

**Special Policy Area**

**Justification Report**

**for the Woodbridge Centre Secondary Plan**

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(Policy Planning,  
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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. City-wide policies comprise Volume 1 of the new City of Vaughan Official Plan. The Woodbridge Centre Secondary Plan includes the new 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 of the Approval of New Special Policy Areas 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 a (1) flood risk assessment and (2) SPA boundary, land use and policy review. 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).

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 redevelopment can be categorized as low risk. 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. As a result, increasing residential densities is not recommended unless directed to the low risk portion of the SPA.

The land use review demonstrates that the most significant increase in residential densities is provided in the currently in effect OPA #440, which provides for almost 500 additional dwelling units in the SPA compared to OPA #240, which was amended by OPA #240. SPA policies have generally remained unchanged through various official plan amendments and cover appropriate issues relating to floodproofing, determination of the floodway through appropriate engineering studies, and permitted uses in the SPA.

There are two main recommendations from the flood risk assessment.

- Residential intensification in parts of the SPA 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.
- The northwest corner of Woodbridge Avenue and Clarence Street, the only low risk part of the SPA with redevelopment potential, is recommended for modest intensification from Mixed Use Commercial designation to Mid-Rise Mixed-Use and Low-Rise Mixed-Use designations.

Development according to current approved policies is estimated to result in 1,179 residential units in the SPA. 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 1,161 residential dwelling units. Hence, the decrease of approximately 18 units over the planning horizon of the Plan constitutes a reduction in risk. 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 residential intensification 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.

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 Woodbridge Centre Secondary Plan demonstrates overall consistency with the Provincial Policy Statement regarding SPAs in that (a) intensification is directed to the low risk area of the SPA and (b) there is a reduction in risk through an overall reduction in dwelling units in the SPA compared to previously approved policies.

## **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 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 Official Plan review. Land use and policy recommendations from the SPA review will be incorporated into the Woodbridge Centre Secondary Plan, which will form part of Volume 2 of the new City of Vaughan Official Plan. Extracts from the Woodbridge Secondary Plan related to the SPA, including schedules for land use designations, a residential density map, height map, policies specific to designations and SPA policies are included in Appendix H.

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
- 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 current approved SPA boundaries are shown in Figure 1-1. Appendix D includes maps of sub-areas of the SPA showing the property boundaries together with the old and new SPA boundaries.



Figure 1-1 Current approved 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 has been the subject of four previous Official Plan Amendments. Relevant schedules depicting plan boundaries and a composite map are provided in Figures 1-2 to 1-6.



- 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 new Official Plan. The policies and land use designations of OPA #695 are not updated as a result of this study.
- b. Official Plan Amendment #597, the Islington Avenue Corridor Secondary Plan, was adopted by Council of the City of Vaughan in 2006. Section 2.7 of Official Plan Amendment #597 (OPA #597), which deals with the SPA, was deferred by the Region of York.
- c. Official Plan Amendment #240 (OPA #240), the Woodbridge Community Plan, was adopted by the Council of Corporation of the Town of Vaughan in 1987. Final approvals from the Province are recorded as of 1995.
- d. 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 1-5 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 1-4 below).

**SCHEDULE - A**



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

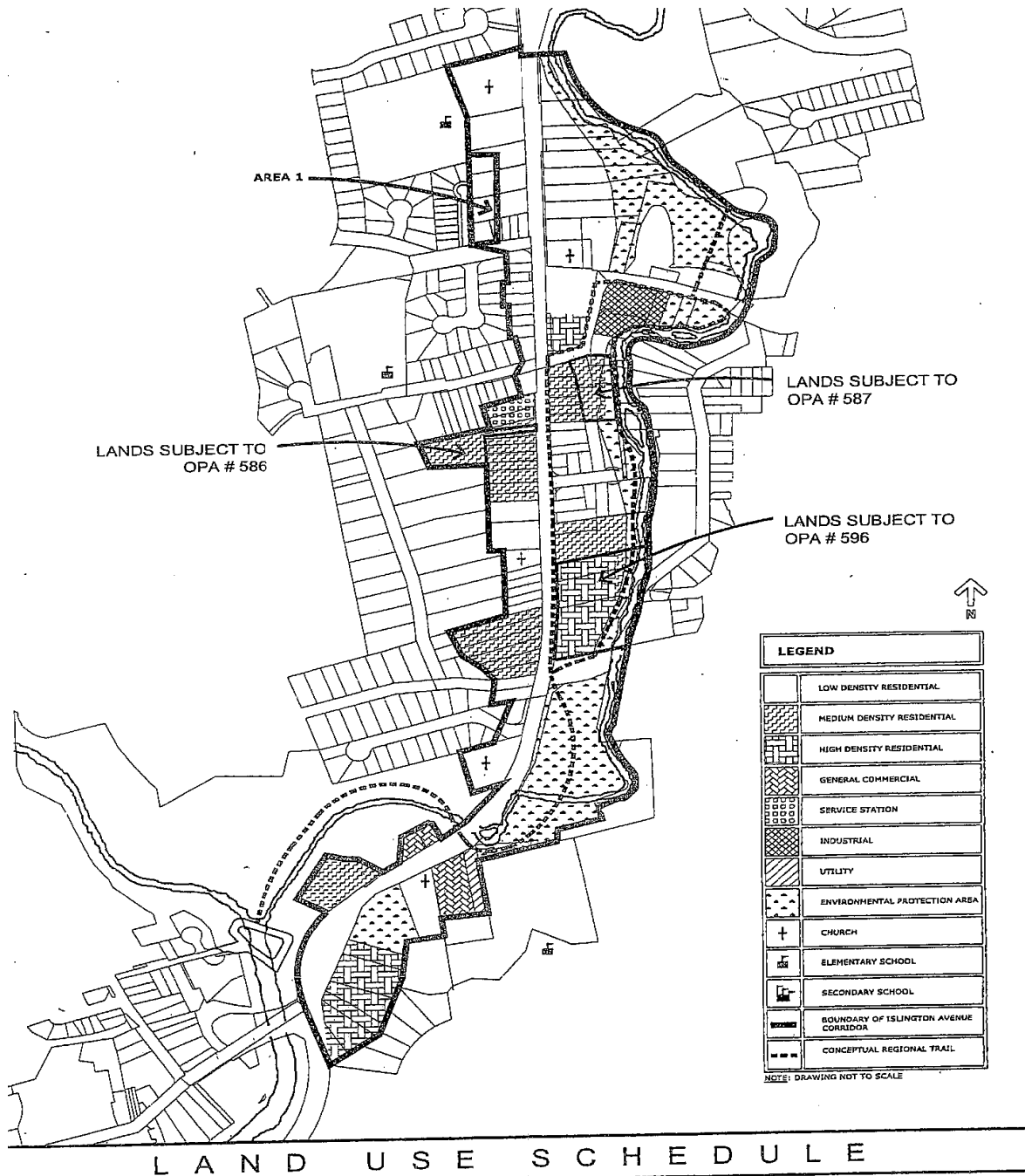


Figure 1-3 Plan area and land use for OPA #597, the Islington Avenue Corridor Secondary Plan.

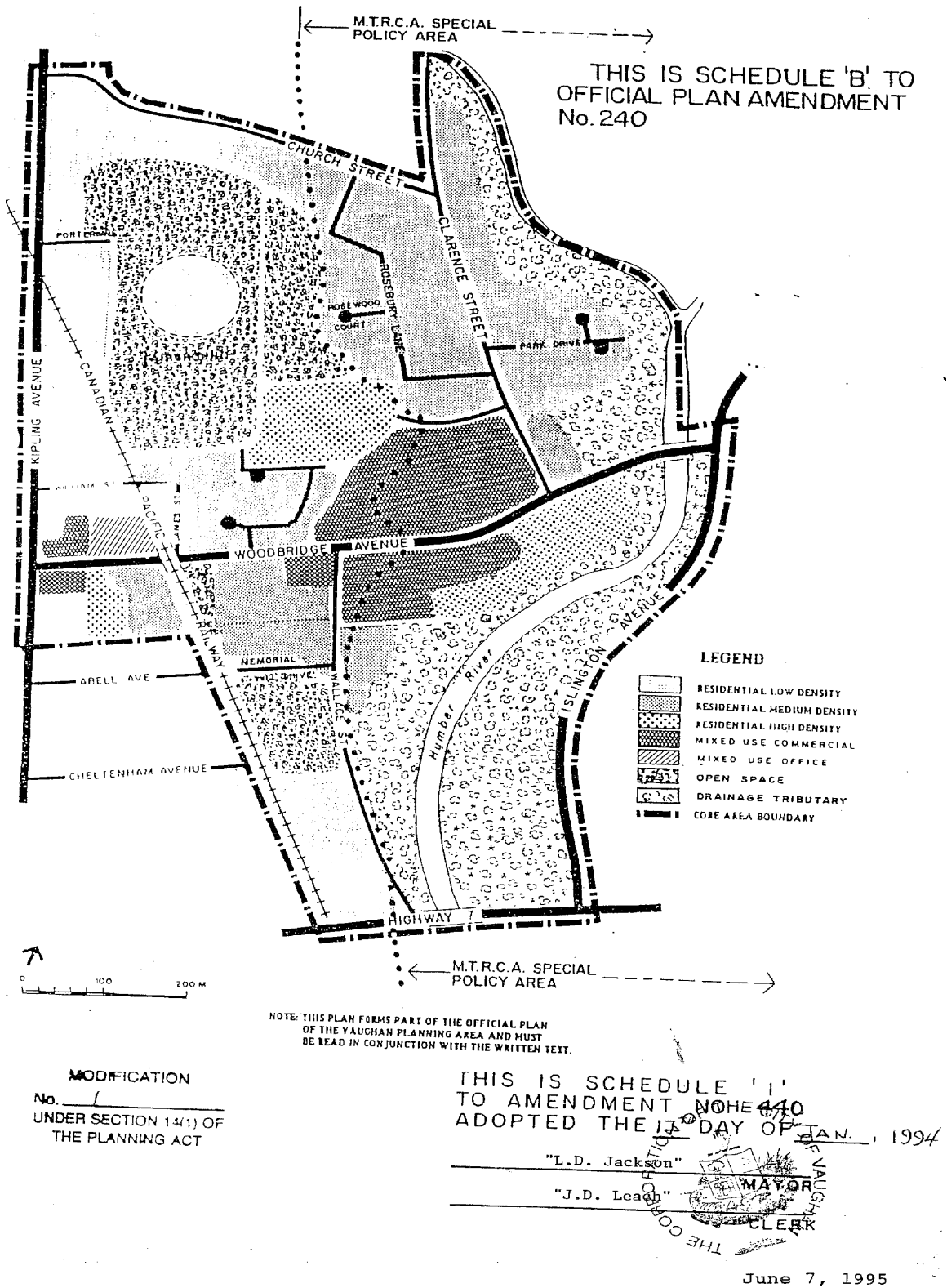


Figure 1-4 Woodbridge Core area as shown on Schedule '1' of OPA #440.

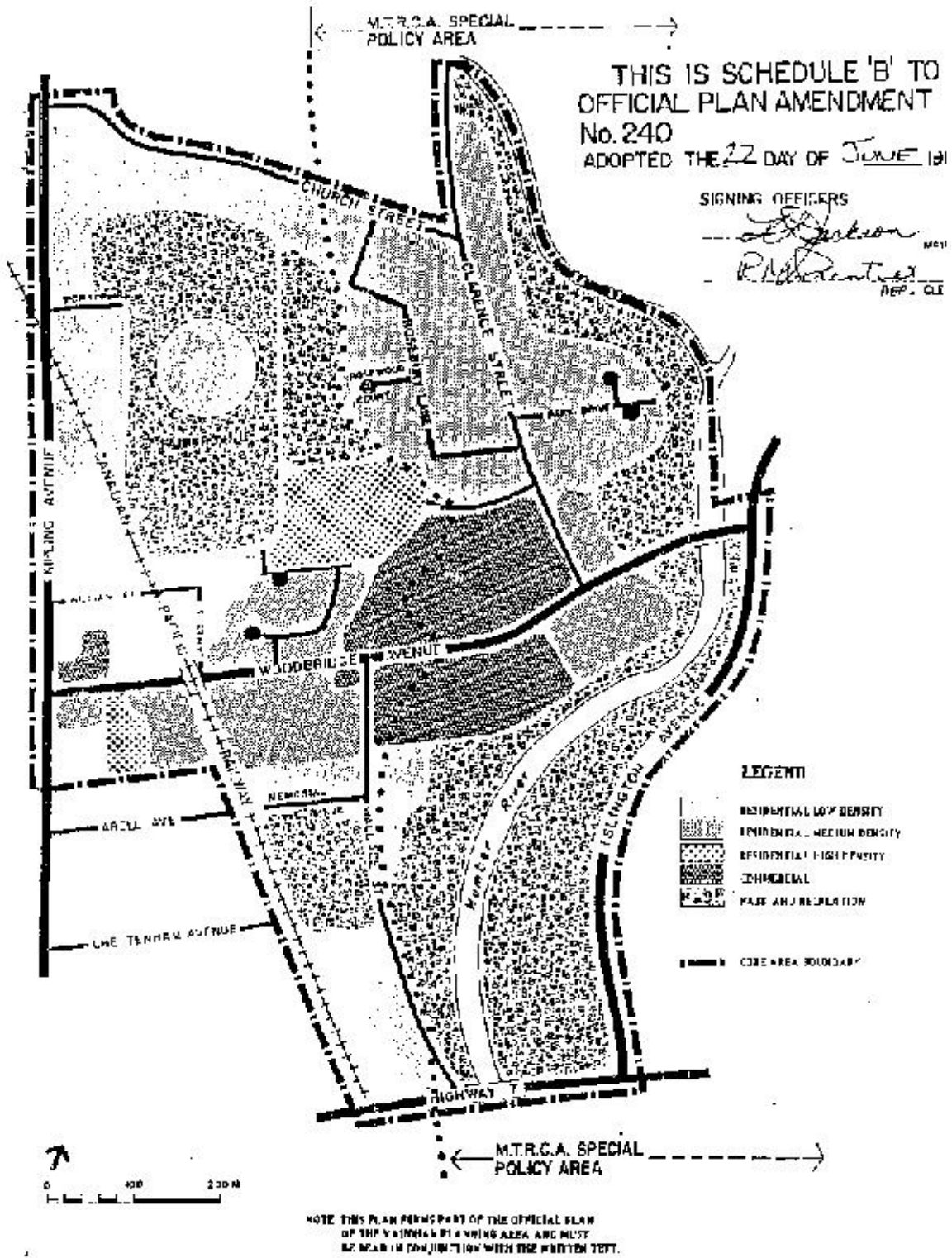


Figure 1-5 Woodbridge Core and land use as shown in Schedule 'B' of OPA 240.

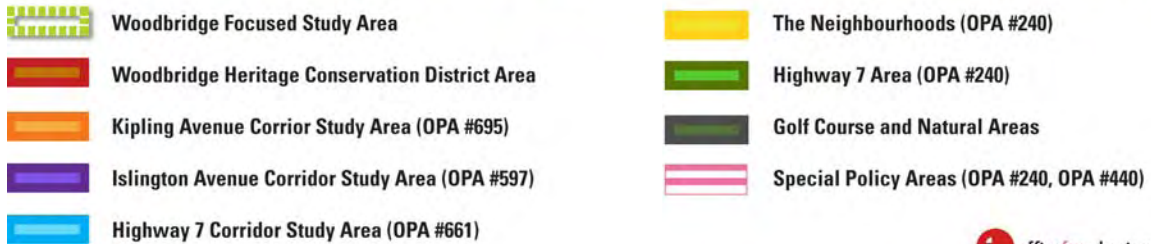
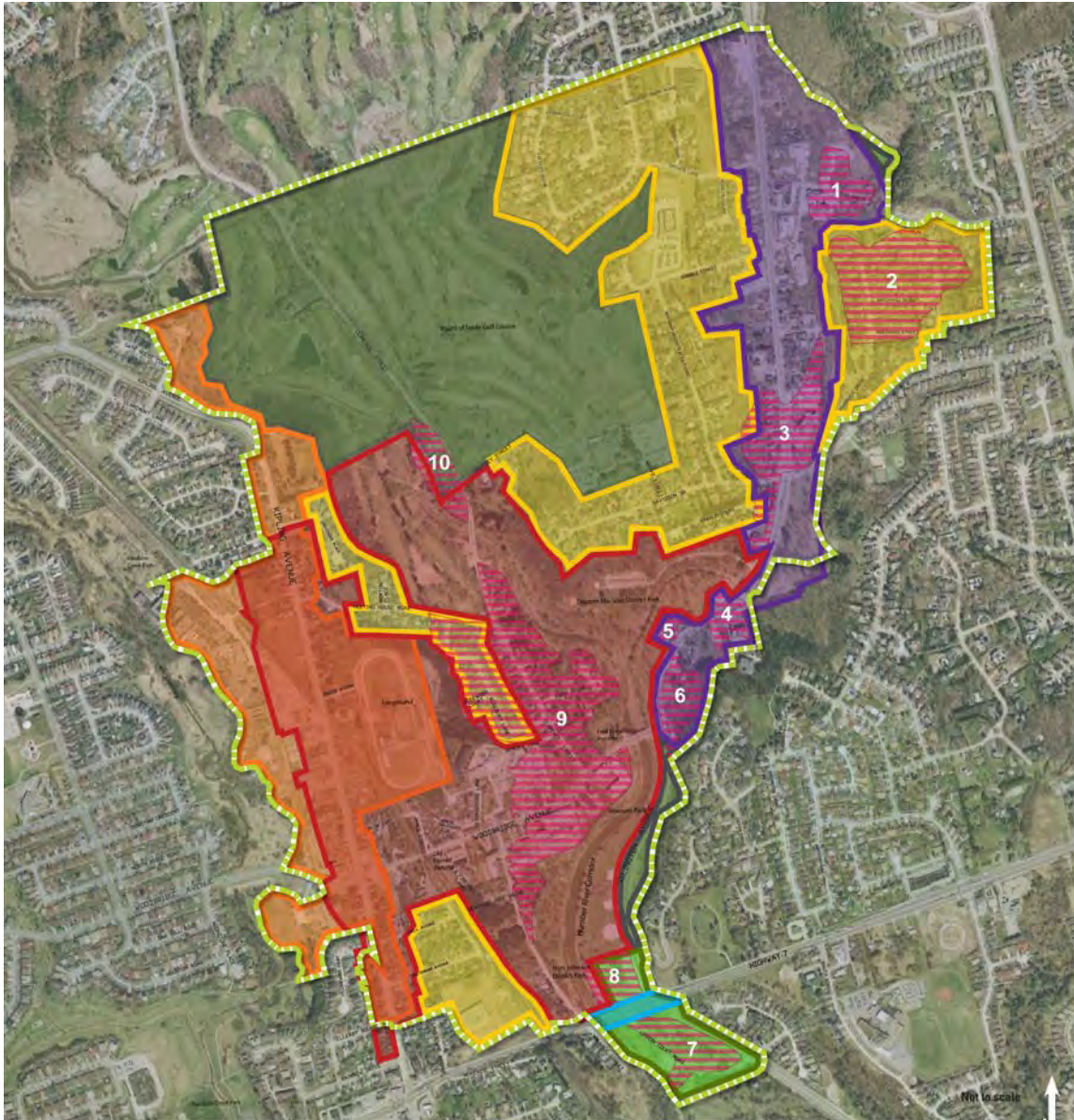


Figure 1-6 Composite map of policy areas relevant to the Woodbridge Focused Area Study. Numbers from 1 to 10 on the map refer to the SPA sub-areas.

The capacity analysis provided in Appendix E of this report sets the baseline for permitted dwelling units as the Council-adopted and Ministry-approved policies of OPA #440 and OPA #597. 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 #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 density expressed as units per hectare is not noted for the Mixed Use Commercial designation, a value of 90 units per hectare was used (see Appendix E for a discussion of this estimated value).

OPA #597 provides for an additional 208 dwelling units in the SPA in Medium Density Residential and High Density Residential designations. This does not include parts of the SPA along Islington Avenue that have already been intensified, notably 155 units added at 8201 Islington Avenue in a multi-residential building developed at a density of approximately 110 units per hectare. Section 2.7 of OPA #597 addressing the SPA policies was deferred by the Region of York.

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. Third, the approved intensification provided for in OPA #440, as well as the approved

policies of OPA #597, sets the base line for assessing risk according to various development scenarios.

### 1.3 Policy Context

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

- the Provincial Policy Statement (PPS), 2005;
- the “*Procedures of the Approval of New Special Policy Areas 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 (2005) 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;

3.1.3 Despite policy 3.1.2, *development and site alteration* may be permitted in certain areas identified in policy 3.1.2:

- 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 site-specific policies or boundaries applying to a *Special Policy Area*, 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 2002) addresses the SPA. Part B of Appendix 5 has been replaced by the "*Procedures of the Approval of New Special Policy Areas 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 of the Approval of New Special Policy Areas 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. In particular, the risk assessment can inform whether to direct intensified land uses either to less susceptible portions of the SPA or completely outside the SPA. The direction is as follows:

“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 4 public meetings. Public consultation meetings were held on September 17, 2009 and February 11, 2010. Statutory Public Meetings were held on April 7, 2010 and April 14, 2010. A Public Hearing for the Woodbridge Centre Secondary Plan is scheduled for June 14, 2010.

## **2.0 City of Vaughan Emergency Management Plan**

The risk analysis for the Woodbridge Focused Area Study includes two distinct analyses: (1) geographical risk; and (2) operational risk. Geographical 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. These pillars include prevention, mitigation, preparedness, response and recovery.

For the purposes of the Woodbridge Focused Area Study, 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 modeling, ingress/egress and site reconnaissance.

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 in dollars.

The assessment team also took into consideration the five pillars of emergency management 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 Civic Centre are available at public events and on its website. To promote emergency preparedness and rapid action by the public to potential emergency situations, the City uses several different mediums to communicate actions for citizens to take. These mediums include, radio, television, websites, York Regional Police Community Alert, 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 situations. 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, and 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 damaged structures include flood proofing measures be a component of the building permit; relocation of structures to areas outside of the flood plain; and development of floodways 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.

### **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 draft Woodbridge Centre Secondary Plan.

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

Many of the SPA policies introduced in OPA #145 have been carried through to OPA #240, OPA #440 and OPA #597. 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, OPA #440 and OPA #597 are 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, OPA #440, and OPA #597. 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**

### **5.1 Technical Information**

The “*Procedures of the Approval of New Special Policy Areas 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 SPA boundary modifications. Tables of SPA reductions and additions together with maps 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 & Associated 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:

- property owned by TRCA on Islington Avenue was removed from the SPA as development will not occur on these lands;
- roadways and road right-of-ways were removed from the SPA as the SPA designation is not appropriate or required to ensure continuation of these uses in the future;
- 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; and
- new boundaries follow property lines, where applicable, such that properties no longer straddle the boundary between the SPA and the “one-zone” area<sup>1</sup>.

These boundary modifications resulted in an overall decrease in the total land area within the Woodbridge SPA. There are fewer existing residential properties located within the revised 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 current 28.7 hectare SPA comprises 10 separate areas and includes approximately 272 parcels. There are 926 existing and approved (i.e. site plan approval in place) dwelling units in the SPA, of which about 600 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 24.0 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 214 parcels and 845 existing and permitted dwelling units in the proposed SPA. The changes include 6.6 hectares of reductions and 1.9 hectares of additions at a parcel scale, resulting in an overall reduction of 4.7 hectares or 16.4% of the current approved SPA. Note that the additions to the SPA constitute less than 10% of the overall SPA and are offset by the larger reductions.

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<sup>1</sup> The “one zone” approach to floodplain management is described in Section 3.6.2 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 below the top of bank of valley and stream corridors, which are included in *Core Features* of the Natural Heritage Network, is prohibited.



## 5.2 Land Use Planning Information Requirements

The “*Procedures of the Approval of New Special Policy Areas 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 Woodbridge Centre Secondary Plan is provided as Attachment 1 to satisfy the information requirements noted above. 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.

## 6.0 Summary of Flood Risk

The assessment of residential densities for several development scenarios, flood depth, and flow velocity explained in the flood risk assessment (Appendix G) 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.
- The northwest corner of Woodbridge Avenue and Clarence Street is the only area with redevelopment potential in which the risk to life thresholds, as defined in the Natural Hazards Technical Guide, are not exceeded. This area is recommended for modest intensification from Mixed Use Commercial designation to Mid-Rise Mixed-Use and Low-Rise Mixed-Use designations. 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 in residential uses.

### 6.1 Main Areas of Redevelopment in the SPA According to Existing Approved Policies and Recommended Land Use Changes

Development provided for in OPA #440 potentially adds 283 dwelling units in the SPA (Table 6-1). This estimate is derived by multiplying the density associated with the land use designation in units per hectare (uph) by the parcel area. As units per hectare is not noted for the Mixed Use Commercial designation, 90 uph is used to estimate dwelling units for lands in this designation. More detail for each parcel is provided in Appendix H and Appendix I.

Table 6-1 Estimated dwelling unit counts for potential redevelopment parcels in the SPA in addition to existing units that may be on the parcels. The SPA includes a portion of the property with the municipal address 124/140 Woodbridge Avenue and a portion of the City-owned parking lot.

Parcels	Estimated Dwelling Units Provided for in OPA 440	Estimated Additional Dwelling Units Provided for in Woodbridge Centre Secondary Plan	Unit Count Change
30 and 36 Clarence Street	19	17	(-) 2
86 Woodbridge Avenue	34	46	12
106, 108, 110, 112 and 116 Woodbridge Avenue	18	27	9
124/140 Woodbridge Avenue (i.e. Market Lane area)	60	75	15
City-owned parking lot (Market Lane area)	26	32	6
<b>SUBTOTALS</b>	<b>157</b>	<b>197</b>	<b>40</b>
23, 31 and 37 Clarence Street	11	14	3
15 Clarence Street and 56 Woodbridge Avenue	14	14	-
93 and 97 Woodbridge Avenue	56	54	(-) 2
137, 145, and 153 Woodbridge Avenue	19	17	(-) 2
43, 49, 57, 65 and 73 Wallace Avenue	26	32	6
<b>SUBTOTALS</b>	<b>126</b>	<b>131</b>	<b>5</b>
<b>TOTALS</b>	<b>283</b>	<b>328</b>	<b>45</b>

The six parcels in the SPA proposed for intensification provided for in the Woodbridge Centre Secondary Plan include (Figure 6-1 and Figure 6-2a):

- 30 and 36 Clarence Avenue,
- 86 Woodbridge Avenue,
- the main parcels in Market Lane area just west of 86 Woodbridge Avenue; and
- the City-owned parcel currently used as a surface parking lot.

These changes provide for an additional 40 dwelling units in the SPA over and above that provided for in OPA #440 (see the top group of properties in Table 6-1).



Figure 6-1 The parcels shaded comprise the area adding an estimated 40 dwelling units in the SPA over and above the development provided for in OPA #440. Note that this area is identified as Mixed Use Commercial in OPA #440 and does not have specific densities written in policy.



Figure 6-2a Street addresses for parcels on the north side of Woodbridge Avenue. Refer to Figure D-7 of Appendix D for current (i.e. old) and new SPA boundaries related to the properties.

According to data from the TRCA, this part of the SPA will experience flood depths of 0.27 metres and average flow velocities of 0.66 m/s. This is one of the lowest flooding depths in the SPA. Furthermore, the product of flood depth and flow velocity for the area is  $0.18 \text{ m}^2/\text{s}$  and is below the risk to life thresholds (i.e.  $0.4 \text{ m}^2/\text{s}$ ) described in the Natural Hazards Technical Guide.

The remaining parcels in the SPA that are likely to redevelop have proposed densities expressed as Floor Space Index that result in small increases in potential dwelling units counts for certain properties. These include parcels with a Residential Medium Density designation in OPA #440 that are identified with an FSI of 0.5 in the Woodbridge Centre Secondary Plan, and results in an additional 5 units in the SPA (Table 6-1). Note that only small portions of the properties at 145 and 153 Woodbridge Avenue are included in the SPA.



Figure 6-2b Street addresses for parcels on the south side of Woodbridge Avenue. Refer to Figure D-7 of Appendix D for current (i.e. old) and new SPA boundaries related to the properties.

## 6.2 Overall Changes in Dwelling Units in the SPA

The original estimate of 926 existing and approved dwelling units included the Thistlewood seniors residence. As the SPA only intersects a portion of this property, and the actual building is removed from the flood limit, the approximately 30 units in this building is removed from the estimate resulting in 896 existing and approved dwelling units in the SPA (Table 6-2). As shown in Table 6-2, adding the 283 dwelling units that can be redeveloped according to OPA #440 results in a cumulative total of 1,179 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 1,366 dwelling units in the SPA.

The revision of the SPA boundaries results in a decrease from 896 existing and approved dwelling units to 833 dwelling units in the SPA (Table 6-2). As the SPA along Islington Avenue is not proposed to change from the current low rise residential form, the only changes to consider are the additional units in the Woodbridge Commercial Core. Taking into consideration the SPA portion of the parcel areas results in 328 additional dwelling units (Table 6-1). This results in 1,161 total dwelling units in the SPA.

In summary, considering the current (old) SPA boundaries and the approved policies of OPA #440 results in the potential development of 1,179 dwelling units in the SPA. Removing dwelling units based on the revised SPA boundaries and adding modest intensification in the low risk part of the SPA results in an estimated 1,161 total dwelling units the SPA. This represents an overall reduction of 18 dwelling units in the SPA.

Table 6-2 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 Secondary Plan.

	Current SPA			New SPA		
	Existing and Approved Development <sup>a</sup>	Estimated Development Potential from Approved Official Plans <sup>b</sup>		Existing and Approved Development <sup>a</sup>	Estimated Development Potential from the Proposed Woodbridge Centre Secondary Plan <sup>c</sup>	
		Additional Units	Cumulative Total		Additional Units	Cumulative Total
Dwelling Units	896	283	1179	833	328	1161
Estimated Population <sup>d</sup>	2,778		3,655	2,582		3,599
Damages <sup>e</sup>						
Dwelling Repair Costs	\$15.23		\$20.04	\$14.16		\$19.74
Vehicle Repair Costs	\$10.75		\$14.15	\$10.00		\$13.93
Dwelling Clean Up Costs	\$3.58		\$4.72	\$3.33		\$4.64
Total Estimated Damage Costs			\$38.91			\$38.31

<sup>a</sup> Includes existing buildings plus development applications with Site Plan approval.

<sup>b</sup> Includes development, in addition to existing and approved development, that is provided for in OPA #440.

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

<sup>d</sup> Population is estimated based on 3.1 persons per unit as noted in the York Region 2031 Land Budget (January 2009).

<sup>e</sup> Estimated damage costs are expressed in millions of dollars. See Subsection 2.2.1 of Appendix G for more details.

### 6.3 Additional Development in the Regulated Area Outside of the SPA

Much of the redevelopment potential along Woodbridge Avenue outside of the SPA is in the regulated area delineated by the Toronto and Region Conservation Authority (TRCA). At the request of the TRCA, and supported by the Province, the discussion below attempts to evaluate the additional development provided for in the Woodbridge Centre Secondary Plan along Woodbridge Avenue.

It is estimated that the Woodbridge Centre Secondary Plan provides for 387 dwelling units along Woodbridge Avenue and Wallace Avenue outside of the SPA (Table 6-3). This represents a 41% increase in dwelling units that are provided for in OPA #440. It also results in the potential for 261 additional dwelling units than currently exist in the regulated area outside of the SPA. See Appendix I for additional details regarding the parcels with redevelopment potential.

Parcels east of Kipling Avenue along the south side of the Woodbridge Avenue are the only parcels largely outside of the regulated area. The regulated area covers approximately 10% of the area of the parcels along the road frontage. Removing these areas from the calculation of additional development results in a comparing potential build-out of 272 dwelling units provided for in the Woodbridge Centre Secondary Plan to 213 units provided for in OPA #440, resulting in an increase of approximately 28%.

It should be noted that the existing unit count of 126 dwelling units in Table 6-3 is not an accurate reflection of existing Gross Floor Area (GFA) as commercial buildings are not accounted for in the table.



Table 6-3 Estimated dwelling unit counts for properties outside of the SPA.

Parcels	Estimated Existing Dwelling Units	Estimated Dwelling Units - OPA 440		Estimated Dwelling Units - Woodbridge Centre Secondary Plan	
		Provided for in Policy	Additional Units	Provided for in Policy	Additional Units
248, 252, 260 and 268 Woodbridge Avenue	1	17	16	26	25
64 Abell Avenue; 239, 245, 251 and 275 Woodbridge Avenue	53	61	8	115	62
Fairground Lane, Amos Maynard Circle, Old Firehall Lane and Woodbridge frontages	64	59	(-) 5	73	9
177, 185 and 197 Woodbridge Avenue	1	19	18	28	27
174 Woodbridge Avenue	-	3	3	10	10
165 and 167 Woodbridge Avenue 15 Wallace Street	-	7	7	6	6
159 Woodbridge Avenue	-	6	6	5	5
<b>SUBTOTALS</b>	<b>119</b>	<b>172</b>	<b>53</b>	<b>263</b>	<b>144</b>
124/140 Woodbridge Avenue (i.e. Market Lane area)	-	73	73	90	90
City-owned parking lot (Market Lane area)	-	3	3	4	4
<b>SUBTOTALS</b>	<b>-</b>	<b>76</b>	<b>76</b>	<b>94</b>	<b>94</b>
1 Memorial Hill Drive	1	12	11	9	8
44, 50, 56 and 60 Wallace Street	4	9	5	13	9
85 and 91 Wallace Street	2	5	3	8	6
<b>SUBTOTALS</b>	<b>7</b>	<b>26</b>	<b>19</b>	<b>30</b>	<b>23</b>
<b>TOTALS</b>	<b>126</b>	<b>274</b>	<b>148</b>	<b>387</b>	<b>261</b>

#### 6.4 Summary of Risk to Life

The above discussion documents the geographical risk based on dwelling unit changes associated with the intensification proposed for the area outlined in Figure 6-1. Table 6-2 summarizes the additional residential development proposed in the SPA in the Woodbridge Centre Secondary Plan with respect to population and estimated damage costs.

Table 6-2 reflects the increase in residential dwelling units with gradual development in the SPA. The development provided for in the existing approved policies of OPA #440 results in the largest increase in population and potential damage costs. The modest increase in dwelling units in the SPA provided for in the Woodbridge Centre Secondary Plan is reflected in the estimated population and damage costs.

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 impact 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.

#### 7.0 Recommended Land Use Plan and SPA Policies

The Woodbridge Centre Secondary Plan is provided as Attachment 1 and land use designations for parcels in the SPA are provided in Appendix H. 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 modest residential intensification is provided along Islington Avenue to reflect the rural residential character of this corridor.

While “feasible opportunities for development outside the flood plain”, as expressed 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. The flood risk summary provided in Section 6.0 above demonstrates that the reduction in SPA area and the changes in land use, despite modest

intensification in the SPA in the Woodbridge Core, results in an overall net decrease in residential units in the SPA. This is compared to development provided for OPA #440 and using the old SPA boundaries.

In addition, the area of modest residential intensification to the northwest of Clarence Street and Woodbridge Avenue is one of the least sensitive parts of the SPA. Risk to life thresholds, calculated using average flood depths and flow velocities, are not exceeded in this area and has been identified as low risk consistent with the Natural Hazards Technical Guide.

Finally, the land use designations in the Woodbridge 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 revised SPA policies are part of the Woodbridge Centre Secondary Plan. The Secondary Plan, together with four other secondary plans, comprise Volume 2 of the City of Vaughan Official Plan.

The Woodbridge Centre Secondary Plan will be presented at a statutory Public Hearing meeting of the Committee of the Whole on June 14<sup>th</sup>, 2010. Final revisions of the Official Plan will occur over July and August 2010 and it is anticipated that Council of the City of Vaughan will adopt the Official Plan in September 2010.

The Region of York will recommend to defer or pass a non-decision on the parts of the Woodbridge Centre Secondary Plan related to the SPA until the Province has approved the relevant reports that comprise the SPA review.

## **References**

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