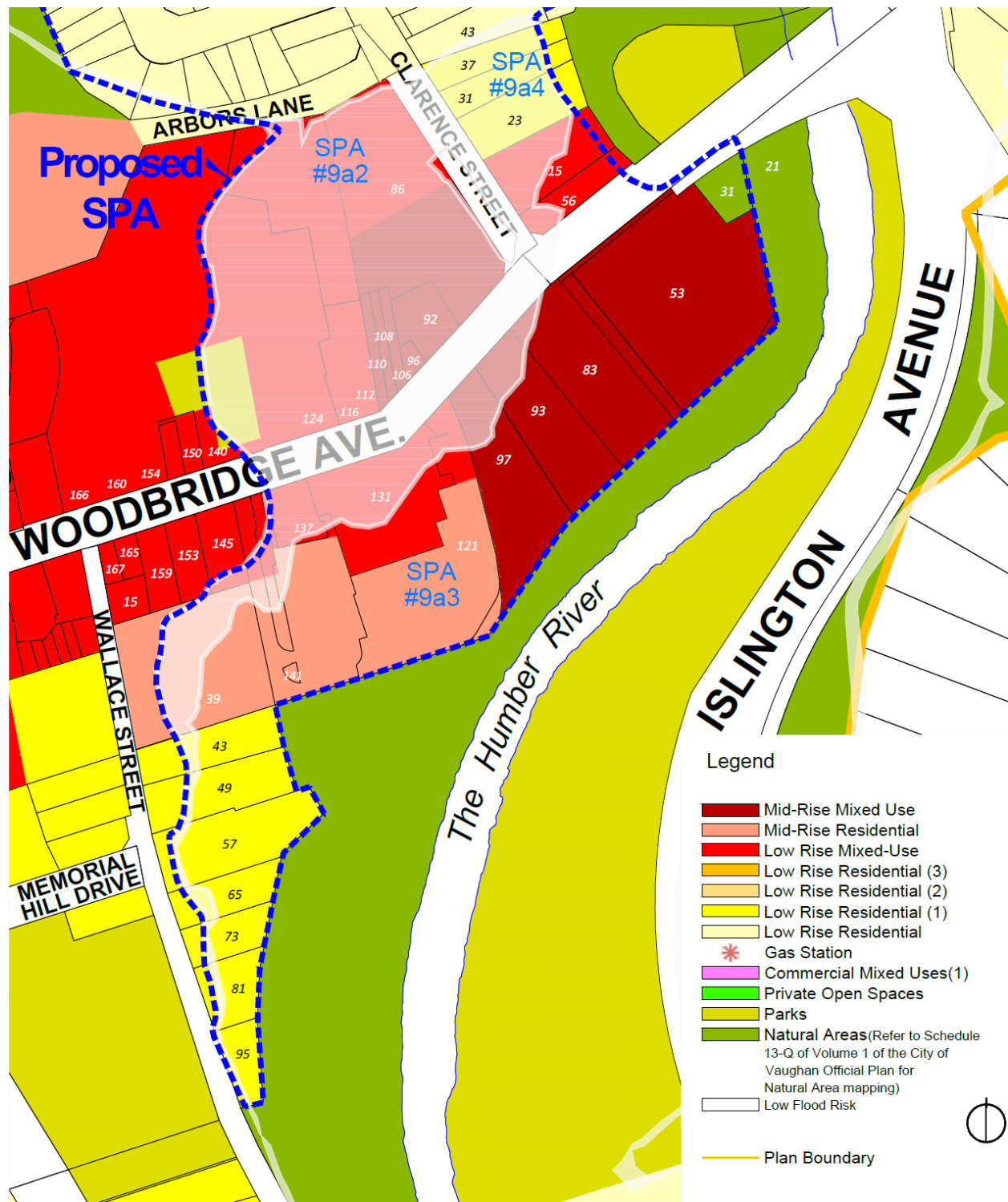


Figure 6-6 Low risk part of the SPA in the Woodbridge Commercial Core (SPA sub-areas #9a2, #9a3 and #9a4) in relation to the land use designations in the Woodbridge Centre Secondary Plan.

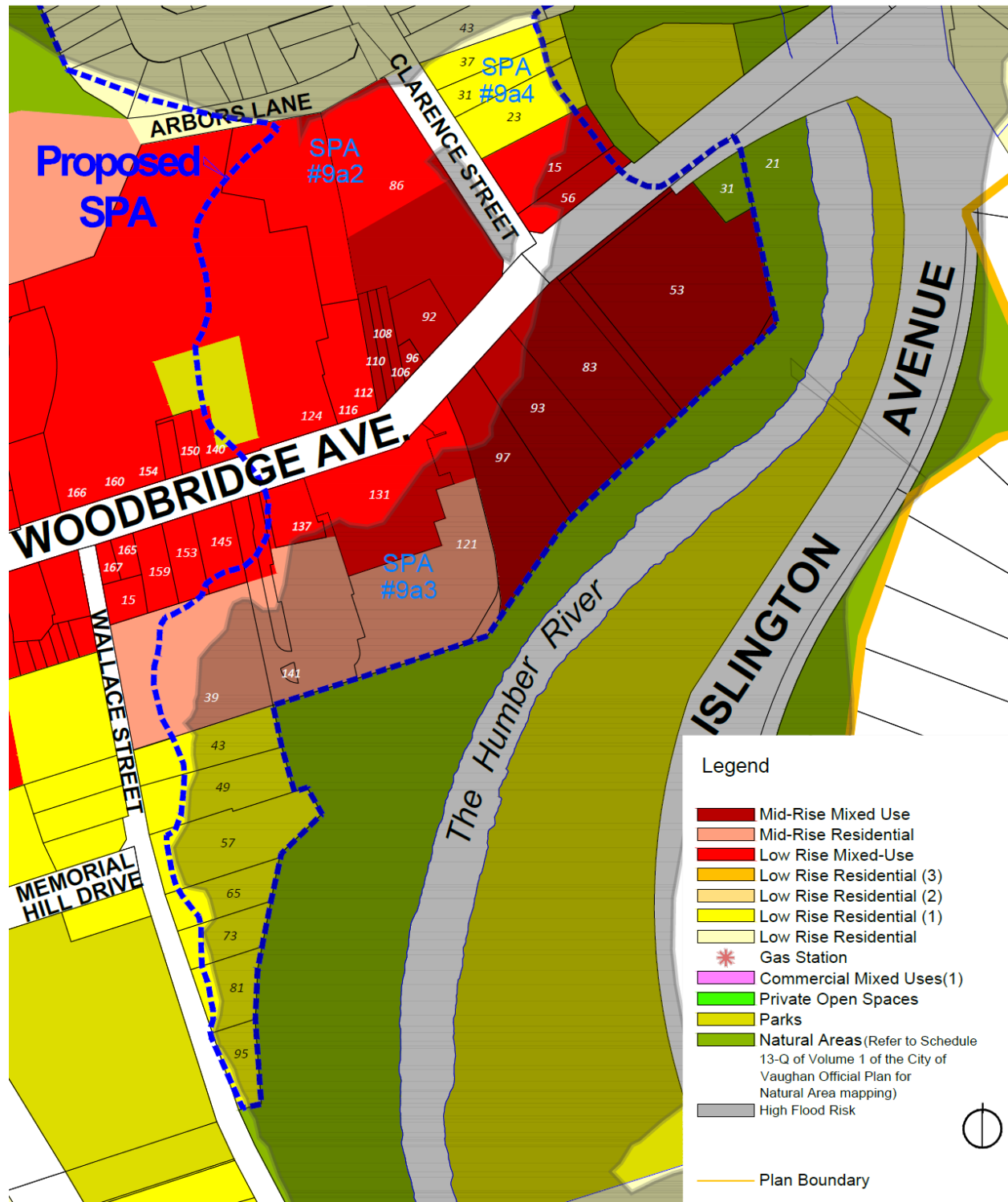


Figure 6-7 High risk part of the SPA in the Woodbridge Commercial Core (SPA sub-areas #9a2, #9a3 and #9a4) in relation to the land use designations in the Woodbridge Centre Secondary Plan.

As noted above, the Woodbridge Centre Secondary Plan provides for additional density for 12 parcels in sub-area #9a2 of the SPA in the Woodbridge Commercial Core. The street addresses of the parcels are listed below and provided in Table 6-2a with existing and estimated dwelling unit build out (see also Figure 6-4a):

- 30 and 36 Clarence Avenue,
- 86, 92 and 96 Woodbridge Avenue,
- 106, 108, and 110 Woodbridge Avenue,
- 112 and 116 Woodbridge Avenue
- the main parcel in Market Lane area (known as 124/140 Woodbridge Avenue) just west of 86 Woodbridge Avenue; and
- the City-owned parcel currently used as a surface parking lot.

These changes provide for an additional 85 dwelling units in the SPA over and above that provided for in OPA 440 (see Table 6-2a). According to data from the TRCA, this part of the SPA will experience average flood depths of 0.54 metres and average flow velocities of 0.19 m/s. This is one of the lowest flooding depths in the SPA and the lowest flow velocity, such that ingress/egress is achievable in this area during a flood event. In addition, much of the SPA sub-area #9a2, as illustrated on Figure 6-5, allows for safe access (defined as areas < 0.3 metres flood depth). Hence, much of SPA sub-area #9a2 can be accessed by vehicles in the event of a Regulatory Flood. Furthermore, the product of flood depth and flow velocity for the area is 0.10 m²/s and is below the “risk to life” thresholds (i.e. 0.37 m²/s) described in the Natural Hazards Technical Guide (Figure 6-6). That is, pedestrian access is possible throughout SPA sub-area #9a2 as the entire area is characterized as low risk with respect to the risk to life thresholds (see Figure 6-6).

The remaining parcels in the SPA that are likely to redevelop, in SPA sub-areas #9a3 and #9a4, have proposed densities expressed as Floor Space Index that result in small increases in potential dwelling units counts for certain properties when attempting to match approved densities in OPA 440 expressed in units per hectare. These include parcels with a Residential Medium Density designation in OPA 440 that are identified with an FSI of 0.5 or 0.7 in the Woodbridge Centre Secondary Plan, and results in an additional 8 units in the SPA (Table 6-2b). Properties with current designations of Mixed Use Commercial and Residential High Density are proposed to have Low-Rise Mixed-Use and Mid-Rise Mixed-Use designations in the Woodbridge Centre Secondary Plan and results in an additional 9 dwelling units provided for in policy (Table 6-2b). As a result, attempts to match the density permissions in approved policy for SPA #9a3 and #9a4 will potentially add 17 units in this part of the SPA (Table 6-2b). The parcels are characterized in more detail below.

- 23, 31 and 37 Clarence Street: The parcels are designated Residential Medium Density in OPA 440 and the proposed designation in the Woodbridge Centre Secondary Plan is Low-Rise Residential(1). This designation has a specified FSI of 0.5. The parcels are shown in Figure 6-6 as largely in a low risk part of the SPA and allows for pedestrian access along the Clarence Street frontage.
- 15 Clarence Street and 56 Woodbridge Avenue: The parcels are designated Residential Medium Density in OPA 440 and the proposed designation in the Woodbridge Centre Secondary Plan is Low-Rise Mixed-Use. The density for the parcels is specifically set to 0.7 FSI to reflect the previous approvals in OPA 440. As illustrated in Figure 6-6, the portion of the parcels within the area of low flood risk is generally coincident with the

Clarence Street frontage and allows for pedestrian access along the Clarence Street frontage.

- 93 and 97 Woodbridge Avenue: The parcels are designated Residential High Density in OPA 440 and the proposed designation in the Woodbridge Centre Secondary Plan is Mid-Rise Mixed-Use. The density for the parcels is specifically set to 1.5 FSI to reflect the previous approvals in OPA 440. As illustrated in Figures 6-6, an area of low flood risk is associated with the Woodbridge Avenue frontage, such that pedestrian access is provided along the Woodbridge Avenue frontage.
- 137, 145 and 153 Woodbridge Avenue: The parcels are designated Mixed Use Commercial in OPA 440 and the proposed designation in the Woodbridge Centre Secondary Plan is Low-Rise Mixed-Use. The density for the parcels is specifically set to 1.0 FSI to reflect the previous approvals in OPA 440. Almost the entire parcel at 137 Woodbridge Avenue is characterized as low risk (Figure 6-6) and an area of safe access is coincident with the Woodbridge Avenue frontage (Figure 6-5). Only small portions of the properties at 145 and 153 Woodbridge Avenue are included in the SPA, such that these parcels have dry access along Woodbridge Avenue.
- 43, 49, 57, 65 and 73 Wallace Avenue: The parcels are designated Residential Medium Density in OPA 440 and the proposed designation in the Woodbridge Centre Secondary Plan is Low-Rise Residential(1). This designation has a specified FSI of 0.5. Portions of the parcels at the Wallace Avenue frontage are no longer in the floodplain and, hence, have dry access.

6.2.3 Planning Rationale for Redevelopment in the Woodbridge Commercial Core in the SPA

It is summarized in Section 3.2.1.2 of the Woodbridge Centre Secondary Plan that approximately 600 additional dwelling units are accommodated in the Woodbridge Commercial Core, which is considered beneficial to the vitality and economic health of the local centre. This represents an increase of approximately 200 dwelling units in addition to the 400 dwelling units that could redevelop on available parcels and according to previous approved policies in OPA 440. As noted in Section 6.2 of the Special Policy Area Justification Report for the Woodbridge Centre Secondary Plan, of the 600 residential units that can redevelop along Woodbridge Avenue, 102 units are estimated to occur in the SPA. 85 of the 102 additional units are directed to the low risk part of the SPA (SPA #9a2).

The above discussion demonstrates that most additional residential density is directed outside of the SPA. The proposed modest additional density in the SPA is directed to the low risk part of the SPA with demonstrated safe access, and is consistent with urban planning goals of the Woodbridge Commercial Core as a local centre and Heritage Conservation District. These aspects are discussed below.

Residential Densities in the Woodbridge Commercial Core

The low risk part of the SPA (SPA #9a2) is designated Mixed Use Commercial in OPA 440. A specific density is not expressed in policy for the Mixed Use Commercial designation in OPA 440. However, the intent of the policy is to be of similar scale to the Residential High Density designation while allowing for commercial uses. Policies in OPA 440 identify a specific density of 99 units per hectare for the Residential High

Density designation. Policy 4.2.3,b),v) from OPA 440 is provided below and describes the building form for the Mixed Use Commercial designation:

“All development shall be of a low profile, street-oriented nature. Building heights should generally not exceed three storeys with an opportunity for a fourth storey to be incorporated into the roof area, depending on a compatible relationship to adjacent development.”

The recently approved development at 86/92 Woodbridge Avenue and 30/36 Clarence Street provides an example of actual build-out in the Mixed Use Commercial designation under OPA 440. A zoning by-law amendment (Z.08.045) was approved to change the zoning to Apartment Residential (RA3). The site plan application (DA.11.071) was approved at 125 units, equivalent to 180 units per hectare, and 1.8 Floor Space Index (FSI) (see June 19, 2012 Committee of the Whole, Report No. 29, Item 47). There has been a wide range of interpretation of the Mixed Use Commercial designation, such that existing developments range from approximately 30 to over 200 units per hectare.

The “low risk” part of the SPA is designated Low-Rise Mixed-Use and Mid-Rise Mixed-Use in the Woodbridge Centre Secondary Plan. A critical difference in the policies of the Woodbridge Centre Secondary Plan is the specification of maximum lot coverage of 50% for Low-Rise Mixed-Use and Mid-Rise Mixed-Use designations. This is in addition to specifying a density expressed as Floor Space Index. Building height maximums for this area range from 3 to 6 storeys in height, with permitted densities ranging from 1.5 to 2.0 FSI. Together with other urban design policies and the Heritage Conservation District Plan, this will provide greater controls to future development in terms of scale and massing than has been provided in OPA 440.

Economic Viability in the Woodbridge Commercial Core

The Woodbridge Commercial Core is a Local Centre within Vaughan’s urban structure as noted in section 2.2.5.7 of the Vaughan Official Plan, adopted by the Council of the City of Vaughan in September 2010 (VOP 2010). Pedestrian in scale, and featuring a mix of commercial and residential uses, Local Centres will continue to serve the surrounding Community Areas and accommodate moderate intensification.

In Section 3.0 of the Woodbridge Centre Secondary Plan, it is noted that the Woodbridge Commercial Core is the historical commercial centre of the community and should continue to serve as an important social gathering area and commercial focus. Furthermore, the vision of the Commercial Core in the Woodbridge Centre Secondary Plan is one of an enhanced local centre, with some residential intensification, a strong animated commercial avenue, and a designated public square.

This vision for the Woodbridge Commercial Core will support several planning goals rooted in the development of more compact, mixed-use communities. Section 5.2, “Sustainable Cities, Sustainable Communities”, of the York Regional Official Plan (YROP) supports the development of mixed-use communities to promote a more efficient use of available land. Establishing mixed-use communities is central to increasing the range of available housing types, providing greater affordability and allowing residents to age in place (Section 3.5, YROP). A more compact, mixed-use community also produces a pedestrian scale built environment, allowing residents to

participate in a more active lifestyle as described in Section 3.1, “Human Health and Well Being”, of the YROP. This vision for the Commercial Core will also promote the economic inputs to generate greater economic activity and support local businesses, a component of “Local Centres and Corridors” (Section 5.5) development in the YROP.

Redevelopment on these lands will strengthen Market Lane, “as the core public amenity area and community focus where pedestrians can gather for social functions and community events”, a priority objective outlined in Part B, Section 2.0 of the Secondary Plan. Furthermore, at the heart of this development, Part 3.4 of the Secondary Plan describes a public square, which serves “as the central open space hub of the community”. Permitting additional dwelling units on the lands in the centre and eastern portion of Market Lane will allow the City to complete several aspects of the Woodbridge Centre plan.

Woodbridge Heritage Conservation District (HCD)

Woodbridge is one of four historic villages within the City of Vaughan, and the Woodbridge Heritage Conservation District (HCD) within Woodbridge Centre represents one of the highest concentrations of heritage properties in the City.

In 2009, the City of Vaughan prepared a Heritage Conservation District Study and Plan to document the inventory of heritage buildings in Woodbridge (City of Vaughan 2009). Section 5.3.2.1 of the Study describes Woodbridge Centre as a village featuring a fine-grained street network that is pedestrian in scale and includes a mix of commercial and residential land-uses (City of Vaughan 2009).

The historic built form and function of Woodbridge is an early example of a compact, mixed-use community centre. This community is unique in the City of Vaughan, featuring many aspects of the mixed-use developments described in “Healthy Communities” (YROP) and the PPS, including: a pedestrian scale built form; and commercial outlets that serve the needs of the surrounding community. The Woodbridge HCD Plan anticipates modest additional density in the Woodbridge Commercial Core and emphasizes the need to manage this growth in a manner that is sensitive to the existing character of the community.

The Heritage Conservation District provides the urban design guidelines for future development in Woodbridge Centre. The guidelines establish a height maximum of six storeys for new buildings that features light commercial uses at grade, as well as extensive architectural guidelines (City of Vaughan 2009). Section 6 of the Woodbridge HCD Plan addresses the heritage character of Woodbridge Avenue, the built form framework in terms of street wall setbacks and street wall heights and scale, and streetscape elements. New developments in the village core must conform to these urban design guidelines and architectural guidelines in order to obtain approval, as these guidelines are enforceable through the VOP 2010 and Woodbridge Centre Secondary Plan.

Planning Rationale Summary for Woodbridge Commercial Core

Most of the additional residential units in the Woodbridge area is directed to Kipling Avenue (> 1,000 dwelling units).

According to a strict interpretation of the policies in OPA 440, it is calculated that 102 additional units would be provided in the proposed Low-Rise Mixed-Use and Mid-Rise Mixed-Use designations over and above the permissions for Mixed Use Commercial in OPA 440. Through specification of densities between 1.5 to 2.0 FSI and updated urban design policies in the Woodbridge Centre Secondary Plan, particularly for maximum lot coverage of 50%, there will be greater controls of built form in terms of scale and massing.

Permitting redevelopment in the Woodbridge Commercial Core is essential to strengthening its position as a Local Centre for the surrounding community. As a pedestrian oriented, mixed-use centre offering a range of commercial services and housing types, the Woodbridge Commercial Core fulfills several planning goals related to the creation of compact, mixed-use centres described in the Provincial Policy Statement and the Provincial Growth Plan. Redevelopment in the Market Lane area will allow this space to become the focal point of the Woodbridge Community.

The Heritage Conservation District Study describes the pedestrian orientation and village character of Woodbridge Centre, serving as an early example of a compact, mixed-use community. In order to preserve and enhance this character, the Heritage Conservation District Plan provides the means of managing growth in a way that is sensitive to the surrounding area. The guidelines contained in the Heritage Plan concern built form and urban design, and will guide future redevelopment in Woodbridge Centre.

Over the past 30 years, the City has actively pursued the redevelopment and revitalization of the Woodbridge Commercial Core. This exercise has been very successful and is arguably a model for other communities seeking to return their historical core areas to their former prominence. The Woodbridge Centre Secondary Plan completes the revitalization process for the Woodbridge Commercial Core in the areas determined to be “low risk” and will facilitate the completion of a successful planning exercise that has provided for the re-emergence of an important community focus.

6.3 Overall Changes in Dwelling Units in the SPA

There are 1,020 existing and approved dwelling units in the existing SPA (Table 6-1). As shown in Table 6-3 below, adding the 253 dwelling units that can be redeveloped according to OPA 440 (see totals from Table 6-2a and Table 6-2b) results in a cumulative total of 1,273 dwelling units in the SPA. If the deferred policies of OPA 597 are added, comprising 187 additional dwelling units, then the cumulative total would be 1,377 dwelling units in the SPA.

The proposed SPA boundaries results in a decrease from 1,020 existing and approved dwelling units to 962 dwelling units in the SPA (Table 6-1). The Woodbridge Centre Secondary Plan adds 102 units above the provisions in OPA 440 (See Tables 6-2a and 6-2b), resulting in 355 additional dwelling units (253 units provided for in OPA 440 plus 102 additional units; see totals from Tables 6-2a and 6-2b). This results in 1,317 total dwelling units in the proposed SPA (Table 6-3).

In summary, considering the existing SPA boundaries and the approved policies of OPA 440 results in the potential development of 1,273 dwelling units in the SPA. Removing dwelling units

based on the proposed SPA boundaries (largely from reducing SPA #2) and providing for additional dwelling units in SPA sub-areas #9a2, #9a3 and #9a4 results in an estimated 1,317 total dwelling units the SPA. This represents an overall increase of 44 dwelling units in the SPA, or about 3% of the number of existing dwelling units in the SPA.

Table 6-3 Summary of change in residential dwelling units, estimated population, and damage costs based on changes to SPA boundaries and land use designations in the Woodbridge Centre Secondary Plan.

	Existing SPA Condition			Proposed SPA Condition		
	Existing and Approved Development ^a	Estimated Development Potential from Approved Official Plans ^b		Existing and Approved Development ^a	Estimated Development Potential from the Proposed Woodbridge Centre Secondary Plan ^c	
		Additional Units	Cumulative Total		Additional Units	Cumulative Total
Dwelling Units	1020	253	1273	962	355	1317
Estimated Population ^d	3,162		3,946	2,973		4,073
Damages ^e						
Dwelling Repair Costs	\$17.34		\$21.64	\$16.40		\$22.39
Vehicle Repair Costs	\$12.24		\$15.28	\$11.54		\$15.80
Dwelling Clean Up Costs	\$4.08		\$5.09	\$3.85		\$5.27
Total Estimated Damage Costs			\$42.01			\$43.46

^a Includes existing buildings plus development applications with Site Plan approval.

^b Includes development, in addition to existing and approved development, that is provided for in OPA 440.

^c Includes additional development provided for in the land use plan (Schedule 2) and density plan (Schedule 3) of the Woodbridge Centre Secondary Plan.

^d Population is estimated based on 3.1 persons per unit (ppu) as noted in the York Region 2031 Land Budget (January 2009) as the Region-wide 2016 average ppu.

^e Estimated damage costs are expressed in millions of dollars. See Subsection 2.2.1 of Appendix G for more details.

The Ontario *Flood Damage Estimate Guide 2007 Update and Software Guide* (OMNR 2007) provides a breakdown of categories of damage costs related to residential, commercial, industrial, institutional, public and agricultural uses. For the purposes of the Woodbridge SPA Justification report, only damage cost estimates related to residential dwellings is provided as this is the main unit of measure to assess risk other than the risk to life thresholds (i.e. product of flood depths and flow velocities). Land use changes in the Woodbridge Centre Secondary Plan only reflect changes to dwelling unit counts and not to commercial, industrial or institutional uses. Furthermore, sufficient infrastructure service levels are available in the form of existing roads, bridges, water supply and storm sewers, such that new infrastructure is not required for build-out as directed in the Secondary Plan.

The “2005 Flood Damage Curves” provided in Appendix C of the *Flood Damage Estimate Guide 2007 Update and Software Guide* (OMNR 2007) is not directly applicable to the Woodbridge SPA. The City does not have a breakdown of dwelling unit typologies consistent with the “2005 Flood Damage Curves”. Furthermore, most dwelling units in the SPA are associated with multi-residential buildings, which is a typology not covered in the “2005 Flood Damage Curves”. As a result, a more generalized approach to estimating damage costs is provided through the City of Vaughan Emergency Planning Program. The following general costs have been derived from real-world examples and occurs as Table G.1 in Appendix G (Flood Risk Assessment). The significant costs from flood damage are associated with repair of vehicles, repair of ground floor/underground areas, and clean-up. Above the flood water line, damages are primarily related to loss of perishable food due to power outages.

Table 6-4 Estimated private property repair costs from flood damage.

Property Damage Private	Unit Cost	Duration
Home	\$17,000	one time
Commercial	\$23,550	one time
Vehicle	\$12,000	one time
Clean-up	\$4,000	one time

6.4 Summary of Operational Risk and Emergency Preparedness

From the perspective of operational risk, the impact on life safety is significantly reduced and even prevented through mitigation measures of early warning of residents in the impacted areas, evacuation of the affected areas in advance of flooding and, if indicated, structural mitigation measures such as placing sand bags around structures. A potentially higher level of risk to life safety applies only to residents who choose not to evacuate. Even in this instance, the risk can be greatly mitigated by directing residents to move to upper levels of the structure that are above the maximum flood depth.

The following additional points can be made regarding operational risk:

- Flooding is ranked 12th out of 24 identified hazards in the City's overall Hazard Identification Risk Assessment (HIRA);
- Additional residential units are directed to areas where risk of flooding is a less frequent event (a conservative approach to estimating flood return period estimates the annual risk of exceedance for SPA sub-areas #9a2, #9a3 and #9a4 to be 0.22%, 0.51% and 0.28%, respectively);
- Additional residential units are directed to areas of lesser depth and lower flow velocities of flooding, which allows for easier response under extreme conditions and reduced risk to both residents and responding emergency personnel;
- The use of forecasting and available lead times allows for effective action in advance of flooding, which in turn will lead to a minimization in the risk to life; and
- New policy in the Secondary Plan requires individual emergency plans coordinated with municipal procedures be submitted and approved prior to development approval for new multi-unit structures.

7.0 Recommended Land Use Plan and SPA Policies

The Woodbridge Centre Secondary Plan was adopted by Council on September 7th, 2010. Modifications to the Woodbridge Centre Secondary Plan, including changes resulting from the SPA review, were adopted by Council of the City of Vaughan on March 19, 2013. Further modifications to the Woodbridge Centre Secondary Plan reflect the Province's "one-window" comments of December 17, 2013 and the Secondary Plan is provided as a component of the SPA Package.

The Secondary Plan provides a consistent urban design framework for the central Woodbridge area given the past studies addressing Islington Avenue, Kipling Avenue and the Woodbridge Heritage Conservation District Plan. No major land use changes are contemplated in the Secondary Plan. The land use changes reflect the overall urban structure in the new City of Vaughan Official Plan, while the height and densities primarily reflect existing approved policies.

Kipling Avenue, described in policy in a stand-alone Secondary Plan, is the focus of intensification for Growth Plan conformity. Intensification along Woodbridge Avenue is intended to reflect the mixed-use character of the Woodbridge Core. Only a modest number of additional dwelling units are provided along Islington Avenue, and outside of the SPA, to reflect the rural residential character of this corridor.

While "feasible opportunities for development outside the flood plain", as expressed in the SPA definition in the Definitions section of the PPS, exist in the general Woodbridge area and the City of Vaughan, the SPA review demonstrates overall consistency with the SPA policies in the PPS and with the Terms of Reference for the SPA review, such that:

- (a) additional dwelling units in the SPA are directed primarily to the low risk area of the SPA, which
- (b) is located in the historic village centre of Woodbridge, being the local downtown that has historically existed in the floodplain.

Finally, the land use designations in the Woodridge Centre Secondary Plan include a density map and height map. This is particularly important in replacing the Mixed Use Commercial designation, which was open to wide interpretation regarding residential densities.

8.0 Implementation

The revised land use designations, land use policies and proposed SPA policies are part of the Woodbridge Centre Secondary Plan. The Secondary Plan, together with four other secondary plans, are contained in Volume 2 of the City of Vaughan Official Plan 2010. The Woodbridge Centre Secondary Plan was presented at a statutory Public Hearing meeting of the Committee of the Whole on June 14th, 2010

([http://www.vaughan.ca/vaughan/council/minutes_agendas/committee_2010/pdf/CW\(PH\)0614_3.pdf](http://www.vaughan.ca/vaughan/council/minutes_agendas/committee_2010/pdf/CW(PH)0614_3.pdf)) and as Report No. 42, Item #2 to the August 31, 2010 Special Committee of the Whole meeting. Volume 2 of the Official Plan was adopted by the Council of the City of Vaughan on September 7, 2010

(http://www.vaughan.ca/vaughan/council/minutes_agendas/council_2010/pdf/0907-10council%20minutes.pdf.)

Given that the Woodbridge Centre Secondary Plan has been adopted by Council, and according to the approval requirements in Section 4.0 of the "Procedures" document (MNR 2009), the City of Vaughan is providing the revised SPA Justification Report to the Ministry of Municipal Affairs and Housing (MMAH) and the Ministry of Natural Resources (MNR) for approval. The revised SPA Justification Report incorporates changes to reflect the City's response to the Province's review of the November 2011 submission of the SPA Justification Report and the Province's "one-window" comments of December 17, 2013.

The revised SPA Justification Report and Woodbridge Centre Secondary Plan will be brought forward in a report to the City of Vaughan Council for approval. The staff report will also include a draft amendment to Comprehensive Zoning By-Law 1-88 to restrict residential units and/or overnight accommodation in select parcels in the SPA where the existing zoning permissions exceed the provisions in the Woodbridge Centre Secondary Plan for these uses. As a result, the final SPA package consists of:

- This transmittal letter signed by the Commissioner of Planning and the Chief of the Fire and Rescue Services Vaughan;
- City of Vaughan staff report to the Committee of the Whole and Council resolution describing the SPA Justification Report, the Woodbridge Centre Secondary Plan and summarizing the process of revisions and approval of the SPA package by the Province;
- The Woodbridge Centre Secondary Plan;
- The SPA Justification Report for the Woodbridge Centre Secondary Plan; and
- A draft Zoning By-law amendment to restrict residential and/or overnight accommodation on select properties in the SPA.

The TRCA will also take the final Council-approved SPA Package to their Full Authority Board for endorsement. The final SPA Justification Report, as approved by Vaughan Council, and the TRCA endorsement will be delivered to the Province for final approval.

The existing (approved) SPA policies and boundaries are carried forward in section 3 and Schedule 8, respectively, of Volume 1 of the VOP 2010. Once Provincial approval of the proposed SPA has been obtained, the Ontario Municipal Board (OMB) will be requested to delete the appropriate policies and schedules from Volume 1. Once the final approved SPA policies, land use designations and boundary changes are issued by the Province, the OMB will be requested to further modify the Woodbridge Centre Secondary Plan to incorporate them into the Plan.

References

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