

6. Analysis of Updated Flood Lines and Flood Risk Mapping

The purpose of this section of the report is to present the updated flood line and flood risk mapping.

6.1 Updated Flood Risk Mapping

The original Bolton SPA was developed using the peak flows and floodlines generated in 1979/1980. Since that time the hydrologic model used to estimate design flows as well as the topographic mapping and hydraulic model used to estimate flood elevations were updated on at least one occasion.

The current mapping is based on:

- 2002 hydrologic modelling;
- 2006 topographic mapping;
- 2013 hydraulic modelling; and
- 2014 hydrology.

6.1.1 Regional/Regulatory Flood Lines

Figure 6.1 illustrates the Regulatory Flood Plain as mapped in 1979/80, 2003/4 and 2013. As illustrated, the changes from 1979 to 2013 have been relatively minor. It should be noted that the 1979 mapping was prepared prior to implementation of the remedial works. The mapping would suggest that the remedial works had relatively minor impacts on flooding. Although this is true for the Regulatory Storm, the differences would be significant for more frequent storm events.

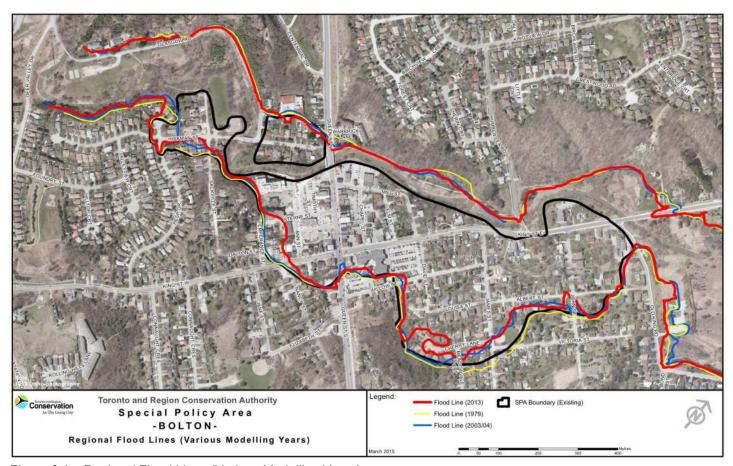


Figure 6.1 – Regional Flood Lines (Various Modelling Years)

6.1.2 500-year Flood Lines and Flood Risk Mapping

In 1984, remedial works were designed to contain the 500-year flood flows along the river corridor. Taking this into consideration together with the urban design of the existing development within the SPA, the minimum flood proofing policy standard when protection to the Regulatory flood elevation cannot be achieved is protection to the 1:500 year flood elevation.

Figure 6.2 illustrates the 500-year flood plain calculated using the flow rates calculated in 1980 (155 m³/s) and 2013 (194 m³/s). Both cases are based on the current topography and current hydraulic model. The difference in the flood elevations is simply based on the fact that the 500-year flow rate calculated in 2013 is higher than the rate calculated in 1980.

Of more significance than the difference between the two floodlines is the fact that the 500-year floodlines extend into the built up area whereas the intent of the remedial works was to protect Bolton from flooding during the 500-year event. This discrepancy between what was assumed in the early 1980s and what is calculated now is mainly due to the following:

- Variations in the base mapping and channel geometry between 1980 and 2013;
- Increase in the estimated 500-year flow, from 155 m³/s to 194 m³/s in 2013;

- Conversion of the hydraulic model from HEC 2 to HEC-RAS; and
- Change in modeling approaches, as the Oxbow was modeled separately in the 1980s study while it is part of the main channel in the 2013 model.

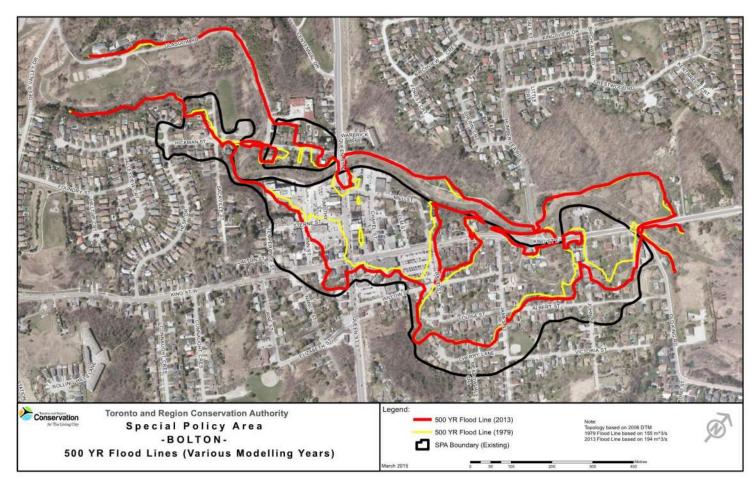


Figure 6.2 – 500-Year Flood Lines (Various Modelling Years)

6.2 Existing Flood Protection Remedial Works - Berm Analysis

One of the key findings of the updated flood mapping was the recognition that the existing level of flood protection was not consistent with the requirements detailed in OPA 57. Most specifically the remedial works constructed in 1984 were intended to alleviate flood risk in the built-up part of Bolton for events up to the 500-year event. However, flood risk mapping completed in 2013 indicated that flooding occurs more frequent than the 500-year event.

However, the TRCA is currently completing a comprehensive update of the hydrologic modelling for the Humber River. Once the update is complete the TRCA will be in a position to better assess current flood risk associated with the 1984 berm and related flood control works.

6.3 Flood Risk Assessment (Access and Egress)

In addition to consideration of flood damage, safe access and egress from a structure within the flood plain is a key factor in assessing flood risk and in developing land use policies. The MNRF and TRCA use the following as a guide in establishing risk associated with access and egress:

Low Risk

Low Risk means that access and egress is safe for emergency vehicles and pedestrians. This criterion applies when the flow depth is no greater than 0.3 metres at all points along the access/egress route.

Moderate and High Risk

Moderate (Medium) Risk means that access and egress is safe by an individual "on foot" but the flow depth is too great for emergency vehicles. The criteria for Moderate Risk are based on human stability. In this context "human stability" refers to the stability and safety of a person who may attempt to exit a flood inundated area on foot. If all of the following three metrics (depth, velocity, depth x velocity) are less than or equal to the stated Threshold Value than an area is considered to be Moderate Risk. If any of the three Threshold Values is exceeded then the area is considered High Risk

<u>Metric</u>	High Risk Threshold Value
Flood Depth:	0.8 m
Flood Velocity:	1.7 m/s
Product of depth and Velocity:	0.37 (m ² /s)

Figure 6.3 illustrates the Regional Storm Risk Map for Bolton. As illustrated for the Regional Storm event, the High Risk Areas represent virtually all of the existing development. Although not illustrated, for the 500-year event the limits of the High Risk area reduces to approximately 25 percent of existing development; predominately in residential areas.

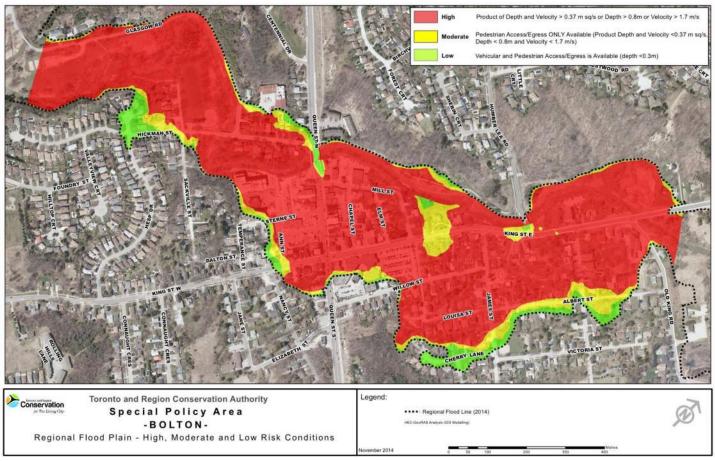


Figure 6.3 – High, Moderate and Low Risk Conditions

7. Analysis of Future Land Uses Flood Risk

The Town's Intensification Study has identified potential intensification opportunities within the Town and specifically assessed the Bolton Core and SPA. The intensification opportunities within the Bolton Core have been identified by MBTW as Speculative and Vacant properties on Drawing: Bolton Downtown (Rural Service Centre), January 7, 2014.

Based upon the findings of the Town's Intensification Study, it was determined that feasible opportunities for intensification in the Town exist outside of the Bolton SPA. However, the Intensification Study identified the potential for an additional 210 residential units (speculative) through redevelopment infill and intensification, and an additional 9 units which may be developed on existing vacant lands within the SPA. Based on this analysis, a flood risk assessment was undertaken for the "Potential Build-Out" based on this Scenario, as described in Section 8.0.

Intensification opportunities within the Bolton Core may accommodate modest infilling, replacement and small-scale redevelopment that is in keeping with the existing development entitlement on these properties. Properties that are identified as speculative are considered to provide potential opportunities for intensification and redevelopment. Future development within the SPA is also anticipated to be respectful of the character of the core, and mindful of heritage conservation and compatibility issues. Furthermore, based on the intensification analysis, the Town has sufficient intensification opportunities located outside of the Bolton Core to extend beyond the 20-year planning horizon. However, at the same time, it is recognized that the continued vitality and vibrancy of the core should be maintained and enhanced through appropriate redevelopment and intensification opportunities.

8. Flood Risk Assessment for Existing and Alternative Development Scenarios

A detailed risk assessment and inventory specific to existing conditions and alternative development scenarios was completed for the SPA. The scenarios that were assessed are listed as follows:

- Existing Conditions (2014 flood plain mapping)¹;
- The "Potential Build-Out" Scenario, based on the recommendations of the Town's Intensification Study (as discussed in Section 7.0);
- Existing development opportunity based on existing zoning (as identified in Section 5.1.1), and
- Potential development opportunity based on the existing zoning and the Town's Official Plan land use designations (as identified in Section 5.1.2).

The completed Risk Assessment focuses on depth and frequency of flooding for all properties prone to flooding. Risk in terms of potential financial damage to property is discussed in Section 9 of this Report.

To complete the risk assessment, a database was created for all buildings in the SPA. For each building the database included the following: estimated elevation adjacent to property, flood elevation for all design storms including the Regional Storm, and the estimated flood depth and velocity adjacent to each building. In addition, each residential building was categorized by the type (one storey, two storey, etc.). The database does not indicate whether or not a building has a basement, however based on our street reconnaissance it appears that virtually all houses have basements.

In addition, the database includes a notation whether each building was in the Moderate Risk or High Risk Zone. Few buildings were located in the Low Risk zone as it is generally confined to the periphery and road right-of-ways. Although the SPA is based on Regional Storm flooding, the analysis was also completed for all events up to the 500-year event to assist in understanding overall risk across a spectrum of flood events. The results are tabulated in Appendix D.

Moderate Risk and High Risk zones were defined as per MNRF criteria and requirements and are presented in Section 6.3.

¹ Consideration was also given to assessing flood risk for Existing Conditions based on the previous flood risk mapping. However, once the current and previous mapping were compared it became evident that a direct comparison was not possible due to difference in the setup of the hydraulic models and the location of the cross-sections. Notwithstanding the above, we compared flood elevations at all cross-sections for design storms ranging from 2-years to the Regional Storm. We then calculated that the average difference between previous and current mapping decreased by 0.17 metres. Given all of the variables associated with calculating flood elevations it was concluded that there was no significant change in the estimation of flood risk based on comparing the previous and current flood risk mapping. As a result the Existing Conditions (current mapping) was considered as the base case for comparing risk associated with various development options.

8.1 Existing Conditions

The results of the risk assessment for existing conditions are included in Table 8.1 to Table 8.3

Table 8.1 summarizes the population and number of houses in the Risk Zones. The population is based on an average of 3.5 persons per house. A total of 250 houses are located in the SPA based on the Regional Storm event. The number reduces to 219 houses under the 500-year event.

Table 8.1: Population and Residential Dwelling Units in Risk Zones

Risk	Zones defined usin	g 500-year Event	Zones defined using Regional Sto		
	Population	Population Dwelling Units P		Dwelling Units	
Moderate	617	199	158	45	
<u>High</u>	<u>56</u>	<u>16</u>	<u>547</u>	<u>179</u>	
Total	687	219	795	250	

Note: 80 residential dwelling units at 60 Ann Street are included as High risk. All other dwelling units are houses.

Table 8.2 summarizes the number of non-residential buildings and the total floor area that is at risk. As illustrated, the majority of the buildings are within the High Risk Zone for the Regional Storm. All but one building would be located in the Medium Risk Zone during the 500-year event. The analysis for non-residential buildings includes the ground floors which may be subject to flood damages, but does not factor in any upper storey uses which would not be subjected to flood damages, but may pose emergency access considerations.

Table 8.2: Non-Residential Buildings and Floor Area in Risk Zones

Risk	Zones defined using	500-year Event	Zones defined using	g Regional Storm
	Area (m²)	No. of Buildings	Area (m²)	No. of Buildings
Moderate	13,100	45	1,600	2
<u>High</u>	<u>100</u>	<u>1</u>	<u>11,500</u>	<u>44</u>
Total	13,100	46	13,100	46

Table 8.3 summarizes the number of buildings that are at risk of flooding for various return periods. These are based on no berm in place.

A building was considered at risk if the flood elevation exceeded the lowest ground elevation adjacent to the building. The elevation was based on available mapping and was not surveyed. As such it should be used for comparative purposes but is not a precise indication of the number of buildings that may be damaged during the prescribed flood event.

As illustrated, without the berm in place 15 residential buildings are at risk of flooding for the 5-year event, increasing to 114 for the 500-year event. A total of 250 residential buildings in the SPA lie within the Regional Storm floodplain.

The non-residential buildings are not as flood prone, with none at risk for the 25-year event, increasing to 37 for the 500-year event. A total of 46 non-residential buildings in the SPA lie within the Regional Storm floodplain.

Table 8.3: Number	· Buildings at	Risk of Floo	odina i	(without berm)
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Risk	5-year	25-year	100-year	350-year	500-year
Residential Buildings			-		-
Moderate	6	39	55	87	94
<u>High</u>	<u>5</u>	<u>8</u>	<u>16</u>	<u>16</u>	<u>16</u>
Total	15	51	75	107	114
Avg. Depth (m):	0.22	0.28	0.36	0.56	0.59
Non-Residential Buildi	ngs				
Moderate	0	0	7	38	38
<u>High</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total	0	0	8	39	39
Avg. Depth (m):	0.00	0.00	0.09	0.50	0.52

8.2 Alternative Development Scenarios

Table 8.4 details flood risk for the various development scenarios and compares the results to existing conditions. As illustrated in Table 8.4, under existing conditions there are 205 dwelling units and 638 resident living in high risk areas. These numbers could reach 424 units and 1,193 residents based on the "Potential Build-Out" scenario. The number would be noticeably greater at 990 units and 2,632 residents based on existing zoning opportunity.

Table 8.5 illustrates the number of buildings within the flood plain for various return periods. The number of residential buildings subject to flooding is much less sensitive to the various development scenarios. This is because the vast majority of new units would be in multi-unit residential buildings.

In interpreting these tables it is important to stress that the new units in all scenarios would not be subject to flooding as they would have to be built with minimum openings above the flood elevation. Hence, as noted, the focus is on access and egress rather than building inundation.

Table 8.4: Impact of Various Development Scenarios on Flood Risk for Regional Storm (Population	n
and Residential Dwelling Units)	

Development	Population	on in Risk Zone	Residential Dwelling Units in Risk Zone		
Scenario	Moderate Risk	High <i>Risk</i>	Moderate Risk	High <i>Risk</i>	
Eviation Canaditions					
Existing Conditions	158	638	45	205	
Potential Build-Out	158	1193	45	424	
Existing Zoning	195	2632	60	990	
Existing Zoning and Official Plan	195	3175	60	1207	
Note: Calculation	is based on no	berm in place, as p	er Provincial requ	irements	

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Table 8.5: Impact of Various Development Scenarios on Flood Risk for Regional Storm (Buildings)							
Development	Buildings a	Buildings at risk of flooding					
Scenario	25-year	25-year 100-year 500-year Regional Storm					
Existing Conditions	51	75	114	171			
Potential Build-Out	51	83	130	194			
Existing Zoning	57	83	125	191			
Existing Zoning and Official Plan 57 83 125 191							
Note: Calculation is based on no berm in place, as per Provincial requirements							

9. Potential Property Damage Due to Flooding

As previously noted, as part of the 1981 *Preliminary Engineering Study of Flood Protection in the Village of Bolton,* the 1981 Expected Annual Flood Damages were calculated as \$54,000/year (\$140,000/year in 2014\$) prior to implementing the remedial works. Although not explicitly discussed, it would have been assumed that given that the remedial measures were designed to protect the community for flooding for events up to the 500-year event, the Average Annual Damage would have been very low following the 1984 implementation of the recommended works.

As part of this assessment of existing flood risk, an update of Expected Annual Damages was undertaken. This update was based on the following information

- The TRCA's Flood Vulnerable Area Data (FVA data);
- The update calculation of flood elevations for various return period up to the Regional Storm; and
- The 2007 Flood Damage Estimation Guide (MNR, 2007).

The FVA data provided by the TRCA lists all buildings in the SPA including their address, structure type, land use, ground elevation, and flood elevation for return periods ranging to 100-years as well as the Regional Storm. We supplemented the data based with flood elevations associated with the 350-year and the 500-year event. In addition we compiled a photographic inventory of all structures in the flood plain and then confirmed that the FVA data base was up to date. Although the 500-year event was the design storm used as the basis for flood protection in the Bolton SPA, details of the 350-year event are also provided recognizing that the 350-year event is the standard more typically applied across the TRCA jurisdiction.

Flood damages were calculated for existing conditions in accordance in the MNR's 2007 Flood Estimation Guide. The MNR Flood Damage Estimation guide includes a series flood damage curves that relate flood damage to the depth of flooding. For residential buildings, damages are estimated for seven types of structures (one storey without basement, one storey with basement, two storey with basement, split level, townhouses, mobile homes). For each group curves, three curves are provided for—low, medium and high. For commercial/industrial/institutional buildings the flood damages as a function of inundation depth are provided for 14 types of facilities.

The estimates are approximate in that building elevations are based on topographic mapping rather than a survey of building openings and first floor elevations. Nevertheless they provide a reasonable estimation of the collective risk associated with the Bolton SPA flood prone structures. The key steps completed included:

- Discounting any benefits of the existing flood control berm, compile an inventory of flood prone structures by identifying the building type associated with each structure in the TRCA's inventory of flood vulnerable structures.
- For floods with return periods of 2 years through to 500 years (plus the Regional Storm) calculate the depth of flooding based on the difference between the calculated flood elevations and the ground elevation associated with each building.
- Calculate the total residential and commercial flood damages for each return period.
- Calculate the expected annual damages in \$2005 and apply the CPI to estimate the expected annual damages in \$2014.

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As summarized in Table 9.1, the Expected Annual Damages are \$82,000. Of this total, approximately 70% are associated with commercial structures with the remaining damages being associated with residential structures. This estimate does not account for the benefits associated with the flood berm that was constructed along the Humber River in the mid 1980s to reduce flood risk.

Flood damages for any of the future scenarios would actually be less than existing condition. This is because as new buildings are constructed in the Bolton SPA they will be flood proofed such that the expected annual damages will be essentially eliminated. Furthermore, the addition of new buildings will in many cases also include removal of existing flood prone structures; hence the reason for an anticipated reduction in the expected floods damages.

Based on discussions with the Region and Town's Public Works, there were no planned infrastructure improvements related to transportation (road, streetscape improvements) and municipal services (water, wastewater improvements), that may need to be factored into the flood damage calculations.

Table 9.1: Expected Annual Damages

Return Period (years)	Regional	500	350	100	50	25	5	2
Frequency:	0.001	0.002	0.003	0.010	0.020	0.040	0.200	0.500
Probability Range:	0.002	0.001	0.007	0.010	0.020	0.160	0.300	0.500
Residential Damages	\$ 2,849,900	\$ 902,600	\$ 774,100	\$ 283,800	\$ 218,600	\$ 162,8900	\$ 21,000	\$ 4,600
Commercial/Industrial	\$ 4,077,600	\$ 1,077,500	\$ 1,064,100	\$ -	\$ -	\$ -	\$ -	\$ -
Structural Damage	\$ 6 927 600	\$ 1 980 100	\$ 1.838.200	\$ 283 800	\$ 218 600	\$ 162 900	\$ 21 000	\$ 4 600

Expected Annual Damage 2005 \$	\$ 70,600
CPI adjustment to 2014	16%

Total Expected Annual Damages in 2014\$ \$82,000

10. Community Emergency Response Plan

The Town is currently in the process of updating their existing Community Emergency Response Plan that defines the roles and responsibilities in response to an emergency, including flooding, that represents a significant risk to life and property. The Town has prepared a Flood Contingency Plan as part of the Community Emergency Response Plan to address flood risks associated with the Bolton core. The following documents currently provide clarity on relative responsibilities in responding to an emergency.

10.1 Existing Emergency Response Plan

The Town of Caledon Community Emergency Response Plan (January 2011) is a generic response plan that defines roles and responsibilities of members of the Community Control Group (CCG), elected officials, and various public administrators in case of an emergency. In this context an emergency is defined as "a situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, an accident or an act whether intentional or otherwise."

The Community Emergency Response Plan does not specifically address the actions to be taken in case of a specific event such as flooding. However, the Town's Fire Department has a Flood Contingency Plan to address flooding within Bolton.

10.2 Draft Emergency Response Plan

The Town is currently in the process of updating their existing Community Emergency Response Plan that defines the roles and responsibilities in response to an emergency that represents a significant risk to life and property. This work is being undertaken concurrently with the preparation of this Report, and will be made available as part of the SPA submission. It is anticipated that any additional comments or revisions to the Emergency Response Plan to address flooding may be undertaken as an addendum to the Plan.

In addition, TRCA's Flood Contingency Plan encompasses a flood warning system and defines the municipality's role upon the issuance of a Flood Watch or a Flood Warning. Furthermore, some individual buildings in Bolton such as River's Edge at 60 Ann Street have a site specific Flood Plain Evacuation Plan intended to evacuate residents and direct them to higher ground. These individual Flood Plain Evacuation Plans are included in the Town's Flood Contingency Plan.

In support of the preparation of the Community Emergency Response Plan, The following provides a framework for the development of an emergency response plan to address flood risk in Bolton. The following elements are intended to be considered in the preparation and update of the Town's Community Emergency Response Plan. Furthermore, the Town's Fire Department has a Flood Contingency Plan to address flooding within Bolton, which is intended to be an appendix to the Community Emergency Response Plan, and will therefore serve to operationalize the specific guidance contained in the Bolton Flood Contingency Plan. The framework includes nine broad elements listed below

1. <u>Flood Warning System</u>: The TRCA flood warning protocols should be used as a starting point, but there may be additional measures specific to Bolton that are warranted.

- 2. <u>Responsibilities</u>: Caledon's Community Emergency Response Plan outlines roles and responsibilities, but additional measures specific to flooding may be warranted.
- 3. <u>Evacuation Decision Plan</u>: This section of the plan will need to address how decisions to issues warnings or evacuation orders are made, and should be consistent with the section addressing responsibilities.
- 4. <u>Warning Plan</u>: This section will address how warnings will be communicated to the public, the preparatory measures that need to be implemented such as additional signage, and clear instructions in case the warning is followed by an order to evacuate.
- 5. <u>Evacuation Plan</u>: This section should detail how evacuation will be organized and implemented. It should address factors such as public notifications, documentation of residents that have not been evacuated, traffic control, crowd management, evacuation routes, pet management, refuge areas, and shelters.
- 6. Flood Mitigation Plan: Once a flood warning is issued there are likely a number of measures that can be implemented to mitigate the risk and consequence of flooding. These may include, but are not limited to, temporary diking including the use of sand bags and the evacuation or moving of mobile property. This section of the plan will identify these measures including roles and responsibilities. A lead time assessment should be undertaken to assess the measures that should be undertaken in accordance with the amount of time available to implement them.
- 7. <u>Shelter Plan</u>: This plan will identify the location of each shelter as well as the measures that will need to be implemented at each shelter for the care of all evacuees.
- 8. <u>Signage</u>: This plan will identify both permanent signage and temporary signage that would be installed during the warning phase. The signage would include evacuation routes, and the identification of the designated shelters.
- 9. <u>Plan Maintenance and Education</u>: The plan will only be effective if it is maintained and communicated on a regular basis. Hence this section will document the steps necessary to maintain the plan. It may include the frequency of meetings, training, and on-going communication to residents that may be affected by a flood.

Reference should be made to the Town's Fire Department Flood Contingency Plan for further details.

10.3 TRCA Flood Contingency Plan

The TRCA's Flood Contingency Plan serves a vital role in communicating the potential of flood risk to the area communities including the Town of Caledon. Broadly their mandate includes on-going communication to municipalities in terms of flood risk, and technical advice as necessary.

As defined in the Flood Contingency Plan a flood is defined as a situation where water levels in a watercourse exceed the channel banks. As warranted the TRCA will communicate with local agencies using one of the following types of flood messages:

- Watershed Conditions Statement Water Safety (yellow);
- Watershed Conditions Statement Flood Outlook (yellow);

- Flood Watch (orange); and
- Flood Warning (red).

The flood messages are defined as follows:

a) Water Safety – Watershed Conditions
 Statement: A notice that high flows, unsafe
 banks, melting ice or other factors that could be
 dangerous for recreational users such as
 anglers, canoeists, hikers, children, pets, etc.
 Flooding is not expected.



- b) Flood Outlook Watershed Conditions Statement: An early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt, high wind or other conditions that could lead to high runoff, cause ice jams, lakeshore flooding or erosion.
- Watershed Conditions Statement Flood Outlook
- c) Flood Watch: A notice that flooding is possible in specific watercourses or municipalities (due to stream conditions and expected weather). Municipalities, emergency services and individual landowners in flood-prone areas should prepare.



 d) Flood Warning: A notice that flooding is imminent or occurring in specific watercourses or municipalities. Municipalities and individuals should take action to deal with flood conditions. This may include road closures and evacuations.



The Flood Contingency Plan also defines the municipality's role upon the issuance of a Flood Watch or a Flood Warning. These are as follows:

- Notify appropriate municipal officials, departments and agencies in accordance with their municipal emergency plan.
- Determine the appropriate response to a flood threat and, if warranted, deploy municipal resources to protect life and property.
- If required, declare a flood emergency and implement their emergency response plan.

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- Request provincial assistance under the *Emergency Management and Civil Protection Act*, if municipal resources are inadequate to respond to the emergency.
- Maintain liaison with Conservation Authority Flood Co-ordinators during a Flood Watch or a Flood Warning.

The Toronto and Region Conservation Flood Contingency Plan is available from the TRCA's website: http://www.trca.on.ca/flood-management-service/current-conditions.dot

11. Recommendations

Based upon the above findings and flood risk assessment, the following recommendations have been identified for consideration and input into the SPA Update and preparation of the implementation documents, including the proposed Official Plan and Zoning By-law amendments which are included in Appendix E and Appendix F, respectively.

Update Flood Hazard Mapping and SPA Boundary

The SPA Update includes updated flood hazard mapping and SPA boundaries based on the most up to date mapping provided by the TRCA. As discussed in Section 6.0, this has resulted in modest modifications to the Regulatory Flood Plain mapping as presented in Figure 6.1. Reconciling the Regulatory Flood Plain mapping with the existing property fabric and existing land use considerations has resulted in a revised SPA boundary as proposed in Figure 11.1. Figure 11.1 illustrates the existing SPA boundary, the Regional Floodline limit, and the Proposed Updated SPA boundary. Areas which are proposed to be added or removed from the SPA are also identified. The Proposed SPA boundary results in a net decrease of roughly 5.9 ha (58,692m2) of lands within the SPA. This decrease is largely attributed to the revised Regional Floodline mapping, particularly as it relates to the lands on the periphery of the SPA including those in the vicinity of Cherry Lane; Temperance Street; and Hickman Street. Further reductions in the SPA area are attributed to the removal of environmental protection area, Town owned parkland, TRCA owned conservation lands (i.e., ox bow), and further adjustments to better reflect the parcel fabric.

Floodproofing Standard

The minimum 1:500 floodproofing standard remains to be the minimum acceptable level of flood protection, where floodproofing to the Regional Flood level is not feasible. This existing standard has not proven to place any undue hardships on lands within the Bolton SPA, and floodproofing to the 1:500 is feasible. All proposed development will continue to be subject to review and approval by the TRCA through the existing permitting process.

Extent of Development

The Town's Intensification Study identified that suitable opportunities for intensification within the Town exist outside the Bolton core, therefore intensification within the Bolton core and SPA has not been contemplated. The existing Official Plan and Zoning By-law development permissions with respect to the extent and intensity of permissible development are proposed to remain status quo. However, the existing development permissions have been refined to ensure that development is subject to appropriate floodproofing requirements, and that uses not permitted in the SPA in accordance with Provincial policy, are no longer permitted through the Town's Official Plan and Zoning By-law. The intent is to balance the flood risks with the existing development opportunity that is currently provided through the Town's planning documents. Furthermore, it is recognized that the extent of new development that could be contemplated through the Town's Official Plan and Zoning By-law is hypothetical, and it would not be realized to the full extent possible, due to a number of factors which include:

- the majority of the SPA, including the core commercial area, is largely "built-out" with marginal opportunities for infill and redevelopment where it would be economically feasible from a market perspective;
- more than half of the SPA area is comprised of stable residential areas, where only modest development (i.e, additions) or development on a few vacant lots may be accommodated; and

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 heritage considerations which may impact the scale and extent of any redevelopment within the core commercial area, and which will be further subject to the urban design and built form recommendations of the Bolton HCD Study.

Built Heritage Considerations

A substantial number of properties within the SPA are either designated or listed on the Town's Built Heritage Resources Inventory as identified on Figure 5.6. The Town has indicated their preference that the protection of health and safety in relation to flood risks is paramount when addressing matters of heritage conservation, and it is acceptable for all buildings to be subject to the minimum 1:500 floodproofing standard. The Draft Village of Bolton Heritage Conservation District Plan, August 2015, and associated Design Guidelines provides further requirements with respect to built form and maintaining the existing heritage character elements of these buildings in the Bolton core area which contribute to the significance of the HCD.

It is important that the urban design and built form guidelines in the HCD Study consider both the established heritage standards and the flood proofing conditions and requirements outlined in the proposed revised Bolton SPA. The HCD Plan identifies various objectives which support the retention, conservation and enhancement of existing buildings and structures that contribute to the heritage character and appearance of the District (Section 2.1). This is supported through the Residential Design Guidelines (Section 3.0), Commercial Design Guidelines (Section 4.0), including new commercial buildings (Section 4.4). Of particular importance is that the floor-to-floor heights on the facades of neighbouring contributing buildings should be considered (Section 4.4.3). While this is an important objective in maintain the character of the area, these considerations must also be balanced with the requirements of the Bolton SPA to ensure that new buildings are able to achieve the minimum level of flood proofing of the 1:500 year flood level. As a result, while the exterior of the façade may be consistent with neighbouring buildings, the ground floor level may require further elevation to ensure that the flood proofing requirements are achieved. Such instances will need to be reviewed on a case-by-case basis to determine the most appropriate built form and architectural treatments to ensure a satisfactory level of floodproofing is achieved.

As previously indicated, the new development within the Bolton SPA may limit in scale and extent in consideration of achieving the Bolton SPA requirements and the HCD urban design and built form considerations.

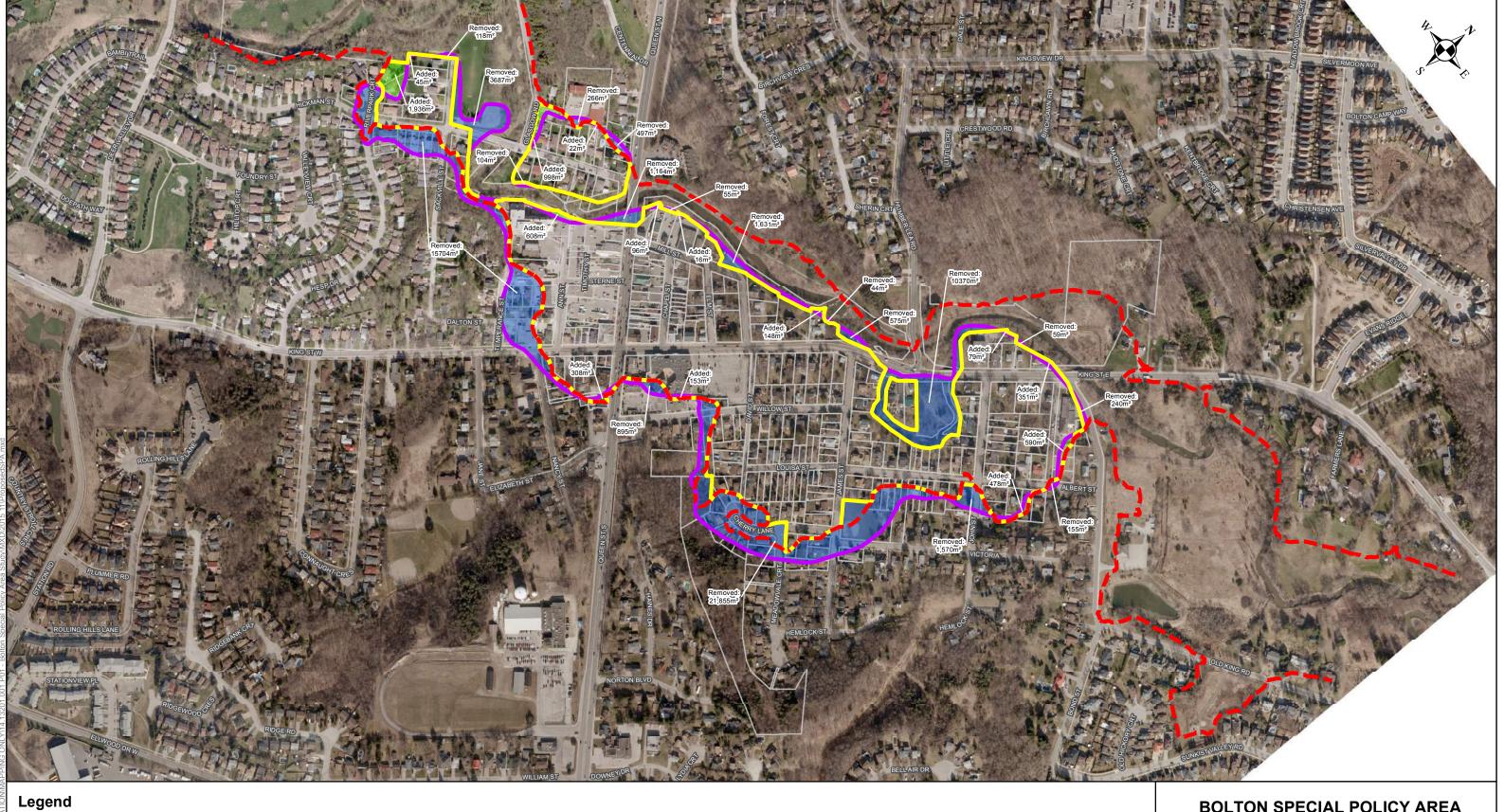
Recommended Remedial Measures (berm, access improvements etc.)

Based upon the field surveys related to the existing berm, it has been identified that the existing berm does not provide flood protection up to the 500-Year storm event. It is recognized that the TRCA will be undertaking a Feasibility Study, to determine the potential recommendations for improvements to the existing flood control measures to provide flood protection up to the 500-Year storm event, based on the most recent flood hazard modelling and mapping. Therefore, the findings and recommendations of this future Study have not been considered in the current scope of work to update the Bolton SPA, however, a future review may be warranted at such time as the Feasibility Study is undertaken.

Draft Official Plan and Zoning By-law Amendment

Modifications to the existing Bolton SPA policies are proposed to reduce the risks associated with flooding hazards. The following measures have been identified and considered in the preparation of the implementing Draft Official Plan and Zoning By-law amendments (included in Appendix A and B, respectively):

- Remove existing entitlements for non-permitted uses in the SPA (i.e., institutional uses, essential emergency services, in accordance with the PPS, 2014);
- Balance flood risks with existing development opportunities currently permitted in the Town's Official Plan
 and Zoning By-law. Additional development permissions are not proposed within the SPA beyond that
 which currently is provided through the Town's Official Plan and Zoning By-law. The existing development
 opportunities are proposed to be further refined to ensure that new development is subject to appropriate
 floodproofing requirements through the Zoning By-law, for lands within the Bolton SPA. Specific zoning
 regulations within the SPA are proposed through the implementation of a zoning suffix ("-SPA") to define
 floodproofing requirements and remove existing zoning entitlement for uses which are not permitted within
 the SPA;
- Update floodproofing requirements, with respect to the acceptable level of floodproofing, and restrictions
 on habitable rooms and building system controls below the Regulatory Flood level;
- Include requirements for the preparation and maintenance of a Community Emergency Response Plan and building specific emergency plans for multi-residential buildings; and
- Address issues of legal non-complying uses within the SPA.



Regional Floodline Limit

Bolton Special Policy Area Boundary to be Amended as Shown

Exising Bolton Special Policy Area Boundary

Total Area Added to SPA: 5,827m²

Total Area Removed from SPA: 58,989m²

Net Difference: -53,162m²

100 50 0 100 200

BOLTON SPECIAL POLICY AREA

Proposed Updated SPA Boundary Prepared by: MMM GROUP Scale as Shown Review: RR 14-13201-001-P01 Date: November 2015 Figure: 11.1 © Queen's Printer for Ontario

12. Next Steps

This Report presents a summary of the existing conditions which includes a review of the existing planning policy framework and flood risk mapping based on more recent mapping and studies undertaken by the TRCA. Furthermore, the Report includes an analysis of future land uses and assess flood risk for alternative development scenarios, including the findings of the Town's Intensification Study for lands within the Bolton SPA by considering flood frequency, and access/egress risk, as well as preparing a framework for the development of an Emergency Response Plan specific to flooding in Bolton.

This Report identifies recommendations for potential modifications to the SPA policies and boundaries for discussion with staff and the public, including implementing Draft Official Plan and Zoning By-law amendments for further consideration.

One of the key findings of Phase 2 was the recognition that the existing level of flood protection was not consistent with the requirements detailed in OPA 57. A field survey of the existing berm has identified that the existing berm does not provide flood protection up to the 500 year storm event. As a result, the TRCA will be undertaking a Feasibility Study, to determine the potential recommendations for improvements to the existing flood control measures to provide flood protection up to the 500-Year storm event, based on the most recent flood hazard modelling and mapping.

Phase 3 of the Study will involve the implementation of the recommendations of the Planning Justification Report, and refinements to the draft Official Plan Amendment and Zoning By-law Amendment to update the existing SPA. Phase 3 will include additional public consultation, including a Statutory Public Information Meeting. The Implementation Documents will then be considered for endorsement by Town Council and the TRCA Board, prior to circulation to the Province for review and approval. Once approved by the Province, the Implementation Documents will be brought forward to Town Council for adoption.

Bolton Special Policy Area StudyFlood Risk Assessment & Planning Justification Report (DRAFT)

Α	P	P	F	N	D	IC	ES
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APPENDIX A - Bolton SPA Policy Excerpts

A) Town of Caledon Official Plan, December 31, 2008 Consolidation

5.10.4.5.13.1 Bolton Special Policy Area (Bolton SPA)

5.10.4.5.13.1 The Floodplain management policies of the Province of Ontario generally state that no development or redevelopment will be permitted in areas below the Regulatory flood line as defined by a Conservation Authority, or if one does not exist, by the Ministry of Natural Resources. In certain exceptional situations, where this basic policy is not feasible, the provincial policy provides for additional flexibility to floodplain management by means of a "Special Policy Area" designation. Such a designation may be applied to developed areas where the strict application of floodplain management policies could threaten the economic and social viability of the community by restricting new development and redevelopment, or by limiting the expansion of existing uses. The Bolton Core is such an area. Situated within the Town's largest settlement area, and within the jurisdiction of the TRCA, the established commercial uses in the Bolton Core constitute a significant component of the Settlement's and the Town's overall economic base.

5.10.4.5.13.2 The boundaries of the Bolton Special Policy Area are shown on Schedules C and C-1: Bolton Land Use Plan and Bolton Core Land Use Plan. These boundaries may in the future be changed by amendment to this Plan, as a result of improved information or further remedial works.

5.10.4.5.13.3 For key terminology contained in Section 5.10.4.5.11 which is not defined in this Plan's Glossary of Terms, reference should be made to the TRCA Valley and Stream Corridor Management Program, or subsequent Authority policy documents.

5.10.4.5.13.4 Remedial flood protection works have been undertaken along a segment of the Humber River traversing through the Bolton Core and certain adjacent valley lands. The works provide flood protection to a level such that the risk of flooding does not exceed 18% in a 100 year period which is a reasonable level of protection for the Core. However, it is still less than that required to meet the Regulatory Floodline for this area which is defined by the Regional Storm floodline generated by Hurricane Hazel.

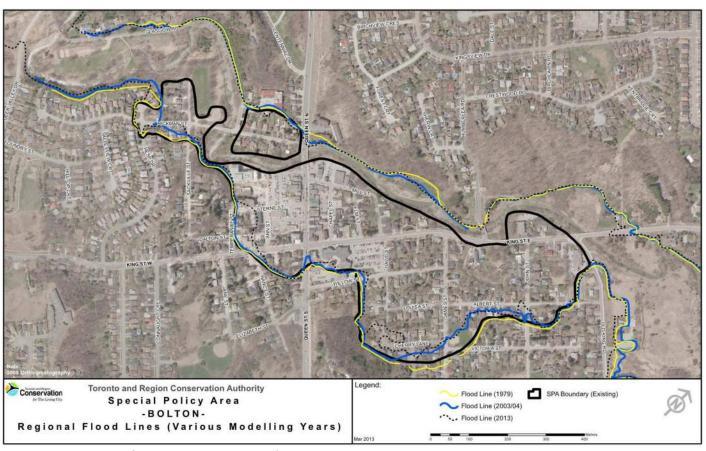
5.10.4.5.13.5 All new structures in the Bolton Special Policy Area should be protected from flooding to the level of the Regulatory Flood line in a manner acceptable to the Town and Conservation Authority. However, if it is demonstrated to the Town and the Conservation Authority that this level of protection is not achievable, then a lesser level of protection may be acceptable. The minimum acceptable level of protection will be an 18 per cent risk of flooding of the structure over a 100 year period (approximately the 1:500 year flood).

5.10.4.5.13.6 The Town shall base its requirement for floodproofing measures on the following alternatives. listed in order of priority:

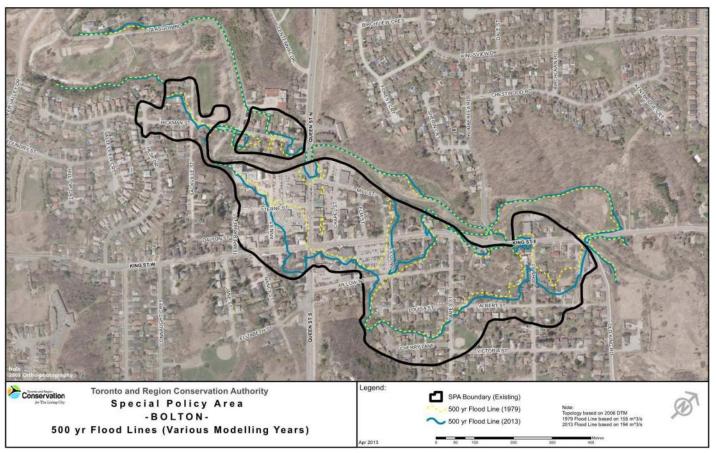
a) dry, passive floodproofing measures shall be required and implemented to the extent technically and economically acceptable;

- b) wet floodproofing measures may be permissible for non-habitable portions of new development in order to minimize flood risk and/or to meet the required level of flood protection; and, c) where a) and b) cannot be achieved, dry active floodproofing measures may also be recommended to minimize flood risk in combination with a) and b).
- 5.10.4.5.13.7 Ingress and egress for all buildings shall be "safe" pursuant to the Provincial Flood Plain Planning Policy and technical studies of site specific flooding conditions.
- 5.10.4.5.13.8 Prior to the issuance of a building permit, the Town shall consult with the Conservation Authority regarding the administration of fill and construction regulations. Any proposed flood damage reduction measures, which may include setbacks, basement elevations, the strength of foundation walls, the placement of fill and the restriction of building openings, are to be addressed.
- 5.10.4.5.13.9 The placing or dumping of fill of any kind, the alteration of any watercourse or the construction of any proposed buildings or structures within the regulatory floodplain, shall not be permitted within the Bolton Special Policy Area without the approval of the Conservation Authority, pursuant to Ontario Regulation 158.
- 5.10.4.5.13.10 An implementing Zoning By-law governing land uses within the Bolton Special Policy Area shall list zone classifications that identify the intended use of the property and shall also include a suffix that indicates the flood susceptibility of such property.
- 5.10.4.5.13.11 An implementing Zoning By-law governing land uses within the Bolton Special Policy Area shall contain provisions, where appropriate, relating to minimum building setbacks, maximum lot coverage, minimum height of any opening, and other such matters as determined by the Town.
- 5.10.4.5.13.12 Notwithstanding any other policy in Section 5.10.4.5.11, no new development or redevelopment will be permitted where they would be subjected to flows which due to their velocity and/or depth would be a hazard to life or where they would be susceptible to major structural damage as a result of a flood less than or equal to the Regulatory Flood line.
- 5.10.4.5.13.13 For public safety purposes, the following uses shall be prohibited on any parcel of land which is either wholly or partially designated SPA:
- a) elementary school, day care centre, hospital, nursing home, senior citizens housing, a home for the physically or mentally handicapped other child care, or residential care facility;
- b) an automobile service station or any development which includes the storage, handling, production or use of a chemical, flammable, explosive, toxic, corrosive, or other dangerous material and the treatment, collection or disposal of sewage; and,
- c) a building or structure directly related to the distribution and delivery of an essential or emergency public service including police, fire, ambulance and electric power transmission.
- 5.10.4.5.13.14 The development or redevelopment of lands for commercial and residential uses, including ancillary residential and multiple residential uses, is to be encouraged in the Bolton Core Area in accordance with Section 7.3 Bolton Core Area Secondary Plan and the Policies contained herein under this Section 5.10.4.5.11, Site Specific Areas.

- 5.10.4.5.13.15 It is the policy of Council to cooperate with the TRCA in the establishment and operation of a flood warning and evacuation system.
- 5.10.4.5.13.16 New development and redevelopment within the Bolton SPA shall be encouraged, or required, to adhere to the Town's ecosystem goals, objectives, policies and performance measures to the greatest extent possible.
- 5.10.4.5.13.17 The proponents of new development and redevelopment within the Bolton SPA may be required to complete appropriate studies, up to, and including, an Environmental Impact Study and Management Plan, pursuant to Section 5.7.7, prior to approval of the development proposal. The need for such studies shall be determined jointly by the Town, the TRCA and other relevant agencies.
- 5.10.4.5.13.18 The requirements of the Town, the TRCA and other agencies, including all necessary floodproofing measures, shall be implemented as a condition of development approval of the Town.
- 5.10.4.5.13.19 The Town supports the principle of establishing a publicly owned riparian habitat zone adjacent to the Humber River within the Bolton Special Policy Area for the purposes of enhancing and restoring riparian habitat.
- 5.10.4.5.13.20 Further to Section 5.10.4.5.13.19, the Town supports the TRCA in advocating a minimum 10 metre width for the riparian habitat zone. However, it is recognized that there are sites within the SPA where this width may need to be increased or reduced in order to respond to existing site constraints, to ensure slope and river bank stability and to provide for non-intensive recreational uses, such as a linked trail system, where appropriate. In such instances, the Town shall, in consultation with the TRCA, determine an appropriate buffer width which achieves the environmental and open space policies of this Plan to the greatest extent feasible, while allowing for appropriate development.
- 5.10.4.5.13.21 Lands which are excluded from development pursuant to Sections 5.10.4.5.13.19 and 5.10.4.5.13.20 above, shall be deemed to be designated EPA and shall be zoned accordingly.



Regional Flood Lines (Various Modelling Years)

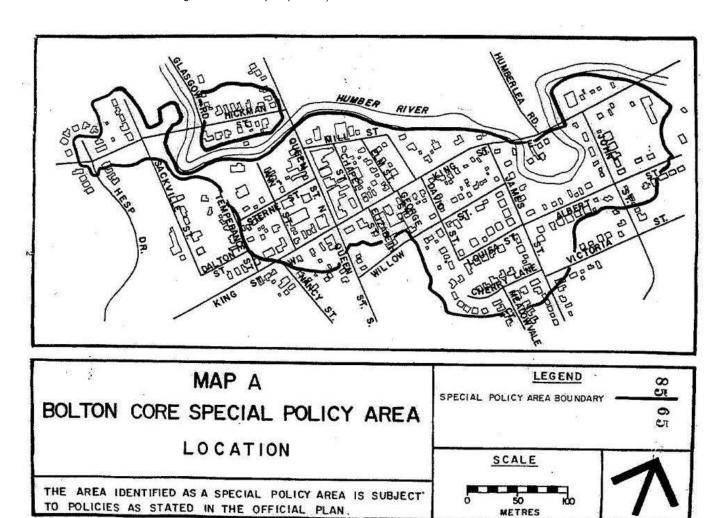


500-Year Flood Lines (Various Modelling Years)

B) Official Plan Amendment 57 (approved as modified by the Ministry of Municipal Affairs on January 7, 1986)

- 3.3.1 The Floodplain management policies of the Province of Ontario generally state that no development or redevelopment will be permitted in areas below the Regulatory flood line as defined by a Conservation Authority, or if one does not exist, by the Ministry of Natural Resources. In certain exceptional situations, where this basic policy is not feasible, the provincial policy provides for additional flexibility to floodplain management by means of a "Special Policy Area" designation. Such a designation may be applied to developed areas where the strict application of floodplain management policies could threaten the economic and social viability of the community by restricting new development and redevelopment, or by limiting the expansion of existing uses. The Bolton Core is such an area. Situated within the Town's only designated growth settlement, the established commercial uses in the Bolton Core constitute a significant component of the Settlement's and the Town's overall economic base and are recognized accordingly under subsection 2.5.10.12 of this Plan.
- 3.3.2 Remedial flood protection works have been undertaken along a segment of the Humber River traversing through the Bolton Core and certain adjacent valley lands. The works provide flood protection to a level such that the risk of flooding does not exceed 18% in a 100 year period, which is a reasonable level of protection for the Core. However, it is still less than that required to meet the Regulatory Floodline for this area which is defined by the Regional Storm floodline generated by Hurricane Hazel. Consequently, the MTRCA has designated part of the Bolton Core and certain adjacent valley lands as a "Flood Damage Centre" under the Authority's Watershed Plan. The Town of Caledon recognizes and supports this designation.
- 3.3.3 The boundaries of the Bolton Flood Damage Centre and the Bolton Core Special Policy Area are one in the same and are as shown on Schedule C: Bolton Land Use Plan. These boundaries may in the future be changed by amendment to this Plan, as a result of improved information or further remedial works.
- 3.3.4 All new structures in the Bolton Core Special Policy Area should be protected from flooding to the level of the Regulatory Flood line in a manner acceptable to the Town and Conservation Authority. However, if it is demonstrated to the Town and the Conservation Authority that this level of protection is not achievable, then a lesser level of protection may be acceptable. The minimum acceptable level of protection will be an 18 per cent risk of flooding of the structure over a 100 year period (approximately the 1:500 year flood).
- 3.3.5 Prior to the issuance of a building permit, the Town shall consult with the Conservation Authority regarding the administration of fill and construction regulations. Any proposed flood damage reduction measures, which may include setbacks, basement elevations, the strength of foundation walls, the placement of fill and the restriction of building openings, are to be addressed.
- 3.3.6 The placing or dumping of fill of any kind of the alteration of any watercourse shall not be permitted within the Bolton Core Special Policy Area without the approval of the Conservation Authority.

- 3.3.7 An implementing restricted area by-law governing land uses within the Bolton Core Special Policy Area shall list zone classifications that identify the intended use of the property and shall also include a suffix that indicates the flood susceptibility of such property.
- 3.3.8 An implementing restricted area zoning by-law governing land uses within the Bolton Core Special Policy Area shall contain provisions, where appropriate, relating to minimum building setbacks, maximum lot coverage, minimum height of any opening, and other such matters as determined by the Town.
- 3.3.9 Notwithstanding any other policy in Section 3.3, no new development or redevelopment will be permitted where they would be subjected to flows which due to their velocity and/or depth would be a hazard to life or where they would be susceptible to major structural damage as a result of a flood less than or equal to the Regulatory Flood line.
- 3.3.10 The development or redevelopment of lands for commercial and residential uses, including ancillary residential and multiple residential uses, is to be encouraged in the Bolton Core Commercial Area in accordance with subsection 2.5.10.16 as noted in this Plan and the policies contained herein under Section 3.3, the Bolton Core Special Policy Areas.



METRES

Bolton Core SPA (Town of Caledon Official Plan Amendment 57)

APPENDIX B – Review of Historical and Current Land Uses

								Current		
		Block	Historical Land					Official Plan		Land Use
ID	Address	No.	Use	Historical Tenancy	Historical Zoning	Current Land Use	Current Tenancy	Designation	Current Zoning	Change
2715	107 HESP DR	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2716	111 HESP DR	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2717	130 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2719	120 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2721	118 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2722	114 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2723	129 RIVERPARK CRT	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2724	112 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2725	108 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2726	106 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2727	120 SACKVILLE ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2607	91 SACKVILLE ST	1	Vacant	Vacant	Residential 2nd Densit	y Vacant	Vacant	EPA	R1	no
2610	60 HICKMAN ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2728	128 SACKVILLE ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2729	134 SACKVILLE ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2730	140 SACKVILLE ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8292	120 HESP DR	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8286	147 RIVERPARK CRT	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8294	131 RIVERPARK CRT	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8293	135 RIVERPARK CRT	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8288	137 RIVERPARK CRT	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
8270	14328 HWY 50	1	Open Space	Conservation Area	0	Open Space	Conservation Area / Park	EPA	EPA1	no
8291	146 SACKVILLE ST	1	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	EPA	R1	no
2611	44 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	EPA	R1	no
2612	40 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2613	36 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2614	32 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2617	43 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2616	24 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2618	18 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2521	113 GLASGOW RD	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2523	39 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2597	14 HICKMAN ST	2	Residential	Single-family dwelling	Residential 2nd Densit	y Residential	Single-detached dwelling	RES	R1	no
2680	14 HICKMAN ST	2	Open Space	0	0	Open Space	Conservation Area	EPA	EPA1	no
2525	35 HICKMAN ST	2	Residential		Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2528	31 HICKMAN ST	2	Residential		Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2589	27 HICKMAN ST	2	Residential	, ,	Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2590	23 HICKMAN ST	2		, .	Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2592	21 HICKMAN ST	2	Residential		Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2596	90 QUEEN ST N	2	Residential		Residential 2nd Densit		Single-detached dwelling	RES	R1	no
2595	96 QUEEN ST N	2	Residential		Residential 2nd Densit	•	Single-detached dwelling	RES	R1	no
2594	102 QUEEN ST N	2	Residential	Single-family dwelling	Residential 2nd Densit	y Kesidential	Single-detached dwelling	RES	R1	no

		Block	Historical Land					Current Official Plan		Land Use
ID	Address	No.		Historical Tenancy	Historical Zoning	Current Land Use		Designation	Current Zoning	
2520	121 GLASGOW RD	2	Multiple Residen		()	Multiple Residential	<u> </u>	EPA	RM-231	no
2593	110 QUEEN ST N	2	•		Residential 2nd Density	•	` ' '	RES	R1	no
2671	49 STERNE ST	3		King Nursing Home (Pr	•	Institutional	· ·	RES	I-31	no
2672	50 ANN ST	3	Institutional	Legion Hall Branch 371		Institutional	0 0 1 77	RES	1	no
2608	60 ANN ST	3	Vacant	0	0		Rivers Edge (4-6 storeys)	RES	RM-236	yes
2673	50 ANN ST	3	Open Space	0	0	Open Space		RES	I 250	no
2773	53 KING ST W	4	Residential	0	0	Commercial	,	COM	CC	no
2775	43 KING ST W	4	Institutional	Bolton Post Office Bra	Comercial	Institutional		COM	CC	no
2773	21 TEMPERANCE ST	-					Single-detached dwelling with office/s		RM-123	
2767	56 STERNE ST	4			Residential 2nd Density			RES	R1	yes no
2777	33 KING ST W	4	Commercial	Dr. Steins, phys; Hoap-	-	Commercial	Offices: Bolton Caledon Community Liv		CC	
2668	52 STERNE ST	4					•	RES		no
					Residential 2nd Density		· ·		R1	no
2669	48 STERNE ST	4			Residential 2nd Density		o o	RES	R1	no
2627	18 ANN ST	4			Residential 2nd Density		· ·	COM	CC	no
2770	28 ANN ST	4			Residential 2nd Density		Fire Hall, Peel Region Paramedic Service		1	yes
2621		5	Vacant	0	0	Institutional		COM	CC	no
2676	56 QUEEN ST N	5		Public Works Garage		Institutional	'	COM	CC	no
2630	40 QUEEN ST N	5		Quality Fabrics & Dres		Commercial	, ,, ,	COM	CC	no
2628	42 QUEEN ST N	5	Commercial	0	Comercial	Commercial	· ·	COM	CC	no
2677	0 SLANCEY ST	5	Vacant	0	Comercial	Open Space	Conservation Area	COM	EPA1	no
2675	53 ANN ST	5	Vacant	0	Comercial	Institutional	Municipal Parking Lot	COM	CC	no
2625	46 QUEEN ST N	5	Commercial	0	Comercial	Commercial	Teww Inc. (Custom Kitchens)	COM	CC	no
2623	50 QUEEN ST N	5	Commercial with	Bolton Enterprise	Comercial	Commercial with and	Cosmetics	COM	CC	no
2620	56 QUEEN ST N	5	Commercial	Davidson's Home Hard	Comercial	Commercial	Hair Salon, 3G Studios (Music Lessons)	COM	CC	no
2678	0 SLANCEY ST	5	Vacant	0	Comercial	Open Space	walkways	COM	EPA1	no
2622	62 QUEEN ST N	5	Commercial with	Riverside Restaurants	Comercial	Commercial with and	: Restaurant (Black Bull Pub)	COM	CC	no
2682	23 KING ST W	6	Commercial	Dr. Nicol-optometrist	Comercial	Commercial	Optometrist, Spa	COM	CC	no
2633	19 KING ST W	6	Residential	Single-family dwelling	Comercial	Residential	Single-detached dwelling	СОМ	CC	no
2683	15 KING ST W	6	Residential	Single-family dwelling	Comercial	Residential	Single-detached dwelling with comme	СОМ	CC	no
2632	20 QUEEN ST N	6	Commercial	0	Comercial	Commercial	Parking lot	СОМ	CC-195	no
2684	11 KING ST W	6	Residential	Single-family dwelling	Comercial	Residential	Single-detached dwelling	СОМ	CC	no
2685	2 QUEEN ST N	6	Commercial	0	Comercial	Commercial	Convenience store, bank, clothing stor	СОМ	CC	no
2629	20 QUEEN ST N	6	Commercial	Bonanza Supermarket	Comercial	Commercial	Tim Hortons, bank, restaurant (Four Co	СОМ	CC-195	yes
2798	25 NANCY ST	7	ROW	0	Residential 2nd Density	ROW		RES	R1	no
2799	19 NANCY ST	7		Single-family dwelling	Residential 2nd Density			RES	R1	no
2801	11 NANCY ST	7			Residential 2nd Density		•	RES	R1	no
2803	32 KING ST W	7			Residential 2nd Density		Single-detached dwelling, ancillary apa		R1	no
	0 QUEEN ST S	7	Vacant	0	0	Vacant	5	RES	R1	no
2807	28 KING ST W	7		Principal res. dwelling	Residential 2nd Density		Community Health Care Services (conv		CC-477	yes
2805	0 KING ST W	7	Commercial	0	0	Commercial		COM	R1	no
2809	26 QUEEN ST S	7	Commercial	0	0	Commercial		COM	CC	no
2687	20 GOLLN 31 3 20 KING ST W	7		-	Residential 2nd Density			COM	CC-249	
2007	ZU NING 31 W	/	nesidelillal	Julgie-Idililly uweiling	nesidential ZIIU Delisity	Commercial	netaii (convented dweiling)	COIVI	CC-243	no

Current **Block Historical Land** Official Plan **Land Use** ID **Address** No. Use **Historical Tenancy Historical Zoning Current Land Use Current Tenancy** Designation **Current Zoning Change** 6 QUEEN ST S Restaurant, Parking lot and open space COM CC Commercial Commercial no Vacant Commercial Ur Comercial Commercial 2690 12 KING ST W 7 Commercial Single-detached dwelling with comme COM CC no CC 2693 8 KING ST W Commercial Bolton Office Supply; J Comercial Commercial Barber Shop, Costume Shop COM no 2694 2 QUEEN ST S 7 Commercial CC Comercial Commercial Clothing Boutique, tattoos, nails COM no 2599 63 QUEEN ST N Commercial with Mr.Submarine, apart. Commercial Restaurant (Riverside Grill - Fish and C COM CC 8 Commercial no 2600 9 MILL ST 8 Commercial Caledon Muffler Comp Commercial Commercial **Automotive Shop** COM CC no CC 2546 15 MILL ST Residential Single-family dwelling Commercial COM Commercial Retail use converted from house yes 2545 0 QUEEN ST N 0 Water treatment/filtration/water tow EPA EPA1 Vacant Institutional no 2598 0 QUEEN ST N 0 Institutional Water treatment/filtration/water tow COM EPA1 8 Vacant no 2548 23 MILL ST 8 Institutional Bolton Fire Station, Cal Commercial Commercial Office (Prudential Real Estate) COM CC yes 2549 23 MILL ST Commercial Commercial Retail (One Crazy Stamper) converted COM CC no 2551 35 MILL ST Residential Single-family dwelling Commercial Residential Single-detached dwelling COM CC no 2481 0 QUEEN ST N 8 Open Space Open Space EPA EPA1 no 2478 0 KING ST E 8 Open Space Open Space EPA EPA1 no COM CC 2692 3 QUEEN ST N Commercial with Leggett & Smith Pharm Commercial Commercial with anc Restaurant, tatoot parlour, bakery no COM CC 2691 11 QUEEN ST N Commercial with Towne Shoppe Commercial Commercial with anc Innovations Creative no 2688 15 QUEEN ST N Commercial with Bolton Milk and Variet Commercial Commercial with anc Convenience store COM CC no 2697 15 KING ST E 9 JLm's Fish & Meat Mar Commercial COM CC Commercial Commercial with anc The Upper Room (Old Town Hall) no 2638 17 QUEEN ST N 9 Commercial with Facin Shoes, apart. Commercial Commercial with anc Convenience store COM CC no CC 2637 19 QUEEN ST N Commercial Commercial Commercial with anc Nail Salon COM no CC 2636 23 QUEEN ST N Commercial with Bolton Village Jeweller Commercial Commercial with anc Clothing store, hair salon COM no CC 2635 25 QUEEN ST N Commercial Cal. Citizen., A Slight In Commercial Commercial Office (Humber Valley Dental) COM no 2634 29 QUEEN ST N 9 Restaurant (Baffo's Restaurant) COM CC-44 Commercial Bolton Pro Hardware Commercial Commercial no 2604 39 QUEEN ST N Commercial Mainstreet Station Res Commercial Commercial **Mainstreet Station Restaurant** COM CC no CC 2603 43 QUEEN ST N Commercial with Bolton Florists; Hatty A Commercial Commercial Florist, Mortgage Broker COM no 2602 49 QUEEN ST N 9 Commercial with Honey's Men Shops, H Commercial Commercial Herbal Magic, salon, office COM CC no 2601 51 QUEEN ST N 9 Commercial Vacant Vacant (former OPP) COM CC-44 Commercial no 2537 21 KING ST E COM CC 10 Commercial Bolton Barber and Hair Commercial Commercial Barber shop, office no 2561 7 CHAPEL ST Residential Single-family dwelling Commercial Commercial COM CC 10 Basic Stitch, converted dwelling yes 2536 27 & 31 KING ST E Commercial Commercial Commercial Family Chiropractic, Fitness Centre COM CC 10 no 2541 31 KING ST E 10 Commercial Commercial Commercial Family Chiropractic, Fitness Centre COM CC yes 2559 11 CHAPEL ST Residential Single-family dwelling Commercial Residential COM CC 10 Single-detached dwelling yes 2558 15 CHAPEL ST 10 Residential Single-family dwelling Commercial Commercial Vacant - for lease COM CC yes 2557 17 CHAPEL ST 10 Commercial with Ed's Shoe Service, Apar Commercial Commercial with and Shoe Repair COM CC no 2554 21 CHAPEL ST COM CC 10 Commercial with Donisi Coiffure, apart Commercial Commercial with anc Hair Salon no 2538 37 KING ST E COM CC 10 Residential Single-family dwelling Commercial Residential Single-detached dwelling no 2553 25 CHAPEL ST 10 Commercial with Baffo's Dining Room, a Commercial Commercial with anc Restaurant (Wings) COM CC no 2534 14 ELM ST 10 Residential Single-family dwelling Commercial Residential Single-detached dwelling COM CC no 2560 18 ELM ST 10 Residential Single-family dwelling Commercial Residential Single-detached dwelling COM CC no 2606 33 CHAPEL ST COM CC 10 Vacant Commercial Commercial Kingsmen Centre yes

Residential

Residential

Single-detached dwelling (boarded up COM

Single-detached dwelling

CC

CC

COM

no

no

Single-family dwelling Commercial

Single-family dwelling Commercial

2556

24 ELM ST

2605 26 MILL ST

10

10

Residential

Residential

Official Plan **Block Historical Land Land Use** ID **Address** No. Use **Historical Tenancy Historical Zoning Current Land Use Current Tenancy** Designation **Current Zoning Change** 2552 34 ELM ST Single-family dwelling Commercial COM CC 10 Residential Vacant Vacant yes 2539 49 KING ST E 11 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling (duplex) RES R1 no 2535 21 ELM ST Single-family dwelling Residential 2nd Density Residential RES RT-79 Residential Single-detached dwelling 11 no 2555 27 ELM ST Single-family dwelling Residential 2nd Density Residential RES 11 Residential Single-detached dwelling R1 no 2533 54 MILL ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES 11 R1 no 2698 1 QUEEN ST S 12 Commercial C.I.B.C Branch Commercial Commercial C.I.B.C Branch COM CC-44 no 2701 49 WILLOW ST COM RM 12 Multiple Residen 21 Apartments; 2 com Commercial Multiple Residential 21 Apartments no 2699 15 QUEEN ST S Commercial Bolton Bldrs Supplier S Commercial Commercial Royal Courtyard (multiple tenants, incl COM CC-247 12 yes 2706 45 WILLOW ST 12 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling COM R1 no 2543 67 KING ST E 13 Residential 0 Residential 2nd Density Residential Single-detached dwelling RES CC-248 no 2542 8 MILL ST 13 Residential Single-family dwelling Residential 2nd Density Institutional Water treatment/filtration/water tow RES EPA2 yes 2479 65 MILL ST 13 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES EPA2 no 2482 61 MILL ST 13 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES EPA2 no 2480 83 KING ST E 13 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES EPA2 no RES EPA2 2454 97 KING ST E 13 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling no RES 2655 69 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 14 no 2657 81 WILLOW ST 14 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2707 70 KING ST E Residential Single-family dwelling Residential 2nd Density Residential RES 14 Single-detached dwelling R1 no 2659 85 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 14 RES 2658 74 KING ST E 14 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no RES 2660 89 WILLOW ST 14 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2661 82 KING ST E Single-family dwelling Residential 2nd Density Residential RES 14 Residential Single-detached dwelling R1 no 2663 95 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential RES R1 14 Single-detached dwelling no 2664 88 KING ST E Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 14 no 2666 103 WILLOW ST Single-family dwelling Residential 2nd Density Residential RES 14 Residential Single-detached dwelling R1 no 2458 94 KING ST E 14 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2459 102 KING ST E Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 14 no RES 2460 112 KING ST E Single-family dwelling Residential 2nd Density Residential R1 14 Residential Single-detached dwelling no RES 4446 111 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 14 no 2649 57 DAVID ST 15 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2653 70 WILLOW ST RES 15 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2652 68 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 15 no RES 2544 70 WILLOW ST 15 Residential with Principal res. dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2654 80 WILLOW ST 15 Residential with Principal res. dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 2656 86 WILLOW ST 15 Residential with Principal res. dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4429 59 DAVID ST RES 15 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4432 77 LOUISA ST 15 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4433 79 LOUISA ST 15 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4434 85 LOUISA ST 15 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R2 no 4435 91 LOUISA ST Residential Single-family dwelling Residential 2nd Density Residential RES R2 15 Semi-detached dwelling no Single-family dwelling Residential 2nd Density Residential RES 4436 93 LOUISA ST 15 R2 Residential Semi-detached dwelling no 4437 97 LOUISA ST 15 Residential with Principal res. dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no

Block Historical Land Official Plan **Land Use** ID **Address** No. Use **Historical Tenancy Historical Zoning Current Land Use Current Tenancy** Designation **Current Zoning Change** 99 LOUISA ST Residential with Principal res. dwelling Residential 2nd Density Residential RES R2 15 Semi-detached dwelling no 4438 92 WILLOW ST 15 Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 Residential no Single-family dwelling Residential 2nd Density Residential RES R2 4440 54 JAMES ST 15 Residential Semi-detached dwelling no 4441 52 JAMES ST RES 15 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no 4442 98 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential RES R1 15 Single-detached dwelling no RES 4443 42 JAMES ST 15 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no RES 4444 40 JAMES ST R2 15 Residential with Principal res. dwelling Residential 2nd Density Residential Semi-detached dwelling no RES 108 WILLOW ST Single-family dwelling Residential 2nd Density Residential 4445 15 Residential Single-detached dwelling R1 no 4459 48 JAMES ST 15 Residential Single-family dwelling Residential 2nd Density Residential RES R2 Semi-detached dwelling no 4460 46 JAMES ST 15 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no RES 2641 46 WILLOW ST 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2643 60 DAVID ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 16 no 2645 56 DAVID ST 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2646 52 DAVID ST 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 2647 50 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 16 no RES 2648 56 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 16 no 2650 60 WILLOW ST 16 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R1 no 2651 62 WILLOW ST Residential Single-family dwelling Residential 2nd Density Residential RES 16 Semi-detached dwelling R1 no 4369 0 MEADOWVALE CR 16 Open Space Open Space Residential 2nd Density Open Space **Conservation Area EPA** EPA1 no 4401 80 CHERRY LANE 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R2 no RES 111 MEADOWVALE (16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no RES 4422 48 CHERRY LANE Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 16 no 4407 99 MEADOWVALE CI 16 Single-family dwelling Residential 2nd Density Residential RES R1 Residential Single-detached dwelling no 4408 98 CHERRY LANE Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 16 no RES 4413 112 JAMES ST 16 Residential Single-family dwelling 0 Residential Single-detached dwelling R1 no 4411 106 JAMES ST 16 Residential Single-family dwelling 0 Residential Single-detached dwelling RES R1 no 4409 110 CHERRY LANE Residential Single-family dwelling 0 Residential Single-detached dwelling RES R2 16 no 0 HAINES DR **EPA** EPA1 4486 16 Open Space Open Space **Conservation Area** no **60 CHERRY LANE** Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 4490 16 no 64 CHERRY LANE Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES 16 R1 no RES 4492 56 CHERRY LANE 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4493 70 CHERRY LANE Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 16 no 4488 0 MARIA ST 16 Open Space 0 Open Space **Conservation Area EPA** EPA1 no 110 MEADOWVALE (16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 4495 52 CHERRY LANE 16 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 106 MEADOWVALE (16 RES Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4497 **50 CHERRY LANE** Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 16 no 4423 71 CHERRY LANE 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4397 **75 CHERRY LANE** 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4424 68 LOUISA ST 17 Single-family dwelling Residential 2nd Density Residential RES Residential Single-detached dwelling R1 no RES 81 CHERRY LANE 17 4399 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4425 74 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no

Block Historical Land Official Plan **Land Use** ID **Address** No. Use **Historical Tenancy Historical Zoning Current Land Use Current Tenancy** Designation **Current Zoning Change 87 CHERRY LANE** Single-family dwelling Residential 2nd Density Residential RES R1 17 Residential Single-detached dwelling no 4426 76 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4427 80 LOUISA ST Single-family dwelling Residential 2nd Density Residential RES R2 17 Residential Semi-detached dwelling no 4402 95 CHERRY LANE RES 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 82 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential RES R2 4428 Semi-detached dwelling no RES 4430 86 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no RES 4406 111 CHERRY LANE R2 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling no RES 4431 88 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no 4405 0 JAMES ST 17 RES R1 Vacant no RES 4396 92 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no RES 4404 80 JAMES ST 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4398 94 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4403 74 JAMES ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4498 71 CHERRY LANE 17 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 4453 96 LOUISA ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R2 no RES R2 4452 72 JAMES ST 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling no 98 LOUISA ST 4454 17 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4455 64 JAMES ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R2 17 no 2662 53 JAMES ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 2665 47 JAMES ST 18 Residential Single-family dwelling Residential 2nd Density Residential Vacant R1-479 no RES 2667 43 JAMES ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1-478 no 2466 133 ALBERT ST RES 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2469 139 ALBERT ST Single-family dwelling Residential 2nd Density Residential RES R1 18 Residential Single-detached dwelling no 2463 37 JAMES ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 2470 145 ALBERT ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2461 122 KING ST E 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2462 0 KING ST E Open Space Residential 2nd Density Open Space **Conservation Area EPA** EPA1 18 no Single-family dwelling Residential 2nd Density Residential RES R1 2476 40 JOHN ST 18 Residential Single-detached dwelling no RES 2472 30 JOHN ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling 18 R1 no 2467 176 KING ST E Residential Residential 2nd Density Residential Single-detached dwelling RES 18 R1 no RES 4447 25 JAMES ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4448 19 JAMES ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 18 no 4308 155 ALBERT ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4309 161 ALBERT ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 132 KING ST E RES 4449 18 Residential with Principal res. dwelling Residential 2nd Density Residential Single-detached dwelling R1 no RES 4310 167 ALBERT ST Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 18 no 4311 173 ALBERT ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4312 58 JOHN ST 18 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4461 149 ALBERT ST 18 Vacant Residential 2nd Density Vacant RES R1 no 4462 151 ALBERT ST Single-family dwelling Residential 2nd Density Residential RES 18 Residential Single-detached dwelling R1 no 4463 142 KING ST E Single-family dwelling Flood Plain Commercial with anc Automotive Shop **EPA** EPA2 18 Residential no 4464 146 KING ST E 18 Residential Single-family dwelling Flood Plain Residential Single-detached dwelling **EPA** EPA2 no

Block Historical Land Official Plan **Land Use** ID **Address** No. Use **Historical Tenancy Historical Zoning Current Land Use Current Tenancy** Designation **Current Zoning Change** 4465 0 KING ST E Residential 2nd Density Open Space EPA EPA2 18 Open Space Conservation Area no 4467 0 KING ST E 18 Residential 2nd Density Open Space **EPA** EPA2 Open Space **Conservation Area** no 4466 48 JOHN ST Single-family dwelling Residential 2nd Density Residential RES R1 18 Residential Single-detached dwelling no Single-family dwelling Residential 2nd Density Residential RES 4415 122 VICTORIA ST 19 Residential Semi-detached dwelling R1 no 4295 147 VICTORIA ST Residential Single-family dwelling Residential 2nd Density Residential RES R1 19 Single-detached dwelling no RES 4297 138 ALBERT ST 19 Residential Single-family dwelling Residential Multiple 1st Residential Semi-detached dwelling R2 no RES 4298 140 ALBERT ST R2 19 Residential Single-family dwelling Residential Multiple 1st Residential Semi-detached dwelling no RES 4300 144 ALBERT ST Single-family dwelling Residential Multiple 1st Residential R2 19 Residential Semi-detached dwelling no 4301 146 ALBERT ST Residential Single-family dwelling Residential Multiple 1st Residential RES R2 19 Semi-detached dwelling no 4302 150 ALBERT ST 19 Residential Single-family dwelling Residential Multiple 1st Residential Semi-detached dwelling RES R2 no Semi-detached dwelling RES 4303 152 ALBERT ST 19 Residential Single-family dwelling Residential Multiple 1st Residential R2 no 4304 160 ALBERT ST 19 Residential Single-family dwelling Residential 2nd Density Residential RES R2 Semi-detached dwelling no 4305 162 ALBERT ST 19 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R2 no 4306 168 ALBERT ST 19 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling RES R1 no RES 4307 178 ALBERT ST 19 Residential Single-family dwelling Residential 2nd Density Residential Semi-detached dwelling R1 no 0 RES 4451 0 VICTORIA ST 19 Open Space Open Space Park OS no 4456 73 JAMES ST 19 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 65 JAMES ST Residential Single-family dwelling Residential 2nd Density Residential RES 4457 19 Single-detached dwelling R1 no 4458 132 ALBERT ST 19 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 1887 211 ALBERT ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no RES 1888 217 ALBERT ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 0 UNION ST RES 1946 20 Vacant 0 0 Vacant R1 no 1947 0 UNION ST 0 0 RES R1 20 Vacant Vacant no 1945 0 KING ST E 20 Open Space 0 Open Space Conservation Area **EPA** EPA1 no RES 2474 192 KING ST E 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 2477 204 KING ST E 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 2464 181 KING ST E Multiple Residen 12 apartments Residential 2nd Density Multiple Residential Apartments (3 storeys) RES RM 20 no RES 189 KING ST E 2465 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RMno 195 KING ST E Residential Single-family dwelling Residential 2nd Density Residential RES 2468 20 Single-detached dwelling RM no 2471 201 KING ST E 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 2475 211 KING ST E 20 Residential Single-family dwelling Residential 2nd Density Residential with anci office (chartered accountant) R1 yes 4342 79 JOHN ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no RES 4341 71 JOHN ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4343 204 ALBERT ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4345 210 ALBERT ST RES 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no RES 4338 195 ALBERT ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling R1 no 4270 216 ALBERT ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4271 55 JOHN ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4273 47 JOHN ST 20 Residential Single-family dwelling Residential 2nd Density Residential Single-detached dwelling RES R1 no 4274 41 JOHN ST Residential Single-family dwelling Residential Multiple 1st Residential RES 20 Semi-detached dwelling R2 no RES 4276 39 JOHN ST 20 R2 Residential Single-family dwelling Residential Multiple 1st Residential Semi-detached dwelling no 4277 35 JOHN ST 20 Residential with Principal res. dwelling Residential Multiple 1st Residential Semi-detached dwelling RES R2 no

								Current		
		Block	Historical Land					Official Plan		Land Use
ID	Address	No.	Use	Historical Tenancy	Historical Zoning	Current Land Use	Current Tenancy	Designation	Current Zoning	Change
4279	33 JOHN ST	20	Residential with	Principal res. dwelling	Residential Multiple 1st	Residential	Semi-detached dwelling	RES	R2	no
4282	0 ALBERT ST	20	Vacant	0	0	Vacant		RES	R1	no
4283	0 UNION ST	20	Vacant	0	0	Vacant		RES	R1	no
4284	0 UNION ST	20	Vacant	0	0	Vacant		RES	R1	no
4286	0 UNION ST	20	Vacant	0	0	Vacant		RES	R1	no
4288	212 KING ST E	20	Residential	Single-family dwelling	Residential 2nd Density	Residential with anci	Home Wildlife Removal	RES	R1	yes
4291	218 KING ST E	20	Residential	Single-family dwelling	Residential 2nd Density	Residential	Single-detached dwelling	RES	R1	no
4292	0 OLD KING RD	20	Vacant	0	0	Vacant		RES	R1	no
4289	230 KING ST E	20	Industrial	0	M1	Industrial	Do It Industries, Shorelander Boat Trai	RES	MS	no

APPENDIX C – Potential Development Capacity

Table 1: Existing Development Opportunity

Block	Official Plan	Zoning	Development Capacity	Development Assumptions, Caveats, Probability
No. 1	Designation Residential, Environmental Policy Area Residential, Environmental Policy Area	R1, EPA1 R1, RM- 231	Single-detached dwelling R1 zone permits an accessory apartment. R1 zone permits an accessory apartment.	Existing vacant lot for sale (91 Sackville), potential development frontage along Sackville, but has environmental constraints. Potential for new accessory apartments. Potential for new accessory apartments.
3	High Density Residential, and OP S. 7.3.4.2	I, I-31, RM-236	NA	50 Ann St. while zoned I, is designated High Density Residential (OP S. 7.3.4.2) and could accommodate an apartment building subject to rezoning (refer to Table 2).
4	Medium Density Residential, Institutional, Commercial	R1, RM- 123, I, and CC	3 Apartment Dwelling Units (RM-123) CC Zone (Area = 2,560m2): 5,750m2 Commercial or 3,197m2 Commercial and 37 Accessory Dwelling Units (69m2/unit) R1 zone permits an accessory apartment.	21 Temperance, RM-123, permits an apartment dwelling with maximum 3 units Refer to CC Zone Assumptions. Assumes Post Office will remain. The Fire Station, is designated and zoned Institutional, it is anticipated it could redevelop as CC zone uses. Refer to Table 2. 48, 52, 56 Sterne St. while zoned R1 is designated Medium Density Residential and could accommodate an apartment building subject to rezoning (refer to Table 2).
5	Commercial	CC, EPA1	CC Zone (Area = 6,656m2): 14,976m2 Commercial or 8,352m2 Commercial and 96 Accessory Dwelling Units (69m2/unit)	Potential for new accessory apartments. Refer to CC Zone Assumptions. Could accommodate redevelopment, and development of underutilized parking areas. Unlikely that Queen St. frontage would redevelop in near term.
6	Commercial	CC, CC- 195	CC Zone (Area = 7,570m2): 17,032m2 Commercial or 9,580m2 Commercial and 108 Accessory Dwelling Units (69m2/unit)	Refer to CC Zone Assumptions. Potential for redevelopment, and development of underutilized parking areas. CC-195 permits a larger retail GFA of 925m2, otherwise CC provisions apply. Unlikely that King St. frontage would redevelop in near term.
7	Commercial, Environmental Policy Area	R1, CC, CC-249, CC-477	1 Single-detached dwelling (0 King St.) CC Zone (Area = 3,324m2): 7,479m2 Commercial	Refer to CC Zone Assumptions. 28 King St (CC-477) built as per site specific zoning.

Block No.	Official Plan Designation	Zoning	Development Capacity	Development Assumptions, Caveats, Probability
			or 4,167m2 Commercial and 48 Accessory Dwelling Units (69m2/unit)	20 King St. (CC-249) could redevelop as per site specific provisions, and assumed to be consistent with CC Zone.
8	Commercial, Environmental Policy Area	CC, EPA1	CC Zone (Area = 5,635m2): 12,680m2 Commercial or 7,035m2 Commercial and 81 Accessory Dwelling Units (69m2/unit)	Refer to CC Zone Assumptions. Potential opportunity for redevelopment of underutilized properties.
9	Commercial	CC, CC- 44	CC Zone (Area = 7,240m2): 16,290m2 Commercial or 9,039m2 Commercial and 105 Accessory Dwelling Units (69m2/unit)	Refer to CC Zone Assumptions. CC-44 permits a larger retail GFA of 925m2, otherwise CC provisions apply. Unlikely that Queen St. and King St. frontage would redevelop in near term.
10	Commercial	CC	CC Zone (Area = 6,604m2): 14,859m2 Commercial or 8,244m2 Commercial and 96 Accessory Dwelling Units (69m2/unit)	Refer to CC Zone Assumptions. Potential redevelopment opportunity on vacant and underutilized lands.
11	Medium Density Residential	R1, RT- 79	21 Elm St., (RT-79): 6 townhouses (1,018m2 minimum lot area, at 150m2 per lot) R1 zone permits an accessory apartment.	21 Elm St. could redevelop in accordance with site specific zone standards. R1 lands are designated Medium Density Residential, and could accommodate an apartment building, subject to rezoning (refer to Table 2).
12	Commercial	CC-44, CC-247, RM, R1- 217	CC Zone (5,827m2): 13,110m2 Commercial or 7,245m2 Commercial and 85 Accessory Dwelling Units (69m2/unit) R1 zone permits an accessory apartment.	Potential opportunity to redevelop parking lot area zoned CC. Anticipate that other lands (Royal Courtyard, bank and Apartment building) would not redevelop in near term. Potential for new accessory apartment at 45 Willow St.
13	Low Density Residential, Residential	EPA2, CC-248	NA	67 King St. (CC-248) appears built in accordance with the site specific zone exception, no further development anticipated. Designated Heritage property 83 and 97 King St. with EPA2 zone constraints, no development is anticipated.
14	Low Density Residential, Residential	R1	R1 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential for new accessory apartments.
15	Residential	R1, R2	R1 and R2 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential for new accessory apartments.
16	Medium Density Residential, Residential	R1, R2	R1 and R2 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential for new accessory apartments.

Block No.	Official Plan Designation	Zoning	Development Capacity	Development Assumptions, Caveats, Probability
	•			62, 60, 56, 50, 46 Willow St. while zoned R1 are designated Medium Density Residential, and could accommodate an apartment building, subject to rezoning (refer to Table 2).
17	Residential	R1, R2	R1 and R2 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential for new accessory apartments.
18	Residential, Environmental Policy Area	R1, EPA2, R1-478, R1-478	2 Single-detached dwellings (47 James St. and 149 Albert St.) R1 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. 47 James St. redevelopment of existing residential property. Potential for new accessory apartments.
19	Residential	R1, R2, OS	R1 and R2 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential for new accessory apartments. Designated Heritage property at 65 James St., no development is anticipated.
20	Residential	RM, R1, R2, MS	7 Single-detached dwellings (on existing vacant lots) RM Zone: 1,671m2 x 20% x 4 storeys = 1,337m2 20 Apartment dwelling units (69m2/unit) R1 and R2 zone permits an accessory apartment.	Established built neighbourhood. Redevelopment not anticipated. Potential redevelopment of existing vacant lots, subject to environmental constraints and opening of road allowance. 2 properties zoned RM could redevelop with apartment dwellings. Potential for new accessory apartments.
TOTAL			11 Single-detached dwellings (38 persons) 6 Townhouse Dwellings (21 persons) 23 Apartment Dwellings (58 persons) In addition to: A) Commercial GFA in the CC zone: 102,176m2 Commercial GFA; OR B) Commercial GFA and Accessory Dwelling Units in the CC zone: 56,859m2 Commercial GFA; and 656 Accessory Dwelling Units (853 persons)	Refer to notes on calculating persons per unit.

Notes:

CC Zoned Properties:

The following assumptions were made to determine potential development opportunity and entitlement for CC zoned properties, which provide for the greatest extent of potential development:

- CC zoned properties may accommodate various commercial uses (offices, retail, personal services, restaurant etc.) including a boarding house as well as 3 accessory dwelling units per commercial establishment.
- The accessory dwelling unit size is not to exceed 15% of the commercial net floor area.
- The maximum permitted building area is 75% the lot area.

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- The maximum permitted building height is 10.5m (3 storeys).
- The maximum permitted GFA of a retail store is 465m2, and the property may accommodate multiple retail stores.
- Assumed that other provisions of the Zoning By-law will be achieved (i.e., parking, setbacks etc.).

Development entitlement was calculated based on alternatives depending on whether only commercial uses are accommodated, or whether commercial and accessory dwelling units are accommodated, and assumes the redevelopment of the entire property/existing uses:

- 1) Commercial Uses:
 - a) lot area (m2) x maximum building area (75%) x maximum permitted height (3 storeys, (10.5m)) = **total commercial GFA (m2).**
- 2) Commercial Uses and Accessory Dwelling Units:
 - a) total commercial GFA (m2) / maximum size of retail store (465 m2) = total number of minimum commercial establishments; and
 - b) total number of minimum commercial establishments x 3 (permitted number of accessory dwelling units per commercial establishments) = total minimum number of accessory dwelling units; and
 - c) total commercial GFA total accessory dwelling units x unit GFA assumed to be 69m2/unit (750ft2) = **total commercial GFA with total minimum number of accessory dwelling units.**

It is noted that while the maximum size of a retail store could be considerably less than 465m2 and generate opportunity for more accessory dwelling units (3 per commercial establishment), however, any commercial establishment less than 350m2, would only permit an accessory dwelling of 52.5m2 (565ft2) which may not be of sufficient size.

R1 and R2 Zoned Properties:

R1 Zone permits detached dwelling, private home day care, home occupation and an accessory apartment.

R2 Zone permits duplex dwelling, linked dwelling, semi-detached dwelling, private home day care, home occupation and an accessory apartment.

Persons Per Unit Assumptions:

Based on the Peel Region Development Charges Background Study, 2012:

Small Units – 1.3 ppu Apartments – 2.5 ppu Other – 3.5 ppu Table 2: Official Plan Policy Land Use Permissions and Potential Development Opportunity

	Official Pla	n Policy Land	<u>l Use Permissi</u>	ions and F	Potential Development	
Block	Address	Developabl	Official Plan	Zoning	Development	Development Assumptions
No.		e Area (m2)	Designation		Capacity	·
3	50 Ann St.	2,868m2	High Density Residential - Site Specific Policy (7.3.4.2)	I	Lot Area x 2.0 = 5,736m2 Apartment Units: 83 (assumes 69m2/unit)	Permitted uses: Apartments and townhouse unit types. Maximum density: 2.0 times the lot area. Maximum building height: Shall not exceed the top of the valley ridge. Rezoning would be required.
11	54 Mill St. 27 Elm St. 49 King St.	3,200m2	Medium Density Residential	R1	Lot Area x 1.5 = 4,800m2 Apartment Units: 70 (assumes 69m2/unit)	Permitted uses: Walk-up apartments, townhouses or similar type units. Office and compatible commercial uses may be permitted on the ground floor of properties which abut Mill Street and Elm Street. Maximum density: 1.5 times the lot area. Maximum building height: 3 storeys or 10 metres. Rezoning would be required.
16	62, 60, 56, 50 and 46 Willow St.	3,419m2	Medium Density Residential	R1	Lot Area x 1.5 = 3,420m2 Apartment Units: 50 (assumes 69m2/unit)	Permitted uses: Walk-up apartments, townhouses or similar type units. Maximum density: 1.5 times the lot area is permitted. Maximum building height: 3 storeys or 10 metres. Rezoning would be required.
4	48,52, 56 Sterne St.	1,300m2	Medium Density Residential	R1	Lot Area x 1.5 = 1,950m2 Apartment Units: 28 (assumes 69m2/unit)	Permitted uses: Walk-up apartments, townhouses or similar type units. Maximum density: 1.5 times the lot area is permitted. Maximum building height: 3 storeys or 10 metres. Rezoning would be required.
4	28 Ann St. (Existing Fire Station)	1,318m2	Institutional	I	CC Zone (Area=1,318m2): 2,965m2 Commercial or 1,886 m2 Commercial and 19 Accessory Dwelling Units	Refer to CC Assumptions. Rezoning would be required.
TOTAL					Apartment Units: 231 (578 persons) In addition to: 2,965m2 Commercial GFA or 1,886 m2 Commercial GFA and 19 Accessory Dwelling Units (25 persons)	Rezoning would be required.

Appendix D – Existing Flood Risk Assessment

TABLE D-1 Summary of Flood Risk for Residential Areas in Bolton SPA 500-year Storm

Table D-1	a	
Populatio	n and Houses ir	Risk Zones
Risk	Population:	No. of Houses
٦	417	119
H1/H3	14	4
<u>H</u>	322	<u>16</u>
T	752	430

People/house: 3.5

Table D-1b: Number of Houses at Risk of Flooding (without berm)

Part		lings within ESA Bounda		Lowest	Flood don't	Flood do-4	h Flood do-1	h Flood do-4	h Flood dorse	Instream Par	nstream Distance	WSEL	WSEL	WSEL	WSEL	WSEL	WSEL	WSEL	WSEL W	SFI .	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Depth	Denth	Donth	Denth	Denth	Denth	Depth	Depth
	D Address 14 ELM ST	Use		Elev (m)			100-year	350-year	500-year	X-Section X-	ection (m)	2-year	5-year	10-year	25-year	50-year	100-year		500-year Regio	nal St.	2-yr (m/s)	5-yr (m/s)	10-yr (m/s)	25-yr (m/s)	50-yr (m/s)	100-yr (m/s)	Reg. St. (m/s)	2-yr (m)						350-yr (m)	500-yr (m)
	18 ELM ST 21 ELM ST	H Residential H Residential			-	-				9.138	.135 100 LEF	213.98		214.33		214.63	214.77	215.32	215.36 21									-0.52 -0.52	-0.31 -0.31	-0.03	-0.91 0.19	-0.79 0.23	0.30	0.12 0.56	0.25 0.65
	24 ELM ST 27 ELM ST	H Residential	3.5	214.50	-	-	0.27	0.82	0.86	9.138	.135 114 LEF	213.98	214.19	214.33	214.50	214.63	214.77	215.32	215.36 21	.07	0.14	0.07	0.11	0.15	0.17	0.19	0.37	-0.52	-0.31	0.45	0.68	0.72	0.79	1.05	0.99 1.14
	34 ELM ST 26 MILL ST 35 MILL ST	H Residential	3.5	214.50	-	0.15	0.37	0.86	0.92	9.144	.141 0 LEF	214.06	214.30	214.46	214.65	214.77	214.87	215.36	215.42 21	.36	0.00	0.00	0.00	0.16	0.26	0.35	0.65	-0.44	-0.20	-2.35	-2.10	-1.92	-1.76	-0.78	-0.80
State	54 MILL ST 80 WILLOW ST	H Residential	3.5	214.50	0.17	0.33	0.27	0.82	0.86	9.138	.135 88 LEF	213.98	214.19	214.33	214.50	214.63	214.77	215.32	215.36 21	.07	0.14	0.07	0.11	0.15	0.17	0.19	0.37	-0.52	-0.31	-2.60	-2.35	-2.17	-2.01	-1.03	-1.05
	86 WILLOW ST 92 WILLOW ST		3.5		-						.114 0 LEF																				0.52				0.98
State Stat	98 WILLOW ST 103 WILLOW ST	H Residential	3.5	213.50	0.08	0.53	0.64	0.90	0.99	9.114	.111 48 LEF	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49 21	.26	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-0.25	0.08	-0.83	-0.57	-0.40	-0.23	0.58	
The column	108 WILLOW ST 111 WILLOW ST	H Residential	3.5	213.33	0.17	0.69	0.80	1.06	1.15	9.108	.105 25 LEF	213.03	213.50	213.79	214.02	214.06	214.13	214.39	214.48 21	.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-0.30	0.17	-0.17	0.00	0.13	0.27	0.82	0.86
1	68 WILLOW ST 70 WILLOW ST 52 DAVID ST	H1 Residential	3.5	213.83	0.18	0.34	0.43	0.68	0.75	9.123	.120 34 LEF	213.90	214.01	214.09	214.17	214.21	214.26	214.51	214.58 21	.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.07	0.18	-0.21	0.03	0.07	0.14	0.40	0.49
See	57 DAVID ST 133 ALBERT ST	H3 Residential	3.5	213.50			0.76	1.01	1.08	9.123	.120 0 LEF	213.90	214.01	214.09	214.17	214.21	214.26	214.51	214.58 21	.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.40	0.51	-0.31	-0.08	0.13	0.32	1.07	1.21
Second Column	139 ALBERT ST 145 ALBERT ST	L Residential	3.5	214.00	-	-	-	-	-	9.099 9.096	0.096 33 LEF 0.112 0 LEF	212.52	212.74	212.87	213.03	213.15	213.27	213.76	213.84 21	.85	0.92	0.00	0.00	0.00	0.00	0.00 0.00	0.34	-1.48	-1.26	-0.17	0.00	0.13	0.27 -0.98	0.82 0.43	0.86 0.35
See	151 ALBERT ST 155 ALBERT ST	L Residential	3.5	214.00	-	-		0.01	0.09	9.096	0.000 LEF	212.38	212.62	212.75	212.92	213.05	213.18	213.70	213.78 21	.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.62	-1.38	-2.20	-1.93	-1.74	-1.57	-0.75	-0.67
1	161 ALBERT ST 167 ALBERT ST 173 ALBERT ST	L Residential	3.5	213.66	-		-			9.090	.110 0 LEF	212.18	212.51	212.67	212.86	213.01	213.14	213.68	213.77 21	.78	1.09	0.00	0.00	0.00	0.00	0.00	0.00	-1.48	-1.15	-1.19	-0.97	-0.93	-0.86	-0.60	-0.51
	173 ALBERT ST 211 ALBERT ST 217 ALBERT ST	L Residential	3.5	212.94	-	-		0.76	0.84	9.096	.063 0 LEF	212.38	212.62	212.75	212.92	213.05	213.18	213.70	213.78 21	.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-0.56	-0.32	-0.99	-0.80	-0.65	-0.52	0.02	0.11
Second 1	18 ANN ST	L Residential	3.5	217.05	-	-	-	-	-	9.171	.168 3 LEF	214.34	214.69	214.92	215.18	215.36	215.53	216.28	216.35 21	.70	0.00	0.00	0.00	0.22	0.42	0.46	0.78	-2.71	-2.36	-2.11	-1.87	-1.69	-1.53	-1.02	-0.97
Series Se	48 CHERRY LANE 50 CHERRY LANE 81 CHERRY LANE	L Residential	3.5	215.18			-	-	-	9.126	.123 70 LEF	213.91	214.02	214.09	214.17	214.20	214.24	214.40	214.47 21	.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-1.27	-1.16	-2.70	-2.44	-2.27	-2.10	-1.29	-1.20
See	7 CHERRY LANE 5 CHERRY LANE	L Residential	3.5	214.54		0.01	-	0.38	0.47	9.111	.108 52 LEF	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49 21	.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-1.42	-1.03	-3.00	-2.73	-2.55	-2.37	-1.58	-1.50
Second S	1 CHERRY LANE DAVID ST	L Residential	3.5		0.23	-	-	-	-	9.108	.105 0 LEF	213.03	213.50	213.79	214.02	214.06	214.13	214.39	214.48 21	.24	0.00	0.00	0.00	0.01		0.05	0.26	-1.64	-1.17	0.14	0.30	0.41	0.47	0.83	0.93
Series S. D. Merces S. D. D. Merces S. D. D. Merces S. D. D. Merces S.	DAVID ST DAVID ST	L Residential	3.5	213.86						9.123	.120 63 LEF	213.90	214.01	214.09	214.17	214.21	214.26	214.51	214.58 21	.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.04	0.15	-0.21	-0.10	0.02	0.18	0.93	1.06
	HICKMAN ST HICKMAN ST	L Residential	3.5	216.00	-	-	-			9.168	.165 0 RIG	HT 214.28	214.62	214.85	215.12	215.30	215.48	216.27	216.35 21	.72	0.00	0.00	0.00	0.16	0.30	0.40	0.68	-1.72	-1.38	-0.75	-0.51	-0.47	-0.40	-0.14	-0.05
No. 1	HICKMAN ST HICKMAN ST	L Residential	3.5	217.00	-	-		-	-	9.180	.177 0 RIG	HT 214.64	215.02	215.26	215.54	215.73	215.91	216.57	216.66 21	.93	0.15	0.33	0.44	0.52	0.56	0.59	0.88	-2.36	-1.98	0.23	0.31	0.35	0.40	0.65	0.72
No. 1 1 1 1 1 1 1 1 1 1	HICKMAN ST HICKMAN ST	L Residential	3.5	217.00		-		-	-	9.183	.180 0 RIG	HT 214.81	215.16	215.38	215.62	215.80	215.96	216.47	216.52 21	.97	0.00	0.00	0.00	0.00	0.00	0.00	1.04	-2.19	-1.84	0.05	0.13	0.16	0.20	0.36	0.43
March 1	ICKMAN ST ICKMAN ST	L Residential	3.5	217.00	-		-	0.78	0.70	9.192	.189 0 RIG	HT 215.02	215.41	215.65	215.94	216.15	216.37	217.78	217.70 21	.66	0.00	0.00	0.00	0.00	0.20	0.34	0.81	-1.98	-1.59	-0.37	-0.12	0.05	0.21	0.82	0.75
Secondary Seco	ICKMAN ST ICKMAN ST	L Residential L Residential		217.03	-	-	-		0.67	9.192	.189 0 RIG .180 22 LEF	T 215.02	215.41	215.65	215.94	216.15	216.37 215.96	217.78 216.47	217.70 21 216.52 21	.66	0.00	0.00	0.00	0.00	0.20	0.34		-2.01 -2.68	-1.62 -2.33	0.45 0.23	0.53 0.33	0.57 0.41	0.62 0.50	0.87 0.80	0.94 0.88
	AMES ST AMES ST	L Residential	3.5	213.07	-	0.22	0.75	0.96	0.91	9.102	0.000 0 LEF	212.61	212.88	213.07	213.29	213.77	213.82	214.03	213.98 21	.09	0.00	0.00	0.00	0.00	0.00	0.00	0.31	-0.46	-0.19	-0.25	-0.08	0.05	0.18	0.70	0.78
Second	AMES ST AMES ST	L Residential	3.5	213.38		0.64	0.75	1.01	1.10	9.108	.105 0 LEF	213.03	213.50	213.79	214.02	214.06	214.13	214.39	214.48 21	.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-0.35	0.12	-1.35	-1.06	-0.85	-0.63	0.78	0.70
Second S	MES ST	L Residential	3.5	213.50	0.09	-	0.32	0.53	0.48	9.102	0.113 0 LEF	212.61	212.88	213.07	213.29	213.77	213.82	214.03	213.98 21	.09	0.00	0.00	0.00	0.00	0.00	0.00	0.31	-0.89	-0.62	0.00	0.22	0.70	0.75	0.96	0.91
37 1 Section 13 21.5	AMES ST AMES ST	L Residential	3.5	213.50		0.52	0.63	0.89	0.98	9.108	.105 0 LEF	213.03	213.50	213.79	214.02	214.06	214.13	214.39	214.48 21	.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-0.47	0.00	-0.26	-0.11	-0.01	0.10	0.68	0.71
Second S	AMES ST	L Residential	3.5	213.67	-	-	0.15	0.36	0.31	9.102	.113 0 LEF	212.61	212.88	213.07	213.29	213.77	213.82	214.03	213.98 21	.09	0.00	0.00	0.00	0.00		0.00	0.31	-1.06	-0.79	-0.91	-0.83	-0.80	-0.76	-0.60	-0.53
37 Conference 15 20.000 15 20.000 15 20.000 15 20.000 15 20.000 20.00	AMES ST AMES ST		3.5	214.00	-			0.39	0.48	9.108	.105 0 LEF	213.03	213.50	213.79	214.02	214.06	214.13		214.48 21	.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-0.97	-0.50		-0.82		-0.65		-0.27
State	MES ST HN ST	L Residential		214.35	-	-	-	0.04	0.13 0.07	9.108 9 9.084 9	0.105 0 LEF 0.100 94 LEF	213.03 211.78	213.50 212.12	213.79 212.27	214.02 212.42	214.06 212.52	212.58	212.94	213.07 21	.00	0.00		0.00 0.19	0.01 0.27	0.34	0.05 0.42	0.26	-1.22	-0.88	-1.19	-1.08	-0.96	-0.80	-0.05	
	HN ST HN ST	L Residential	3.5	212.79	-	-			0.25	9.078	.100 44 LEF	211.36	211.62	211.77	211.88	212.00	212.16	212.91	213.04 21	.30	0.00	0.12	0.21	0.29	0.29	0.38	0.49	-1.43	-1.17	-1.13	-0.90	-0.74	-0.60	-0.04	0.05
137	OHN ST OHN ST OHN ST	L Residential	3.5	212.96	-	-	-		0.08	9.078	.100 44 LEF	211.36	211.62	211.77	211.88	212.00	212.16	212.91	213.04 21	.30	0.00	0.12	0.21	0.29	0.29	0.38	0.49	-1.60	-1.34	-0.73	-0.58	-0.48	-0.42	-0.06	0.07
Fig. September 15	HN ST NG ST E	L Residential	3.5	213.67			-	-	0.05	9.087	.100 77 LEF	211.98	212.34	212.54	212.77	212.93	213.07	213.63	213.72 21	.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-1.69	-1.33	-0.49	-0.34	-0.24	-0.13	0.45	0.48
STE L Sendemal 3.5 242-66 0.4 0.23 9.314 9.315 57 127 2182 2183 2183 2480 24.60 24	NG ST E NG ST E	L Residential	3.5	214.50	-	-		0.79	0.83	9.135	.132 72 LEF	213.97	214.16	214.30	214.47	214.60	214.73	215.29	215.33 21	.02	0.10	0.13	0.16	0.18	0.20	0.21	0.51	-0.53	-0.34	-2.13	-1.87	-1.69	-1.52	-0.77	-0.70
STE Reinferrial 35 21147 . 0.51 0.61 0.87 0.96 9.10 0.17 21.297 21.30 21	ING ST E KING ST E	L Residential	3.5	214.26	-	-	-			9.114	.111 57 LEF	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49 21	.26	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-1.01	-0.68	-0.54	-0.35	-0.23	-0.13	0.36	0.52 0.42
STE L Residential 3.5 213.50	ING ST E ING ST E			213.47	-	0.51	0.61	0.87	0.96	9.105	.102 0 LEF				213.98	214.01	214.08	214.34	214.43 21		0.00	0.00			0.01	0.05	0.30	-0.50	-0.17	-0.22	-0.21 -0.07		0.14	0.72	0.75
GSTE L Residential 3.5 213.00 0.07 0.63 0.72 9.087 9.00 105 LFT 211.98 212.24 212.77 212.99 213.07 213.63 213.72 214.76 0.71 0.00 0.05 0.13 0.16 0.16 0.14 0.10 0.00 0.05 0.13 0.16 0.16 0.14 0.10 0.00 0.05 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.1	ING ST E	L Residential L Residential		213.50	-	0.18		0.53	0.48	9.102	.000 0 LEF	212.61 212.61	212.88 212.88	213.07 213.07	213.29	213.77	213.82	214.03	213.98 21		0.00	0.00	0.00		0.00	0.00	0.31	-0.89	-0.62	-0.24			0.12	0.70	0.73
GSTE L Residential 3.5 213.00 0.07 0.63 0.72 9.087 9.00 105 LFT 211.98 212.24 212.77 212.99 213.07 213.63 213.72 214.76 0.71 0.00 0.05 0.13 0.16 0.16 0.14 0.10 0.00 0.05 0.13 0.16 0.16 0.14 0.10 0.00 0.05 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.75 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.1	ING ST E	L Residential	3.5	213.00	-	-	0.18	0.26 0.70	0.34	9.099	0.096 0 LEF	212.52	212.74	212.75	212.92	213.05	213.18	213.70	213.78 21	.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-0.62	-0.76 -0.38	-0.04 -0.54	-0.35	-0.23	-0.13	0.86	0.92
GSTE L Residential 3.5 212.00 - 0.00 0.49 9.081 9.078 42 LEFT 211.70 212.01 212.16 212.32 212.48 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.59 0.34 0.17 0.01 0.60 0.53 0.57 0.57 0.32 0.04 0.59 0.34 0.17 0.01 0.60 0.53 0.57 0.57 0.32 0.04 0.59 0.34 0.17 0.01 0.60 0.53 0.57 0.57 0.32 0.04 0.59 0.34 0.17 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.05 0.34 0.17 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.05 0.34 0.17 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.05 0.34 0.17 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.05 0.34 0.17 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.32 0.04 0.02 0.33 0.64 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.0	ING ST E	L Residential	3.5	213.00	-	-		0.23	0.72	9.087	.100 105 LEF	211.98	212.34	212.54	212.77	212.93	213.07	213.63	213.72 21	.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-1.02	-0.66	-0.93	-0.20 -0.68	-0.51	-0.35	0.26	0.19
Solf L Residential 3.5 211.02 - 0.30 0.47 0.83 0.93 9.081 9.078 44 LEF 211.70 212.01 212.16 212.32 212.48 212.49 212.85 212.49 212.85 213.03 0.64 0.81 1.77 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.64 0.81 1.77 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.64 0.81 1.77 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.64 0.81 1.77 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.69 0.44 0.07 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.69 0.44 0.07 0.01 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.69 0.44 0.07 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.69 0.44 0.02 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.33 0.69 0.44 0.02 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.02 0.15 0.25 0.31 0.37 0.67 0.02 0.35 0.00 0.00 0.15 0.25 0.31 0.37 0.42 0.66 0.53 0.60 0.36 0.67 0.42 0.66 0.53 0.60 0.36 0.67 0.42 0.65 0.45 0.65 0.45 0.65 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.4	KING ST E KING ST E KING ST E	L Residential	3.5	212.46	-	-		0.43	0.49	9.084	1.000 84 LEF 1.078 59 LEF	211.70	212.01	212.16	212.32	212.43	212.49	212.85	212.95 21	.14	0.00	0.02	0.15	0.25	0.31	0.37	0.67	-0.76	-0.45	-0.63	-0.43	-0.34 -0.30	-0.23 -0.18 -0.01	0.04	0.26
GSTE L Residential 3.5 211.80 0.35 1.10 1.23 9.075 0.000 0 LEFT 211.00 211.42 211.79 211.77 211.97 211.77 211.97 211.77 211.97 211.70 0.00 0.00 0.00 0.00 0.00 0.00 0.00	KING ST E KING ST E	L Residential	3.5	212.02	- 0.33	0.30		0.83	0.93	9.081	0.078 34 LEF	211.70	212.01	212.16	212.32	212.43	212.49	212.85	212.95 21	.14	0.00	0.02	0.15	0.25	0.31	0.37	0.67	-0.32	-0.01	-0.59	-0.34	-0.17	-0.01 -0.01 -0.11	0.60	0.53
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	KING ST E KING ST E	L Residential	3.5	211.98	-	-	0.18	0.93	1.06	9.078 9 9.075 (0.100 0 LEF 0.000 0 LEF	211.36 211.20	211.62	211.77	211.88	212.00	212.16	212.91	213.04 21	.30	0.00	0.12	0.21	0.29	0.29	0.38	0.49	-0.62	-0.36	-0.67	-0.42	-0.25	-0.09 -0.07	0.52	0.45
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	KING ST E	L Residential L Residential	3.5 3.5	211.82 213.08	-	-	0.32	-	-	9.069	0.000 0 LEF 0.063 0 RIG	211.01 HT 210.95	211.33 211.26	211.51 211.44	211.74 211.64	211.95 211.78	212.14 211.92	212.89 212.72	213.03 21 212.93 21	.29	0.00	0.39 0.00	0.30 0.00	0.40 0.11	0.42 0.22	0.43 0.30	0.46 0.37	-0.81 -2.13	-0.49 -1.82	-0.68 -0.68	-0.43	-0.26 -0.26	-0.10 -0.10	0.51 0.51	0.44 0.44
STW L Residential 3.5 215.96 0.22 0.31 9.162 9.159 0 LEFT 214.18 214.50 214.71 214.97 215.15 215.31 216.18 216.27 217.69 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	99 KING ST E KING ST W	L Residential L Residential	3.5 3.5	216.09	-		-	0.39	0.18	9.120 9 9.162 9	0.117 0 LEF 0.159 0 LEF	213.79 214.18	214.50	214.71	214.97	215.15	215.31	216.18	216.27 21	.69	0.00	0.00	0.00	0.00	0.20	0.34	0.57	-1.91	-1.59	-0.63 -1.48	-0.47 -1.22	-0.35 -1.04	-0.88	0.26 -0.22	0.34 -0.15
SAST L Residential 3.5 214.00 - 0.05 0.16 0.42 0.49 9.117 9.114 0 LEFF 213.28 213.61 213.83 214.05 214.09 215.26 0.00 0.00 0.03 0.05 0.08 0.34 -0.72 -0.39 -0.70 -0.44 -0.26 -0.09 0.54 0.60 SAST L Residential 3.5 214.00 - 0.03 0.14 0.40 0.49 9.114 9.111 0 LEFF 213.28 213.81 214.03 214.09 215.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	KING ST W KING ST W	L Residential	3.5	216.21	-	-		0.22 0.04	0.31	9.162	0.159 0 LEF 0.162 0 LEF	214.18 214.24	214.58	214.80	215.07	215.26	215.43	216.25	216.33 21	.72	0.00	0.00	0.00	0.11	0.26	0.34 0.37	0.58	-1.97	-1.63	-0.34	-0.19	-0.09	-0.06 0.02	0.60	0.55
SAST L Residential 3.5 214.00 - 0.05 0.16 0.42 0.49 9.117 9.114 0 LEFF 213.28 213.61 213.83 214.05 214.09 215.26 0.00 0.00 0.03 0.05 0.08 0.34 -0.72 -0.39 -0.70 -0.44 -0.26 -0.09 0.54 0.60 SAST L Residential 3.5 214.00 - 0.03 0.14 0.40 0.49 9.114 9.111 0 LEFF 213.28 213.81 214.03 214.09 215.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	ING ST W	L Residential L Residential	3.5	217.85	-	-	-	-	-	9.168	0.162 0 LEF 0.165 0 LEF	214.24	214.62	214.85	215.12	215.30	215.48	216.27	216.35 21	.72	0.00	0.00	0.00	0.16	0.30	0.40	0.68	-3.57	-3.23	-0.18	-0.03 -0.72	-0.55	0.18 -0.38	0.43	0.79
SAST L Residential 3.5 214.00 - 0.05 0.16 0.42 0.49 9.117 9.114 0 LEFT 213.28 213.61 213.83 214.05 214.09 215.26 0.00 0.00 0.00 0.00 0.00 0.05 0.08 0.34 0.07 0.39 0.31 0.53 0.57 0.64 0.90 0.99	LOUISA ST LOUISA ST	L Residential	3.5 3.5	214.00	-	0.05	0.16	0.42	0.49	9.117	0.11/ 35 LEF 0.114 0 LEF	213.79	213.61	213.83	214.05	214.09	214.16	214.42	214.49 21	.26	0.00	0.00	0.00	0.03	0.05	0.08	0.34	-0.72	-0.39	-0.83 -0.70	-0.44	-0.26	-0.23 -0.09	0.54	0.67
SAST L Residential 3.5 214.00 - 0.03 0.14 0.40 0.49 9.114 9.111 0 LEFT 213.25 213.58 213.61 214.03 214.07 214.14 214.00 214.99 215.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	LOUISA ST LOUISA ST LOUISA ST	L Residential	3.5	214.00		0.03	0.16	0.40	0.49	9.117	.114 0 LEF	213.28	213.61	213.83	214.03	214.07	214.16	214.42	214.49 21	.26	0.00	0.00	0.00	0.03	0.05	0.08	0.34	-0.72	-0.39	0.31	0.53	0.57	0.64	0.90	0.99
AST L Residential 3.5 214.00 - 0.03 0.14 0.40 0.49 9.114 9.111 67 LEFT 213.25 213.58 213.61 214.03 214.49 215.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	LOUISA ST LOUISA ST LOUISA ST	L Residential	3.5	214.00		0.03	0.14	0.40	0.49	9.114	0.111 0 LEF 0.111 58 LEF	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49 21	.26	0.00	0.00	0.00	0.02 0.02 0.02	0.04	0.07	0.30	-0.75	-0.42	-0.22 -1.40 0.57	-1.16	-1.12	-1.05 0.91	-0.79	-0.70
SAST L Residential 3.5 214.00 - 0.03 0.14 0.40 0.49 9.114 9.111 0 LEFT 213.25 213.58 213.81 214.03 214.47 214.44 214.49 225.26 0.00 0.00 0.00 0.02 0.04 0.07 0.30 0.75 0.42 0.90 0.68 0.20 0.15 0.06 0.01	LOUISA ST LOUISA ST	L Residential L Residential	3.5 3.5	214.00 214.00 214.00	-	0.03 0.03	0.14 0.14	0.40	0.49 0.49	9.114	0.111 67 LEF 0.111 0 LEF	213.25 213.25	213.58 213.58	213.81 213.81	214.03 214.03 214.03	214.07 214.07	214.14	214.40	214.49 21	.26	0.00 0.00 0.00	0.00	0.00	0.02 0.02 0.02	0.04	0.07 0.07	0.30 0.30	-0.75 -0.75	-0.42 -0.42	-0.20 -0.90	-0.03 -0.68	0.10	0.23 -0.15	0.79	0.83

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3461 88 LOUISA ST	L Residential	3.5	214.00	-	0.03	0.14	0.40	0.49	9.114	9.111	54 LEFT	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49	215.26	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-0.75	-0.42	-0.38	-0.19	-0.07	0.03	0.52	0.58	1.52
7241 91 LOUISA ST	L Residential	3.5	213.80	-	0.23	0.34	0.60	0.69	9.114	9.111	0 LEFT	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49	215.26	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-0.55	-0.22	-1.67	-1.50	-1.37	-1.24	-0.72	-0.64	0.38
7246 92 LOUISA ST	L Residential	3.5	214.00	-	0.03	0.14	0.40	0.49	9.111	9.108	0 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.88	-0.49	-0.25	-0.08	0.05	0.18	0.70	0.78	1.80
3457 93 LOUISA ST	L Residential	3.5	213.84	-	0.19	0.30	0.56	0.65	9.114	9.111	59 LEFT	213.25	213.58	213.81	214.03	214.07	214.14	214.40	214.49	215.26	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-0.59	-0.26	-0.05	0.18	0.22	0.29	0.55	0.64	1.40
3462 94 LOUISA ST	L Residential	3.5	214.00	-	0.03	0.14	0.40	0.49	9.111	9.108	36 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.88	-0.49	-0.20	-0.03	0.10	0.23	0.79	0.83	1.52
7247 96 LOUISA ST	L Residential	3.5	214.00	-	0.03	0.14	0.40	0.49	9.111	9.108	0 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.88	-0.49	-2.86	-2.61	-2.44	-2.27	-1.50	-1.42	0.12
7249 97 LOUISA ST	L Residential	3.5	213.81	-	0.22	0.33	0.59	0.68	9.111	9.108	0 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.69	-0.30	-0.70	-0.45	-0.28	-0.12	0.49	0.42	1.01
7248 98 LOUISA ST	L Residential	3.5	214.00	-	0.03	0.14	0.40	0.49	9.111	9.108	0 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.88	-0.49	-2.06	-1.80	-1.63	-1.46	-0.65	-0.56	0.91
1236 99 LOUISA ST	L Residential	3.5	213.75	-	0.28	0.39	0.65	0.74	9.111	9.108	44 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.63	-0.24	-1.37	-1.11	-0.93	-0.76	-0.01	0.06	1.41
1755 99 MEADOWV	LE CF L Residential	3.5	215.36	_	_	_	-	-	9.111	9.108	36 LEFT	213.12	213.51	213.79	214.03	214.07	214.14	214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-2.24	-1.85	-2.12	-1.88	-1.70	-1.54	-1.03	-0.98	0.47
1450 61 MILL ST	L Residential	3.5	214.83	_	_	_	0.46	0.50	9.135	9.132	35 LEFT	213.97	214.16	214.30	214.47	214.60	214.73	215.29	215.33	216.02	0.10	0.13	0.16	0.18	0.20	0.21	0.51	-0.86	-0.67	-2.39	-2.16	-2.01	-1.86	-0.96	-0.96	0.16
3545 65 MILL ST	L Residential	3.5	214.92	_	_	-	0.37	0.41	9.135	9.132	20 LEFT	213.97	214.16	214.30	214.47	214.60	214.73	215.29	215.33	216.02	0.10	0.13	0.16	0.18	0.20	0.21	0.51	-0.95	-0.76	-2.39	-2.14	-1.96	-1.80	-0.82	-0.84	0.23
3025 26 QUEEN ST S	L Residential	3.5	217.47	_	_	-		-	9.159	9.156	0 LEFT	214.14	214.46	214.67	214.93	215.10	215.27	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-3.33	-3.01	-1.71	-1.49	-1.01	-0.96	-0.75	-0.80	0.31
7225 129 RIVERPARI	CRT L Residential	3.5	218.75	_	_	-	_	-	9.198	9.195	0 LEFT	215.83	216.18	216.40	216.65	216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-2.92	-2.57	-1.96	-1.80	-1.68	-1.56	-1.07	-0.99	0.02
7226 134 RIVERPARI		3.5	218.68	_	_	-	_	-	9.198	9.195	0 LEFT	215.83	216.18	216.40	216.65	216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-2.85	-2.50	-1.96	-1.80	-1.68	-1.56	-1.07	-0.99	0.02
7227 135 RIVERPARI		3.5	219.00	_	_	-	_	-	9.198	9.195	0 LEFT	215.83	216.18	216.40	216.65	216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-3.17	-2.82	-1.97	-1.81	-1.69	-1.57	-1.08	-1.00	0.01
7228 137 RIVERPARI		3.5	219.00	_	_	_	_	_	9.201	9.198	0 LEFT	216.04	216.40	216.61	216.84	216.99	217.14	218.04	218.04	219.16	0.03	0.13	0.19	0.24	0.28	0.30	0.69	-2.96	-2.60	-2.09	-1.92	-1.79	-1.66	-1.14	-1.06	-0.04
3026 120 SACKVILLE		3.5	218.00	_	_	-	_	_	9.195	9.192	91 LEFT	215.41	215.77	216.00	216.27	216.46	216.66	217.84	217.79	218.76	0.00	0.15	0.21	0.28	0.31	0.33	0.46	-2.59	-2.23	-2.06	-1.89	-1.76	-1.63	-1.11	-1.03	-0.01
1239 128 SACKVILLE		3.5	217.90	_	_	-	0.07	0.05	9.198	9.195	102 LEFT	215.83	216.18	216.40	216.65	216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-2.07	-1.72	-2.04	-1.87	-1.74	-1.61	-1.09	-1.01	0.01
3348 134 SACKVILLE		3.5	217.87	_	_	-	0.10	0.08	9.198	9.195	120 LEFT	215.83	216.18		216.65	216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-2.04	-1.69	-2.01	-1.84	-1.71	-1.58	-1.06	-0.98	0.04
1240 140 SACKVILLE		3.5	217.63	_	_	-	0.34	0.32	9.198	9.195	0 LEFT	215.83	216.18	216.40		216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-1.80	-1.45	-1.96	-1.79	-1.66	-1.53	-1.01	-0.93	0.09
3349 146 SACKVILLE		3.5	217.50	_	_		0.47	0.45	9.198	9.195	9 LEFT	215.83	216.18	216.40		216.83	216.99	217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-1.67	-1.32	0.01	0.23	0.27	0.34	0.60	0.69	1.46
1248 45 WILLOW ST	L Residential	3.5	215.85		_		0.47	0.43	9.132	9.129	24 LEFT	213.92	214.06	214.14	214.23	214.28	214.34	215.06	215.04	215.52	0.16	0.20	0.26	0.33	0.39	0.45	0.79	-1.93	-1.79	-0.17	0.05	0.09	0.16	0.42	0.49	1.26
1249 50 WILLOW ST		3.5	214.81		_			0.03	9.129	9.126	9 LEFT	213.91	214.04	214.11	214.19	214.23	214.27	214.37	214.84	215.44	0.00	0.03	0.08	0.14	0.18	0.23	0.73	-0.90	-0.77	-0.17	0.05	0.09	0.16	0.42	0.49	1.26
1250 56 WILLOW ST	L Residential	3.5	214.40	_	_			0.44	9.129	9.126	0 LEFT	213.91	214.04	214.11	214.19	214.23	214.27	214.37	214.84	215.44	0.00	0.03	0.08	0.14	0.18	0.23	0.61	-0.49	-0.36	-0.19	0.03	0.07	0.14	0.40	0.49	1.26
3470 62 WILLOW ST	L Residential	3.5	214.04	_	0.13	0.20	0.36	0.43	9.126	9.123	73 LEFT	213.91	214.02	214.09		214.20	214.24	214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-0.13	-0.02	-0.19	0.03	0.07	0.14	0.40	0.49	1.26
3364 69 WILLOW ST	L Residential	3.5	214.50	_	-	-	0.50	0.43	9.126	9.123	53 LEFT	213.91	214.02	214.09	214.17	214.20	214.24	214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-0.59	-0.48	-0.21	0.03	0.07	0.14	0.40	0.49	1.25
3467 81 WILLOW ST	L Residential	3.5	214.33		-		0.18	0.25	9.123	9.120	19 LEFT	213.90	214.02	214.09	214.17	214.21	214.26	214.51	214.58	215.32	0.12	0.02	0.06	0.10	0.14	0.16	0.45	-0.43	-0.32	0.21	0.67	0.71	0.76	1.01	1.08	1.82
3466 85 WILLOW ST		3.5	214.27		-		0.23	0.23	9.120	9.117	7 LEFT	213.79	213.87	213.93	214.17	214.21	214.20	214.50	214.58	215.36	1.45	0.00	0.00	0.00	0.00	0.00	0.32	-0.48	-0.40	0.33	0.64	0.68	0.75	1.01	1.10	1.86
3465 89 WILLOW ST	L Residential	3.5	214.11		-	0.05	0.31	0.31	9.117	9.114	O LEFT	213.79	213.61	213.83	214.05	214.11	214.16	214.42	214.49	215.26	0.00	0.00	0.00	0.03	0.05	0.08	0.34	-0.83	-0.50	0.22	0.45	0.49	0.56	0.82	0.91	1.67
1742 95 WILLOW ST	I Residential	3.5	213.83		0.20	0.03	0.51	0.56	9.117	9.111	62 1557	213.25	213.58	213.83	214.03	214.07	214.14	214.40	214.49	215.26	0.00	0.00	0.00	0.03	0.03	0.00	0.34	-0.63	0.36	0.22	0.45	0.50	0.50	0.89	0.06	1.70
	ctor is the VD criteria along W	illow St. accord Ma		may show this to		1 m2/c crition	0.57	0.00	5.114	9.111	UZ LEFT	213.23	213.30	213.01	214.03	214.07	214.14	214.40	214.49	213.20	0.00	0.00	0.00	0.02	0.04	0.07	0.30	-0.36	-0.25	0.47	0.33	0.59	0.04	0.03	0.90	1.70

1742 9 SWILLOW 31 L RESIDENTIAL 3 21.383 - 0.20 0.31
11 Only high risk factor is the VO criteria along Willow St. access. However 2D modelling may show this to be less than 0.4 m2/s critiera
12 On boundary between Low and High
13 Shallow flooding(c 1.0 m) but velocity on David. 2D modelling required to confirm velocity

TABLE D-2			
Summary of Flood R	isk for Non-res	idential Are	as in Bolton S
500-year Storm			
	Table D-2a:	Buildings and	
	Square Foot	age in Risk Zon	es
	Risk	Area (m2)	No. of buildings
	L	12,988	45
	<u>H</u>	119	1

Table D-2b: Numbe	r of Buildings at Risk	of Flooding (withou	ıt berm)		
Risk	5-year	25-year	100-year	350-year	500-year
L	0	0	7	36	36
<u>H</u>	<u>0</u>	<u>0</u>	<u>1</u>	1	1
Total	0	0	8	37	37
Avg Depth (m):	0.00	0.00	0.09	0.50	0.52

Inventory of Non-Residential Buildings within ESA Boundaries

liiveito	ory of Non-Residential Bu		1																														
OBJECTID Address	Risk Building	Building	Lowest Elev (m)	Flood depth	Flood depth	Flood depth	Flood depth	Flood depth	WSEL	WSEL	WSEL	WSEL 25-year	WSEL	WSEL 100-year	WSEL 350-year	WSEL 500-year	WSEL	Velocity 2-yr (m/s)	Velocity 5-yr (m/s)	Velocity	Velocity	Velocity 50-yr (m/s)	Velocity 100-yr (m/s)	Velocity	Depth 2-yr (m)	Depth 5-yr (m)	Depth 10-yr (m)	Depth 25-yr (m)	Depth 50-yr (m)	Depth 100-yr (m)	Depth 350-yr (m)	Depth 500-yr (m)	Depth
2525 22 25 CHARSE CT		Size (m2)		5-year	25-year	100-year	350-year	500-year	2-year	5-year	10-year		50-year				Regional St.			10-yr (m/s)	25-yr (m/s)			Reg. St. (m/s)				25-yr (m) -1.25					Reg. St. (m)
3535 33-35 CHAPEL ST 3836 28 ANN ST	H Commercial L Fire Hall	119 611	214.58 217.10		-	0.10	0.68	0.71	214.01 214.34	214.20 214.69	214.32 214.92		214.57 215.36	214.68 215.53	215.26 216.28	215.29 216.35	215.94 217.70	0.00	0.00	0.00	0.00	0.07	0.13 0.46	0.57 0.78	-0.57 -2.76	-0.38 -2.41	-1.42 -0.46	-0.23	-1.12 -0.07	-0.99 0.07	-0.47 0.63	-0.39 0.72	0.63
3981 50 ANN ST	L Commercial	545	217.10				-		214.34	214.69	214.92		215.36	215.53		216.35	217.70	0.00	0.00	0.00	0.22		0.46	0.78	-2.76	-2.41	0.04	0.23	0.32	0.07	0.65	0.72	1.76
3994 11 CHAPEL ST	L Commercial	545	216.44				0.52	0.55	214.37	214.72	214.96		215.40	215.56	216.22 215.26	215.29	217.63	0.00	0.00	0.00		0.46	0.48	0.57	-0.73	-1.72	-1.50	-1.25	-1.07	-0.91	0.65	0.74	1.50
3848 15 CHAPEL ST	L Commercial	100	214.74	-	-	-	0.52	0.55	214.01	214.20	214.32		214.57	214.68	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.07	0.13	0.57	-0.73	-0.54	-1.50	-0.98	-0.80	-0.91		0.05	1.12
3849 17-19 CHAPEL ST	L Commercial	100	214.68	-	1	0.00 0.14	0.58	0.61	214.01	214.20	214.32		214.57	214.68	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.07	0.13	0.57	-0.57	-0.48	-1.23	-0.98	-0.80	-0.64	0.34 -0.85	-0.76	0.39
3850 21-23 CHAPEL ST	L Commercial	100	214.54			0.14	0.72	0.75	214.01	214.20	214.32		214.57	214.68	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.07	0.13	0.57	-0.53	-0.34	-1.94	-1.71	-1.55	-1.41	-0.89	-0.76	0.28
3851 25-27 CHAPEL ST	L Commercial	7.7											_		215.26	215.29		0.00	0.00			1.7			-0.55	-0.36	-1.09	-0.92	-0.79	-0.66	-0.14	-0.06	0.21
3847 15 KING ST E	L Commercial	110	214.56	-	-	0.12	0.70	0.73	214.01 214.06	214.20 214.30	214.32		214.57 214.77	214.68	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.07	0.13	0.57	-0.55	-0.70	-0.88	-0.65	-0.79	-0.54	-0.14	-0.19	0.50
21 KING ST E	L Commercial	207	215.00				0.36	0.42			214.46 214.39		214.77	214.87	215.30	215.42	216.36 216.20	0.00	0.00		0.16	0.26	0.35	0.65	-0.75	-0.76	-0.55	-0.83	0.30	-0.34	0.00	0.20	0.37
3995 27 KING ST E	L Commercial	102	214.80	-	-	-	0.51	0.55	214.03 214.01	214.25 214.20	214.39		214.57	214.69	215.31	215.33	215.20	0.00	0.00	0.00	0.00	0.10	0.25	0.62	-0.75	-0.46	-0.23	0.01	0.05	0.12	0.38	0.47	1.33
3995 27 KING ST E	L Commercial	92	214.66 214.50	-	-	0.02	0.60	0.63 0.79	214.01	214.20	214.32		214.57	214.68	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.07	0.13	0.57 0.57	-0.49	-0.46	-1.71	-1.62	-1.57	-1.51	-0.79	-0.81	0.22
23 KING ST W	L Commercial	165	214.50	-	1	0.18	0.76	0.79	214.01	214.20	214.32		214.57	214.68 215.43	216.25	216.33	215.94	0.00	0.00	0.00	0.00	0.07	0.13 0.37	0.57	-2.12	-1.78	-0.18	-0.03	0.07	0.18	0.76	0.79	1.44
2620 20 KING ST W	L Commercial	114	216.50	-	-		-		214.24	214.58	214.80		215.26	215.43	216.25	216.33	217.72	0.00	0.00	0.00	0.11	0.26	0.37	0.58	-2.12	-1.78	-0.70	-0.62	-0.58	-0.54	-0.44	0.73	0.63
3431 28 KING ST W	L Commercial	100	216.50			-	-		214.24	214.58	214.80	215.07	215.26	215.43	216.23	216.35	217.72	0.00	0.00	0.00	0.11	0.26	0.37		-2.33	-1.92	-1.08	-0.02	-0.38	-0.65	-0.13	-0.05	0.03
3839 33 KING ST W		325	217.39				-		214.28	214.62	214.85		215.30	215.48	216.27	216.35	217.72	0.00	0.00	0.00	0.16 0.22	0.30	0.40	0.68 0.78	-2.55	-2.70	-1.06	-1.08	-0.78			-0.03	0.97
43 KING ST W	L Commercial L Post Office	525 524	217.39	-	-		-	-	214.34	214.69	214.92		215.36	215.53	216.28	216.35	217.70	0.00	0.00	0.00		0.42	0.46		-3.05	-2.70	-1.25	-1.08		-0.82	-0.30 -0.30	-0.22	0.80
53 KING ST W	L Commercial	134	217.39	-	-	-	-		214.34	214.69	214.92		215.36	215.53	216.28	216.35	217.70	0.00	0.00	0.00	0.22 0.22	0.42	0.46	0.78 0.78	-3.05	-2.70	-1.25	-1.08	-0.95 -0.95	-0.82 -0.82	-0.30	-0.22	0.80
1738 15 MILL ST	L Commercial	134	217.39	-	1	-	0.36	0.42	214.34	214.69	214.92		215.36	215.53	215.28	215.42	217.70	0.00	0.00	0.00	0.22	0.42 0.26	0.46	0.78	-0.94	-2.70	-1.25	-1.08	-0.95	-0.82	-0.30	-0.22	0.80
3858 9-13 MILL ST	L Commercial	303	215.13				0.04	0.42	214.00	214.33	214.40		214.77	214.87	215.30	215.42	216.20	0.00	0.00	0.00	0.10	0.18	0.24	0.64	-1.06	-0.80	-1.20	-1.12	-0.90	-0.39	-0.25	-0.43	0.00
3853 9-13 MILL ST	L Commercial	303	215.13				0.04	0.26	214.07	214.33	214.50		214.83	214.95	215.17	215.39	216.20	0.00	0.00	0.00	0.12	0.18	0.24	0.64	-0.94	-0.80	-1.20	-0.97	-0.90	-0.77	-0.25	-0.17	0.85
3854 23-29 MILL ST	L Commercial	244	214.67			0.01	0.59	0.62	214.00	214.30	214.40		214.77	214.68	215.26	215.42	215.94	0.00	0.00	0.00	0.00	0.26	0.13	0.57	-0.66	-0.47	-0.43	-0.21	0.27	0.32	0.53	0.48	1.50
3 QUEEN ST N	L Commercial	244	215.30		-	0.01	0.52	0.62	214.01	214.20	214.52		214.57	215.21	215.20	215.25	216.34	0.00	0.00	0.00	0.00		0.00	0.00	-1.17	-0.47	-0.43	0.05	0.27	0.52	0.33	0.46	1.59
3862 11 QUEEN ST N	L Commercial	515	215.30		-		0.52	0.45	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.17	-0.87	-0.17	0.05	0.53	0.58	0.79	0.74	1.05
3473 15 QUEEN ST N	L Commercial	229	215.31		-		0.52	0.43	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.17	-0.88	-2.48	-2.25	-2.04	-1.85	-1.10	-0.96	0.30
3861 15 QUEEN ST N	L Commercial	196	215.32				0.50	0.44	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.10	-0.89	-0.31	-0.14	-0.01	0.12	0.64	0.72	1.74
3340 20 QUEEN ST N	L Commercial	1100	216.06				0.12	0.45	214.13	214.43	214.03		215.05	215.21	216.18	216.27	217.69	0.00	0.00	0.00	0.00	0.20	0.34	0.57	-1.19	-1.56	-0.19	-0.14	0.11	0.12	0.76	0.72	1.74
3866 23 QUEEN ST N	L Commercial	125	215.31				0.51	0.44	214.13	214.30	214.71		215.15	215.31	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.00	-0.88	0.38	0.61	0.65	0.72	0.98	1.07	1.00
3864 25 QUEEN ST N	L Commercial	190	215.28				0.54	0.44	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.15	-0.85	0.29	0.52	0.56	0.72	0.89	0.98	1.74
3845 29 QUEEN ST N	L Commercial	190	215.21				0.61	0.54	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.13	-0.83	-0.17	0.00	0.30	0.03	0.82	0.86	1.74
3860 39 QUEEN ST N	L Commercial	452	215.22				0.60	0.53	214.13	214.43	214.63	214.88	215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.09	-0.79	-0.17	-0.03	0.07	0.18	0.76	0.79	1.07
2399 40 QUEEN ST N	L Commercial	121	215.50				0.58	0.67	214.14	214.46	214.67	214.93	215.10	215.27	216.08	216.17	210.54	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.36	-1.04	-1.91	-1.73	-1.53	-1.35	-0.60	-0.47	0.70
3844 49 QUEEN ST N	L Commercial	295	215.28				0.54	0.47	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.15	-0.85	-1.43	-1.21	-0.73	-0.68	-0.47	-0.52	0.79
3998 56 QUEEN ST N	L Commercial	436	215.50				0.54	0.47	214.13	214.45	214.65		215.03	215.21	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.36	-1.04	-0.56	-0.33	-0.29	-0.22	0.04	0.13	0.55
3997 62 QUEEN ST N	L Commercial	230	215.65				0.43	0.52	214.14	214.46	214.67		215.10	215.27	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.51	-1.19	0.48	0.64	0.75	0.81	1.17	1.27	2.46
3841 2-8 QUEEN ST N	L Commercial	692	215.83				0.45	0.32	214.14	214.46	214.67		215.10	215.27	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.69	-1.13	0.48	0.38	0.50	0.66	1.41	1.54	2.40
3865 19-21 QUEEN ST N	L Commercial	200	215.31				0.51	0.44	214.13	214.43	214.63		215.05	215.21	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.18	-0.88	0.18	0.41	0.45	0.52	0.78	0.87	1.63
2398 42-44 QUEEN ST N	L Commercial	260	215.50				0.58	0.67	214.14	214.46	214.67		215.10	215.27	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.36	-1.04	-0.07	0.03	0.11	0.20	0.50	0.58	1.36
3859 43-45 QUEEN ST N	L Commercial	336	215.30				0.60	0.53	214.14	214.46	214.67		215.10	215.27	215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.09	-0.79	-0.19	0.03	0.07	0.14	0.40	0.49	1.26
7257 46-48 QUEEN ST N	L Commercial	202	215.50				0.58	0.67	214.13	214.45	214.65		215.03	215.21	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.36	-1.04	-0.90	-0.65	-0.48	-0.32	0.29	0.43	0.81
7258 50-52 QUEEN ST N	L Commercial	285	215.50				0.58	0.67	214.14	214.46	214.67		215.10	215.27	216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.36	-1.04	-0.54	-0.35	-0.23	-0.13	0.36	0.42	1.36
3843 51-55 QUEEN ST N	L Commercial	537	215.12				0.05	0.87	214.14	214.46	214.50		214.83	214.95	215.17	215.39	216.20	0.00	0.00	0.00	0.12	0.18	0.24	0.64	-1.05	-0.79	-0.69	-0.47	-0.23	-0.15	-0.10	-0.03	0.74
1737 63-65 A QUEEN ST N	L Commercial	130	215.53				0.29	0.27	214.07	214.55	214.63		214.85	214.93	215.17	215.75	216.34	0.00	0.00	0.00	0.12	0.00	0.00	0.00	-1.40	-1.10	-0.45	-0.47	-0.43	-0.12	0.14	0.23	1.00
2621 6 QUEEN ST S	L Commercial	100	215.60				0.48	0.22	214.13	214.45	214.65	214.00	215.03	215.21	216.08	215.75	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-1.46	-1.10	0.31	0.53	0.57	0.64	0.14	0.23	1.76
3856 15 QUEEN ST S	L Commercial	347	214.91			-	0.35	0.37	214.14	214.40	214.07	214.93	214.57	213.27	215.26	215.29	215.94	0.00	0.00	0.00	0.00	0.16	0.13	0.57	-0.90	-0.71	-0.02	0.33	0.24	0.84	0.57	0.66	1.43
3835 49 STERNE ST	I Nursing Home	995	214.91				0.55	0.56	214.01	214.20	214.32	214.47	214.37	214.00	216.22	216.29	213.54	0.00	0.00	0.00	0.00	0.07	0.13	0.57	-0.90	-0.71	-0.02	-1.06	-0.89	-0.72	0.37	0.00	1.45
3033 4331EM4E31	L INGLISHING HOTHE	993	217.11						214.5/	214.72	214.90	213.22	215.40	213.30	210.22	210.23	217.05	0.00	0.00	0.00	0.52	0.40	0.40	0.97	-2.74	-2.33	-1.32	-1.00	-0.03	-0.72	0.03	0.10	1.03

TABLE D-3

Summary of Flood Rick for Residential Areas in Rolton SP

summary of Flood Risk for Residential Areas	s in Bolton SPA		
Regional Storm	Table D-3a: Popu	lation and Houses in	Risk Zones
	Risk	Population:	No. of Houses
	L	158	45
	H1/H2/H3	91	26
	<u>H</u>	347	<u>98</u>
	T-4-1	FOF	1.00

Table D-3b: Nu	mber of Houses	at Risk of Floor	ling (without be	erm)	
Risk	5-year	25-year	100-year	350-year	500-year
L	0	1	4	8	10
M	7	8	8	10	13
<u>H</u>	8	42	<u>63</u>	88	90
Total	15	51	75	106	113
Avg Depth (m):	0.22	0.28	0.36	0.56	0.59

		H1/H2/H3 <u>H</u> Total	91 <u>347</u> 595	26 <u>98</u> 169			M <u>H</u> Total Avg Depth (m):	7 <u>8</u> 15 0.22	8 <u>42</u> 51 0.28	8 <u>63</u> 75 0.36	10 <u>88</u> 106 0.56	13 <u>90</u> 113 0.59																					
Inventory of Residential Buil	ldings within ESA Bounda	aries	People/house:	3.5						3.00	2.00	3.33																					
OBJECTID Address	RISK Building	Population	Lowest		Flood depth					WSEL	WSEL						WSEL	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Depth	Depth Fur (m)	Depth 10 vs (m)	Depth	Depth 50 vs (m)	Depth	Depth 250 yr (m)	Depth 500 vs (m)	Depth
08JECTID 2960 13029 13031 22 ELM ST 3032 22 ELM ST 3032 23 ELM ST 3032 24 ELM ST 3032 34 ELM ST 3609 13 HICKMAN ST 2422 34 HICKMAN ST 2422 34 HICKMAN ST 3242 35 HICKMAN ST 3242 35 HICKMAN ST 327 36 HICKMAN ST 327 37 SHICKMAN ST 327 37 SHICKMAN ST 327 37 SHICKMAN ST 327 38 HICKMAN ST 327 39 HICKMAN ST 327 39 HICKMAN ST 327 39 HICKMAN ST 327 34 SHICKMAN ST 327 34 SHICKMAN ST 327 34 HICKMAN ST 327 34 HICKMAN ST 342 35 HICKMAN ST 36 HICKMAN ST 36 HICKMAN ST 37 36 HICKMAN ST 37 37 JAMES ST 37 36 JAMES ST 37 37 37 JAMES ST 37 37 38 JAMES ST 38 J	RISK Building H Residential	Population 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.	Lowest Elev (m)	Flood depth 5-year	Flood depth 25-year	Flood depth 100-year 100-ye		Flood depth 500-year 1	WSEL 2-year 21-year 21	Visear 214.19 214.19 214.19 214.20 214.19 214.21 214.19 214.20 214.19 214.20 214.19 214.20 214.50 214.51 215.02 214.51 215.02 214.51 215.02 214.51 215.02 215.01 215.02 215.01 215.02 215.01 215.02 215.02 215.02 215.02 215.02 215.02 215.02 215.02 215.02 215.02 215.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.02 212.01 2	WSEL 10-year 214.33 214.33 214.33 214.33 214.33 214.33 214.33 214.33 214.32 214.33 214.32 214.39 215.26 215.26 215.26 215.26 215.26 215.26 215.26 215.26 215.26 215.26 215.27 215.27 212.27 213.79 213.81	25-year 214.50 214.50 214.50 214.47 214.50 214.47 215.07 215.18 215.24 215.18 215.54 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 215.52 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.02 214.03	50-year 2014-63 214-63 214-63 214-63 214-63 214-63 214-63 214-63 214-63 214-63 214-67 214-68 214-68 214-68 214-68 214-68 214-68 214-68 214-68 214-68 214-67 2	100-year 359 214.77	15.53 2 2 15.32 2 2 15.32 2 2 15.32 2 2 15.32 2 15.32 2 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 15.32 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 16.25 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.43 2 14.44	100-year 100-year	WSEL 296001 St. 216.007 216.007 216.007 216.007 216.007 216.007 216.007 216.007 216.007 216.007 216.007 216.007 215.94 217.72 217.72 217.72 217.72 217.72 217.79 217.93 217.50 21	Velocity 2-yr (m/s) 0.14 0.14 0.14 0.00 0.00 0.00 0.00 0.00	Velocity S-yr (m/s)	Velocity 10-yr (m/s) 0.11 0.11 0.11 0.11 0.00 0.0	Velocity 25-yr (m/s)	Velocity 50-yr (m/s) 50-yr (m/s) 50-yr (m/s) 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.20 0.30 0.42 0.56 0.14 0.00 0.56 0.20 0.56 0.20 0.0	Velocity 100-yr (m/s) 0.19 0.19 0.19 0.13 0.19 0.13 0.19 0.13 0.19 0.13 0.19 0.13 0.19 0.13 0.19 0.13 0.37 0.40 0.46 0.59 0.28 0.00 0.59 0.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.05 0.	Velocity Reg. St. (m/s)	Depth	Depth	Depth 10-yr (m) -0.34 -1.02 -0.03 -0.31 -0.45 -0.19 -0.21 -0.75 -0.34 -0.23 -0.32 -0.37 -0.68 -0.45 -0.23 -0.43 -0.23 -0.43 -0.25 -0.77 -0.26 -0.47 -0.91 -0.89 -0.92 -0.113 -0.06 -0.113 -0.06 -0.113 -0.06 -0.113 -0.06 -0.113 -0.06 -0.18 -0.36 -0.68 -0.68 -0.63 -0.69 -0.67 -0.65 -0.68 -0.68 -0.68 -0.68 -0.68 -0.68 -0.68 -0.68 -0.69 -0.67 -0.65 -0.69 -0.67 -0.65 -0.68 -0.68 -0.68 -0.69 -0.67 -0.69 -0.69 -0.67 -0.69 -0.69 -0.67 -0.69 -0.69 -0.67 -0.69 -0.	Depth 25-yr (m) 25-yr (m)	Depth	Depth 100-yr (m) 100-yr (m) -0.01 -0.63 0.30 0.04 0.79 0.14 -0.07 0.20 0.40 0.21 -0.10 0.62 0.50 0.32 0.18 -0.29 -0.63 -1.04 0.75 -0.38 -0.10 0.65 -0.51 -0.23 -0.60 0.61 -1.57 -1.52 -1.86 -0.13 0.01 -0.12 0.37 -0.13 -0.01 -0.12 0.37 -0.13 -0.01 -0.15 -0.23 -0.01 -0.15 -0.23 -0.01 -0.11 -0.09 -0.07 -0.10 -0.11 -0.09 -0.07 -0.10 -0.11 -0.09 -0.07 -0.10 -0.23 -0.25 -0.23 -0.25 -0.25 -0.25 -0.25 -0.25 -0.56 -0.66 -0.51 -0.23 -0.25 -0.25 -0.56 -0.66 -0.51 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.23 -0.23 -0.25 -0.56 -0.66 -0.51 -0.23 -0.	Depth Story rm Control Contr		Depth Reg. 5.4 (m) Reg. 5.4 (m) Reg. 5.4 (m) 1.51 1.51 1.51 1.52 1.76 1.70 1.26 1.75 1.71 1.70 1.76 1.76 1.76 1.76 1.76 1.76 1.76 1.76

7254	70 KING CT	F 114	Desidential	2.5	214.07	1	1	1	1		242.04	214.04	214.11	1440 2443	214 27	21427	214.04	215 44	0.00	0.03	0.00	0.14	0.10	0.22	0.61	0.00	0.03	4 27	1.00	0.01	0.64	0.10	0.20	1.65
3539	70 KING ST 74 KING ST		Residential Residential	3.5 3.5	214.87 215.00	_					213.91 213.91	214.04 214.02		214.19 214.23 214.17 214.20		214.37 214.40	214.84 214.47	215.44 215.30	0.00	0.03	0.08	0.14 0.11	0.18 0.14	0.23 0.18	0.61 0.49	-0.96 -1.09	-0.83 -0.98	-1.27 -1.16	-1.00 -0.90	-0.81 -0.73	-0.64 -0.56	0.18 0.25	0.26 0.34	1.65
	75 KING ST		Residential	3.5	215.00						213.91	214.02		214.19 214.23		214.37	214.47	215.44	0.00	0.02	0.08	0.11	0.14	0.23	0.61	-1.09	-0.96	-1.10	-0.91	-0.77	-0.64	-0.10	0.00	1.62
3540	82 KING ST	F H1	Residential	3.5	214.98						213.90	214.01		14.17 214.21		214.51	214.58	215.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	-1.08	-0.97	-0.62	-0.42	-0.29	-0.17	0.05	0.27	1.08
	83 KING ST		Residential	3.5	215.00	-		_		_	213.91	214.04		14.19 214.23		214.37	214.84	215.44	0.00	0.03	0.08	0.14	0.18	0.23	0.61	-1.09	-0.96	-0.65	-0.40	-0.23	-0.07	0.54	0.47	1.06
	88 KING ST		Residential	3.5	214.85	-	-	-	-	-	213.79	213.87		14.03 214.11		214.50	214.58	215.36	1.45	0.00	0.00	0.00	0.00	0.00	0.32	-1.06	-0.98	-0.58	-0.33	-0.16	0.00	0.61	0.54	1.13
1739	94 KING ST	E H1	Residential	3.5	214.52	-	-	-	-	-	213.28	213.61	213.83	214.05 214.09	214.16	214.42	214.49	215.26	0.00	0.00	0.00	0.03	0.05	0.08	0.34	-1.24	-0.91	-0.60	-0.35	-0.18	-0.02	0.59	0.52	1.11
1249			Residential	3.5	214.81	-	-	-	-	0.03	213.91	214.04		214.19 214.23		214.37	214.84	215.44	0.00	0.03	0.08	0.14	0.18	0.23	0.61	-0.90	-0.77	-0.17	0.05	0.09	0.16	0.42	0.49	1.26
1250			Residential	3.5	214.40	-	-	-	-	0.44	213.91	214.04		214.19 214.23		214.37	214.84	215.44	0.00	0.03	0.08	0.14	0.18	0.23	0.61	-0.49	-0.36	-0.19	0.03	0.07	0.14	0.40	0.49	1.26
3470			Residential	3.5	214.04	-	0.13	0.20	0.36	0.43	213.91	214.02		214.17 214.20		214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-0.13	-0.02	-0.19	0.03	0.07	0.14	0.40	0.49	1.26
1745			Residential	3.5	213.99	0.44	0.89	1.22	1.83	1.76	214.13	214.43		214.88 215.05		215.82	215.75	216.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.44	-0.21	0.03	0.07	0.14	0.40	0.49	1.25
3364			Residential	3.5	214.50	- 0.10	- 0.24	0.42	- 0.60	- 75	213.91	214.02		214.17 214.20		214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-0.59	-0.48	-0.21	0.03	0.07	0.14	0.40	0.49	1.25
3476 3837			Residential Residential	3.5 3.5	213.83 217.05	0.18	0.34	0.43	0.68	0.75	213.90 214.34	214.01 214.69		214.17 214.21 215.18 215.36		214.51 216.28	214.58 216.35	215.32 217.70	0.12 0.00	0.01	0.06	0.10 0.22	0.13 0.42	0.16 0.46	0.45 0.78	0.07 -2.71	0.18 -2.36	-0.21 -2.11	0.03 -1.87	0.07 -1.69	0.14 -1.53	0.40 -1.02	0.49 -0.97	1.25
1453			Residential	3.5	214.50	-	-	-	-	-	214.34	214.69		213.29 213.77		214.03	213.98	217.70	0.00	0.00	0.00	0.22	0.42	0.00	0.78	-2.71	-1.62	-0.89	-0.81	-0.77	-0.73	-0.63	-0.97	0.48
1446			Residential	3.5	214.15				0.24	0.33	213.03	213.50		214.02 214.06		214.39	214.48	215.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-1.12	-0.65	-0.86	-0.77	-0.72	-0.66	0.06	0.04	0.52
3546			Residential	3.5	212.96	_	_	_	0.24	0.08	211.36	211.62		11.88 212.00		212.91	213.04	214.30	0.00	0.12	0.21	0.29	0.29	0.38	0.49	-1.60	-1.34	-0.73	-0.58	-0.48	-0.42	-0.06	0.07	1.00
3551			Residential	3.5	213.28	-		_	0.35	0.44	211.98	212.34		12.77 212.93		213.63	213.72	214.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-1.30	-0.94	-0.74	-0.51	-0.35	-0.21	0.35	0.44	1.48
3469			Residential	3.5	213.77	0.25	0.40	0.47	0.63	0.70	213.91	214.02		214.17 214.20		214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	0.14	0.25	-1.64	-1.44	-1.30	-1.16	-0.36	-0.15	1.17
1744			Residential	3.5	213.79	0.23	0.38	0.45	0.61	0.68	213.91	214.02		214.17 214.20		214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	0.12	0.23	-2.80	-2.57	-2.36	-2.17	-1.42	-1.28	-0.02
7250		Т Н3	Residential	3.5	213.50	0.51	0.67	0.76	1.01	1.08	213.90	214.01	214.09	214.17 214.21	214.26	214.51	214.58	215.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.40	0.51	-0.31	-0.08	0.13	0.32	1.07	1.21	2.47
3474			Residential	3.5	213.64	0.37	0.53	0.62	0.87	0.94	213.90	214.01		214.17 214.21		214.51	214.58	215.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.26	0.37	-0.21	-0.03	0.17	0.35	1.10	1.23	2.49
	60 DAVID S		Residential	3.5	213.86	0.15	0.31	0.40	0.65	0.72	213.90	214.01		214.17 214.21		214.51	214.58	215.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	0.04	0.15	-0.21	-0.10	0.02	0.18	0.93	1.06	2.32
3347			Residential	3.5	217.00	-			-	-	214.24	214.58		215.07 215.26		216.25	216.33	217.72	0.00	0.00	0.00	0.11	0.26	0.37	0.58	-2.76	-2.42	-0.21	0.02	0.06	0.13	0.39	0.48	1.24
	23 HICKMA		Residential	3.5	216.97			-		-	214.34	214.69		215.18 215.36		216.28	216.35	217.70	0.00	0.00	0.00	0.22	0.42	0.46	0.78	-2.63	-2.28	-0.28	-0.06	-0.02	0.05	0.31	0.38	1.15
3345			Residential	3.5	216.86	-	-	-	-	-	224.57	214.72		215.22 215.40		216.22	216.29	217.63	0.00	0.00	0.00	0.32	0.46	0.48	0.97	-2.49	-2.14	-0.24	-0.16	-0.12	-0.07	0.18	0.25	0.99
7232 2963	132 ALBERT		Residential Residential	3.5 3.5	214.78 213.81			0.01	0.22	0.17	212.61 212.61	212.88 212.88		213.29 213.77 213.29 213.77		214.03 214.03	213.98 213.98	215.09 215.09	0.00	0.00	0.00	0.00	0.00	0.00	0.31 0.31	-2.17 -1.20	-1.90 -0.93	-0.17 -0.18	0.00 -0.03	0.13 0.07	0.27 0.18	0.82 0.76	0.86 0.79	1.57 1.44
7233			Residential	3.5	213.81			0.01	0.22	0.17	212.51	212.88		13.03 213.15		213.76	213.98	215.09	0.00	0.00	0.00	0.00	0.00	0.00	0.34	-1.20	-0.93	-0.18	0.00	0.07	0.18	0.76	0.79	1.44
	139 ALBERT		Residential	3.5	214.00						212.52	212.74		13.03 213.15		213.76	213.84	214.85	0.92	0.00	0.00	0.00	0.00	0.00	0.34	-1.48	-1.26	-0.17	0.00	0.13	0.27		0.86	1.57
	140 ALBERT		Residential	3.5	214.83	_					212.52	212.74		13.03 213.15		213.76	213.84	214.85	0.92	0.00	0.00	0.00	0.00	0.00	0.34	-2.31	-2.09	-1.35	-1.09	-0.91	-0.75	0.12	0.21	1.63
	144 ALBERT		Residential	3.5	214.84	-		_		-	212.52	212.74		13.03 213.15		213.76	213.84	214.85	0.92	0.00	0.00	0.00	0.00	0.00	0.34	-2.32	-2.10	-2.23	-1.97	-1.80	-1.63	-0.82	-0.73	0.74
	145 ALBERT		Residential	3.5	213.95	-		_		-	212.38	212.62		12.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.57	-1.33	-1.70	-1.41	-1.20	-0.98	0.43	0.35	1.31
	146 ALBERT		Residential	3.5	214.84	-	-	-	-	-	212.38	212.62		12.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-2.46	-2.22	-1.38	-1.09	-0.88	-0.66	0.75	0.67	1.63
7237	150 ALBERT	rst L	Residential	3.5	214.81	-	-	-	-	-	212.38	212.62	212.75	12.92 213.05	213.18	213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-2.43	-2.19	-1.74	-1.46	-1.27	-1.09	-0.43	-0.34	0.93
3369			Residential	3.5	213.69	-	-	-	0.01	0.09	212.38	212.62		12.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.31	-1.07	-1.90	-1.64	-1.46	-1.30	-0.64	-0.57	0.77
7238			Residential	3.5	214.79	-	-	-	-	-	212.38	212.62		212.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-2.41	-2.17	-2.05	-1.79	-1.61	-1.44	-0.69	-0.62	0.73
1253			Residential	3.5	214.00	-	-	-	-	-	212.38	212.62		212.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.62	-1.38	-2.20	-1.93	-1.74	-1.57	-0.75	-0.67	0.72
7239			Residential	3.5	214.76	-	-	-	-	-	212.38	212.62		12.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-2.38	-2.14	-1.47	-1.22	-1.04	-0.88	0.10	0.08	1.15
1252			Residential	3.5	213.83	-	-	-	-	-	212.38	212.62		212.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.45	-1.21	-1.10	-0.85	-0.67	-0.51	0.47	0.45	1.52
7240 3368			Residential Residential	3.5 3.5	214.71 213.66	-	-	-	0.02	0.11	212.38 212.18	212.62 212.51		212.92 213.05 212.86 213.01		213.70 213.68	213.78 213.77	214.80 214.78	1.04 1.09	0.00	0.00	0.00	0.00	0.00	0.45 0.00	-2.33 -1.48	-2.09 -1.15	-0.24 -1.19	-0.09 -0.97	0.01 -0.93	0.07 -0.86	0.43 -0.60	0.56 -0.51	1.49 0.26
1243			Residential	3.5	213.00	-			0.02	0.11	212.18	212.51		212.86 213.01		213.68	213.77	214.78	1.09	0.00	0.00	0.00	0.00	0.00	0.00	-2.39	-2.06	-1.19	-1.01	-0.98	-0.94	-0.78	-0.71	0.12
3367			Residential	3.5	213.57				0.06	0.15	211.98	212.34		12.77 212.93		213.63	213.77	214.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-1.59	-1.23	0.46	0.69	0.73	0.80	1.06	1.15	1.91
	178 ALBERT		Residential	3.5	214.48		_	_	-	-	211.98	212.34		12.77 212.93		213.63	213.72	214.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-2.50	-2.14	-0.41	-0.33	-0.30	-0.26	-0.10	-0.03	0.80
	195 ALBERT		Residential	3.5	213.50	-	-	-	-	-	211.20	211.42		11.77 211.97		212.90	213.03	214.29	0.00	0.00	0.20	0.37	0.42	0.46	0.53	-2.30	-2.08	-0.18	-0.03	0.07	0.18	0.76	0.79	1.44
	204 ALBERT		Residential	3.5	213.84	-	-	-	-	-	212.38	212.62		12.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.46	-1.22	-0.20	-0.03	0.10	0.23	0.79	0.83	1.52
1245	210 ALBERT		Residential	3.5	214.17	-	-	-	-	-	212.38	212.62	212.75	12.92 213.05	213.18	213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-1.79	-1.55	-1.03	-0.80	-0.64	-0.50	0.06	0.15	1.19
1443			Residential	3.5	212.94	-	-	0.24	0.76	0.84	212.38	212.62		212.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-0.56	-0.32	-0.99	-0.80	-0.65	-0.52	0.02	0.11	1.12
	217 ALBERT		Residential	3.5	213.06	-	-	0.12	0.64	0.72	212.38	212.62		212.92 213.05		213.70	213.78	214.80	1.04	0.00	0.00	0.00	0.00	0.00	0.45	-0.68	-0.44	-0.94	-0.77	-0.64	-0.51	0.01	0.09	1.11
	48 CHERRY		Residential	3.5	214.54	-	-	-	-	0.04	213.90	214.01		214.17 214.21	214.26	214.51	214.58	215.32	0.12	0.01	0.06	0.10	0.13	0.16	0.45	-0.64	-0.53	-1.38	-1.12	-0.94	-0.78	0.09	0.18	1.60
	50 CHERRY		Residential	3.5	215.18	-				-	213.91	214.02		214.17 214.20		214.40	214.47	215.30	0.00	0.02	0.06	0.11	0.14	0.18	0.49	-1.27	-1.16	-2.70	-2.44	-2.27	-2.10	-1.29	-1.20	0.27
3355 3463	81 CHERRY 87 CHERRY		Residential Residential	3.5 3.5	215.00 214.54	-			1		213.25 213.12	213.58 213.51		214.03 214.07 214.03 214.07		214.40 214.40	214.49 214.49	215.26 215.25	0.00	0.00	0.00	0.02 0.02	0.04 0.04	0.07 0.06	0.30 0.28	-1.75 -1.42	-1.42 -1.03	-1.76 -3.00	-1.49 -2.73	-1.31 -2.55	-1.13 -2.37	-0.34 -1.58	-0.26 -1.50	1.11 -0.13
1247			Residential	3.5	214.54		0.01	0.12	0.38	0.47	213.12	213.51		214.03 214.07		214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-0.90	-0.51	-0.30	-2.73	-0.03	0.03	0.39	0.49	1.68
1247			Residential	3.5	214.67		0.01	0.12	-	-	213.03	213.50		214.02 214.06		214.39	214.48	215.24	0.00	0.00	0.00	0.02	0.03	0.05	0.26	-1.64	-1.17	0.14	0.30	0.41	0.47	0.83	0.93	2.12
	80 JAMES S		Residential	3.5	214.35	-	-	-	0.04	0.13	213.03	213.50		214.02 214.06		214.39	214.48	215.24	0.00	0.00	0.00	0.01	0.03	0.05	0.26	-1.32	-0.85	-0.62	-0.45	-0.32	-0.19	0.37	0.41	1.10
	55 JOHN ST		Residential	3.5	213.28	-	-	-	-	-	211.20	211.42		11.77 211.97		212.90	213.03	214.29	0.00	0.00	0.20	0.37	0.42	0.46	0.53	-2.08	-1.86	-0.73	-0.58	-0.48	-0.42	-0.06	0.07	1.00
3548	58 JOHN ST	L	Residential	3.5	213.67	-	-	-	-	0.05	211.98	212.34	212.54	12.77 212.93	213.07	213.63	213.72	214.76	0.71	0.00	0.05	0.13	0.16	0.16	0.44	-1.69	-1.33	-0.49	-0.34	-0.24	-0.13	0.45	0.48	1.13
1441			Residential	3.5	213.99	-	-	-	-	-	211.01	211.33		211.74 211.95		212.89	213.03	214.29	0.00	0.39	0.30	0.40	0.42	0.43	0.46	-2.98	-2.66	-1.15	-0.88	-0.70	-0.52	0.27	0.35	1.72
3451			Residential	3.5	214.31	-	-	-	-	-	211.01	211.33		211.74 211.95		212.89	213.03	214.29	0.00	0.39	0.30	0.40	0.42	0.43	0.46	-3.30	-2.98	-2.15	-1.89	-1.71	-1.55	-0.89	-0.82	0.52
3432			Residential	3.5	217.85	-	-	-	-	-	214.28	214.62		215.12 215.30		216.27	216.35	217.72	0.00	0.00	0.00	0.16	0.30	0.40	0.68	-3.57	-3.23	-0.98	-0.72	-0.55	-0.38	0.43	0.52	1.99
1755			Residential	3.5	215.36	-	-	-	-	-	213.12	213.51		214.03 214.07		214.40	214.49	215.25	0.00	0.00	0.00	0.02	0.04	0.06	0.28	-2.24	-1.85	-2.12	-1.88	-1.70	-1.54	-1.03	-0.98	0.47
3341			Residential	3.5	216.90	-	-	-	-	-	214.14	214.46		214.93 215.10		216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-2.76	-2.44	-2.39	-2.16	-2.01	-1.86	-0.96	-0.96	0.16
3428			Residential	3.5	217.37	-	-	-		-	214.14	214.46		214.93 215.10		216.08	216.17	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-3.23	-2.91	-0.39	-0.31	-0.27	-0.23	-0.13	0.34	0.94
3025			Residential Residential	3.5	217.47	-				-	214.14	214.46 216.18		214.93 215.10 216.65 216.83		216.08 217.97	216.17 217.95	217.64	0.00	0.00	0.00	0.00	0.16	0.29	0.57	-3.33 -2.92	-3.01 -2.57	-1.71 -1.96	-1.49 -1.80	-1.01 -1.68	-0.96 -1.56	-0.75 -1.07	-0.80 -0.99	0.31 0.02
7225 7226			Residential	3.5 3.5	218.75 218.68	-					215.83 215.83	216.18		216.65 216.83 216.65 216.83		217.97	217.95	219.02 219.02	0.17 0.17	0.26 0.26	0.30 0.30	0.36 0.36	0.41 0.41	0.45 0.45	0.89 0.89	-2.92	-2.50	-1.96	-1.80	-1.68	-1.56	-1.07	-0.99	0.02
7227			Residential	3.5	219.00						215.83	216.18		216.65 216.83		217.97	217.95	219.02	0.17	0.26	0.30	0.36	0.41	0.45	0.89	-2.85	-2.82	-1.96	-1.80	-1.00	-1.56	-1.07	-1.00	0.02
7228			Residential	3.5	219.00						215.03	216.40		216.84 216.99		218.04	217.93	219.16	0.03	0.13	0.19	0.24	0.28	0.30	0.69	-2.96	-2.60	-2.09	-1.92	-1.69 -1.79	-1.66	-1.14	-1.06	-0.04
	120 SACKVI		Residential	3.5	218.00						215.41	215.77		16.27 216.46		217.84	217.79	218.76	0.00	0.15	0.19	0.24	0.28	0.33	0.46	-2.59	-2.23	-2.06	-1.89	-1.76	-1.63	-1.11	-1.03	-0.01
2020																																		

3.5 218.00

H1 Only high risk factor is the VD criteria along Willow St. access. However 2D modelling may show this to be less than 0.4 m2/s critiera
H2 On boundary between Low and High
H3 Shallow flooding(< 1.0 m) but velocity on David. 2D modelling required to confirm velocity

March 2014
TABLE D-4
Summary of Flood Risk for Non-residential Areas in Bolton SPA
Regional Storm

Table D-4a Buildings and	Square Footag	ge in Risk Zones
Risk	Area (M2)	No. of building
L	1,606	2
<u>H</u>	11,501	44
Total	13 107	46

Secondary Seco	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
395. 395.	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
3981 10 AMS 17	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
2994 11 CAPPLEST Commercial 90 214.74 - - 0.02 0.55 9.141 9.188 0 LEFT 214.01 214.20 224.87 224.68 223.20 223.59 225.59 0.00 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
3848 S. CAPARLET Commercial 100 216.48	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
See 1.7.5 Commercial 100 214.54 0.15 0.72 0.75 9.141 9.138 0 EFT 214.01 214.20 214.27 214.67 214.67 214.57 214.68 215.20 215.54 0.00	0.13 0.57 -0.53 -0.34 -1.94 -1.71 -1.55 -1.41 -0.85 -0.76 0.28 0.13 0.57 -0.52 -0.33 -1.90 -1.71 -1.56 -1.43 -0.89 -0.80 0.21 0.13 0.57 -0.55 -0.36 -1.09 -0.92 -0.79 -0.66 -0.14 -0.06 0.96 0.35 0.65 -0.94 -0.70 -0.88 -0.65 -0.61 -0.54 -0.28 -0.19 0.57 0.25 0.62 -0.75 -0.56 -0.55 -0.33 -0.30 -0.30 0.00 0.00 0.20 0.90 0.13 0.57 -0.65 -0.46 -0.23 0.01 0.05 0.12 0.38 0.47 1.23 0.13 0.57 -0.49 -0.30 -1.71 -1.62 -1.57 -1.51 -0.79 -0.81 -0.33 0.37 0.58 -2.12 -1.78 -0.18 -0.03
Section Sect	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
3811 25-72 CMPELST Commercial 10 214.56 - 0.012 0.70 0.73 9.141 9.138 0 UFF 214.00 214.32 214.67 214.68 215.26 215.29 215.94 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
15 NM ST E Commercial 207 215.00	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
21 KMS ST Commercial 102 214.80	0.25 0.62 -0.75 -0.56 -0.55 -0.33 0.30 -0.30 0.00 0.20 0.90 0.13 0.57 -0.65 -0.46 -0.23 0.01 0.05 0.12 0.38 0.47 1.23 0.13 0.57 -0.49 -0.30 -1.71 -1.62 -1.57 -1.51 -0.79 -0.81 -0.33 0.37 0.58 -2.12 -1.78 -0.18 -0.03 0.07 0.18 0.76 0.79 1.44
3995 ZYRNST E Commercial 92 Z14.66 . 0.02 0.60 0.63 9.141 9.138 0.157 0.140 9.141 9.138 0.157 0.140 9.141 9.138 0.157 0.140 9.141 9.138 0.157 0.140 9.141 9.140 9.140	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
3396 31 KINGSTE Commercial 16 214.50 - 0.18 0.76 0.79 9.141 9.138 103 LEFT 214.01 214.20 214.32 214.87 215.56 215.26 215.26 215.26 215.26 215.20 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.13
22 NN 65 TW Commercial 1.00 216.50 9.165 9.162 0 LET 214.24 214.85 214.80 215.07 215.66 215.43 216.25 216.33 217.72 0.00 0.00 0.00 0.00 0.01 10.26 0.3 3431 28 NN 65 TW Commercial 1.00 216.61 9.168 9.165 0 LET 214.42 214.85 214.80 215.07 215.56 215.43 216.25 216.33 217.72 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.37
2620 20 KMS ST W Commercial 100 216.50 9.168 91.62 0 LEFT 214.28 214.58 215.07 215.26 215.26 215.26 216.25 216.23 21.772 0.00 0.00 0.00 0.11 0.26 0.3 0.4 34 KMS ST W Commercial 325 217.39 9.188 91.65 0 LEFT 214.28 214.485 215.12 215.30 215.48 216.27 216.38 21.770 0.00 0.00 0.00 0.00 0.00 0.00 0.00	
331 28 KNGSTW Commercial 325 217.39 9.178 9.168 9.165 0 LEFT 214.28 214.62 214.85 215.12 215.36 215.33 216.28 215.27 20.00 0.00 0.00 0.00 0.00 0.00 0.00	0.37 0.58 -2.26 -1.92 -0.70 -0.62 -0.58 -0.54 -0.44 0.03 0.63
3389 338 MINSTW Commercial 325 217.39 9.171 9.168 0 EFT 214.34 214.69 214.92 215.18 215.36 215.53 216.28 216.35 217.70 0.00 0.00 0.00 0.02 0.22 0.42 0.40 0.53 MINSTW Commercial 134 217.39 9.171 9.168 0 EFT 214.34 214.69 214.92 215.18 215.36 215.53 216.28 216.35 217.70 0.00 0.00 0.00 0.00 0.02 0.42 0.42 0.4	
## REPORT	0.40 0.68 -2.33 -1.99 -1.08 -0.91 -0.78 -0.65 -0.13 -0.05 0.97
SARINGSTW Commercial 134 217.39 - - - - - - - - -	0.46 0.78 -3.05 -2.70 -1.25 -1.08 -0.95 -0.82 -0.30 -0.22 0.80
1738 15 MILLST 15 Commercial 92 215.00 - - - - 0.36 0.42 9.144 9.141 0 LEFT 214.06 214.30 214.46 214.65 214.77 214.87 215.36 215.22 215.36 0.00 0.	0.46 0.78 -3.05 -2.70 -1.25 -1.08 -0.95 -0.82 -0.30 -0.22 0.80
3858 9.13 MILLST Commercial 303 215.13 0.04 0.26 9.147 9.141 0 LEFT 214.07 214.33 214.46 214.67 214.77 214.87 215.39 216.20 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.46 0.78 -3.05 -2.70 -1.25 -1.08 -0.95 -0.82 -0.30 -0.22 0.80
3854 23-29 MILLST Commercial 782 215.00 0.36 0.42 9.144 9.141 0 LEFT 214.05 214.46 214.46 214.45 224.47 214.87 215.36 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.35 0.65 -0.94 -0.70 -1.34 -1.12 -0.64 -0.59 -0.38 -0.43 0.68
3854 23-29MILST Commercial 244 214.67 0.01 0.59 0.62 9.141 9.138 0 LEFT 214.01 214.47 214.47 214.47 214.48 215.50 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.24
30/20 30/20 31/20	0.35 0.65 -0.94 -0.70 -1.13 -0.97 -0.85 -0.73 -0.24 -0.16 0.85
3862 11 QUENSTN Commercial 29 215.30 0.52 0.45 9.150 9.147 0 LEFT 214.13 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.13 0.57 -0.66 -0.47 -0.43 -0.21 0.27 0.32 0.53 0.48 1.59
3473 15 QUENSTN Commercial 229 215.21 0.51 0.44 9.150 9.147 0 LEFT 214.13 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.17 -0.87 -0.17 0.05 0.53 0.58 0.79 0.74 1.85
3861 IS QUENSTN Commercial 186 215.32 0.50 0.43 9.150 9.147 0 LEFT 214.13 214.63 214.68 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.17 -0.87 -0.17 0.05 0.53 0.58 0.79 0.74 1.85
3340 20 QUEENST N Commercial 1100 216.06 0.12 0.21 9.162 9.159 1 LEFT 214.18 214.50 214.71 214.97 215.15 215.31 216.18 216.27 217.69 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.18 -0.88 -2.48 -2.25 -2.04 -1.85 -1.10 -0.96 0.30
3866 23 QUENSTN Commercial 135 215.31 0.51 0.44 9.150 9.147 0 LEFT 214.13 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.19 -0.89 -0.31 -0.14 -0.01 0.12 0.64 0.72 1.74
3866 23 QUEENSTN Commercial 135 215.31 0.51 0.44 9.150 9.147 0 LEFT 214.13 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.34 0.57 -1.88 -1.56 -0.19 -0.02 0.11 0.24 0.76 0.84 1.86
3864 25 QUEENST N Commercial 190 215.28 0.54 0.47 9.150 9.147 0 LEFT 214.13 214.63 214.68 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.18 -0.88 0.38 0.61 0.65 0.72 0.98 1.07 1.83
3845 29 QUEENSTN Commercial 190 215.21 0.61 0.54 9.150 9.147 0 LEFT 214.13 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.15 -0.85 0.29 0.52 0.56 0.63 0.89 0.98 1.74
3860 39 QUEEN ST N Commercial 452 215.22 0.60 0.53 9.150 9.147 0 LEFT 214.13 214.43 214.63 214.88 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 0.00 -1.08 -0.78 -0.17 0.00 0.13 0.27 0.82 0.86 1.57
2399 40 QUEEN ST N Commercial 121 215.50 0.58 0.67 9.159 9.156 0 LEFT 214.14 214.46 214.67 214.93 215.10 215.27 216.08 216.17 217.64 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 -1.09 -0.79 -0.18 -0.03 0.07 0.18 0.76 0.79 1.44
	0.29 0.57 -1.36 -1.04 -1.91 -1.73 -1.53 -1.35 -0.60 -0.47 0.79
3844 49 QUEEN ST N Commercial 295 215.28 0.54 0.47 9.150 9.147 0 LEFT 214.13 214.43 214.68 215.05 215.21 215.82 215.75 216.34 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 -1.15 -0.85 -1.43 -1.21 -0.73 -0.68 -0.47 -0.52 0.59
	0.29 0.57 -1.36 -1.04 -0.56 -0.33 -0.29 -0.22 0.04 0.13 0.89
	0.29 0.57 -1.51 -1.19 0.48 0.64 0.75 0.81 1.17 1.27 2.46
	0.29 0.57 -1.69 -1.37 0.27 0.38 0.50 0.66 1.41 1.54 2.80
	0.00 0.00 -1.18 -0.88 0.18 0.41 0.45 0.52 0.78 0.87 1.63
	0.29 0.57 -1.36 -1.04 -0.07 0.03 0.11 0.20 0.50 0.58 1.36
	0.00 0.00 -1.09 -0.79 -0.19 0.03 0.07 0.14 0.40 0.49 1.26
	0.29 0.57 -1.36 -1.04 -0.90 -0.65 -0.48 -0.32 0.29 0.22 0.81
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3835 49 STERNEST Nursing Horn 995 217.11 9.174 9.171 0 LEFT 214.37 214.72 214.96 215.22 215.40 215.56 216.29 217.63 0.00 0.00 0.00 0.32 0.46 0.4	0.29 0.57 -1.46 -1.14 0.31 0.53 0.57 0.64 0.90 0.99 1.76

APPENDIX E – Official Plan Amendment (DRAFT)

AMENDMENT NO. ____ TO THE OFFICIAL PLAN FOR THE TOWN OF CALEDON PLANNING AREA

THE CORPORATION OF THE TOWN OF CALEDON

BY-LAW NO	
A By-law to adopt Amendment No to the Office	cial Plan for the Town of Caledon
WHEREAS the Council of the Corporation of the T the provisions of the Planning Act, R.S.O. 1990, a FOLLOWS:	
 Amendment No. xx to the Official Plan for the T be and is hereby adopted. 	Fown of Caledon Planning Area shall
Read three times and finally passed in open Counc	il this day of,
_	Mayor
	Clerk

THE CONSTITUTIONAL STATEMENT

PART A - THE PREAMBLE - does not constitute part of this amendment.

PART B - THE AMENDMENT - consisting of the following text and Schedule "A" constitutes Amendment No. _____ of the Town of

Caledon Official Plan.

AMENDMENT NO. ____

OF THE TOWN OF CALEDON OFFICIAL PLAN

PART A - THE PREAMBLE

Purpose of the Amendment:

The purpose of this Amendment is to amend Section 5.10.4.5.13.1 and Schedule "C" Bolton Land Use Plan and Schedule "C-1" Bolton Core Land Use Plan of the Town of Caledon Official Plan to implement the review and update to the Bolton Special Policy Area (SPA).

Location:

The lands subject to this Amendment are generally located within the Bolton Core, and are indicated on the attached Schedule "A".

Basis:

The basis for this Amendment is contained in Planning Report PD _______, as adopted by Council on ______. The Town, in consultation with the Toronto and Region Conservation Authority (TRCA) has initiated an amendment to the Town of Caledon Official Plan to update the policies pertaining to the Bolton Special Policy Area, to reflect recent flood plain mapping and reduce health and safety risks resulting from potential flooding within the Bolton Core, while allowing for development/redevelopment to proceed where appropriate mitigation measures have been applied. In support of the application, the Town has undertaken the following supporting reports:

- 1. Flood Risk Assessment Existing Conditions Report; and
- 2. Bolton Special Policy Area Planning Justification Report.

PART B - THE AMENDMENT

This part of the document, entitled "Part B - The Amendment", and consisting of the following text constitutes Amendment No. _____ of the Town of Caledon Official Plan.

Details of the Amendment

The Town of Caledon Official Plan is amended as follows:

1. Section 5.10.4.5.13.1 Bolton Special Policy Area is amended by deleting Section 5.10.4.5.13.1 in its entirety and replacing it with the following:

5.10.4.5.13.1 Bolton Special Policy Area (Bolton SPA)

5.10.4.5.13.1 The Floodplain management policies of the Province of Ontario generally state that no development or redevelopment will be permitted in areas below the Regulatory flood line as defined by a Conservation Authority, or if one does not exist, by the Ministry of Natural Resources and Forestry. In certain exceptional situations, where this basic policy is not feasible, the provincial policy provides for additional flexibility to floodplain management by means of a "Special Policy Area" designation. Such a designation may be applied to developed areas to provide for the continued viability of existing uses (which are generally small scale), where the strict application of floodplain management policies could threaten the economic and social viability of the community. The Bolton Core is such an area. Situated within the Town's largest settlement area, and within the jurisdiction of the TRCA, the established commercial uses in the Bolton Core constitute a significant component of the Settlement's and the Town's overall economic base.

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. Within the Town feasible opportunities for development outside the Bolton SPA exist, and therefore, more intensive development within the SPA, beyond that which is already contemplated through the policies of this Plan, is not permitted.

The Town will not support Official Plan Amendments that propose an increase in development beyond that which is currently permitted by the policies of this Plan. Where there is a conflict between the policies of this section and the policies in other sections of this Plan, the Special Policy Area policies will prevail.

5.10.4.5.13.2 The boundaries of the Bolton Special Policy Area are shown on Schedules C and C-1: Bolton Land Use Plan and Bolton Core Land Use Plan. These boundaries may in the future be changed by amendment to this Plan, as a result of improved information or further remedial works.

Any change or modification to the official plan policies, land use designations or boundaries applying to the Bolton Special Policy Area, must be approved by the Ministers of Municipal Affairs and Housing and the Ministry of Natural Resources and Forestry prior to the approval authority approving such changes or modifications.

5.10.4.5.13.3 All new buildings and structures, including parking structures, in the Bolton Special Policy Area shall be floodproofed to the level of the Regulatory Flood level in a manner acceptable to the Town and Conservation Authority. Where it has been demonstrated to the satisfaction

of the Town and the Conservation Authority that it is technically impractical to floodproof a building or structure to the Regulatory Flood level, floodproofing must be to the highest level technically feasible. The minimum acceptable level of protection will be the 1:500 year flood.

- 5.10.4.5.13.4 Where development may be permitted within the Special Policy Area:
 - a) for any new development proposing overnight accommodation, no habitable living space is permitted below the Regulatory Flood Elevation; and.
 - b) all new development shall locate primary building system controls such as service units and panels, at or above the Regulatory Flood level, as established by the Conservation Authority.
- 5.10.4.5.13.5 The Town shall base its requirement for floodproofing measures on the following alternatives, listed in order of priority:
 - a) dry, passive floodproofing measures shall be required and implemented to the extent technically and economically acceptable;
 - b) wet floodproofing measures may be permissible for non-habitable portions of new development in order to minimize flood risk and/or to meet the required level of flood protection; and,
 - c) where a) and b) cannot be achieved, dry active floodproofing measures may also be recommended to minimize flood risk in combination with a) and b).
- 5.10.4.5.13.6 Pedestrian and vehicle access and egress to all new buildings and structures providing overnight accommodation shall be safe, pursuant to the Provincial Flood Plain Planning Policy and Natural Hazard Technical Guides (dry access/egress is preferred). For uses not providing overnight accommodation or for redevelopment (not involving an increase in overnight accommodation/residential units), where access and egress cannot achieve provincial flood proofing standards, they must achieve the maximum level of flood protection determined by the Toronto and Region Conservation Authority and the Town to be practical and feasible. The stated safe access for all pedestrian and vehicular traffic shall be to the satisfaction of the Town and Toronto and Region Conservation Authority.
- 5.10.4.5.13.7 Prior to the issuance of a building permit by the Town, or a proposed change in use, which does not involve an official plan amendment, the proponent shall obtain the required approval of the Conservation Authority in relation to any site alteration including the placing or dumping of fill of any kind, the alteration of any watercourse or the construction of any proposed buildings or structures within the Bolton Special Policy Area. Any proposed flood damage reduction measures, which may include setbacks, basement elevations, the strength of foundation walls, the placement of fill and the restriction of building openings, are to be addressed.

- 5.10.4.5.13.8 An implementing Zoning By-law governing land uses within the Bolton Special Policy Area shall list zone classifications that identify the intended use of the property and shall also include a suffix that identifies the property as being located within the Special Policy Area.
- 5.10.4.5.13.9. All lands within the Special Policy Area shall be subject to site plan control despite Section 6.2.11. Floodproofing in accordance with the policies of this plan shall be a condition of site plan control.
- 5.10.4.5.13.10 An implementing Zoning By-law governing land uses within the Bolton Special Policy Area shall contain provisions, where appropriate, relating to minimum building setbacks, maximum lot coverage, minimum height of any opening, and other such matters as determined by the Town.
- 5.10.4.5.13.11 No new development, redevelopment, or site alteration will be permitted on any parcel of land within the Special Policy Areas where:
 - a) the development would be subjected to velocities and/or depths that would create an unacceptable risk to life or property;
 - b) the development would be susceptible to major structural damage as a result of a flood less than or equal to the regulatory flood standard;
 - c) the necessary flood protection measures would have a negative impact on adjacent properties; or
 - d) adverse downstream and/or upstream impacts would be created/exacerbated and/or an increase in risk to life or property would occur as a result of flooding.
- 5.10.4.5.13.12 To prohibit the following uses within the Special Policy Area:
 - an institutional use including hospitals, long term care homes, retirement homes, pre-schools, school nurseries, day cares and schools;
 - b) an essential emergency service such as that provided by fire, police, and ambulance stations and electrical substations; or
 - c) uses associated with the disposal, manufacture, treatment, or storage or hazardous substances.
- 5.10.4.5.13.13 The development or redevelopment of lands for commercial and residential uses, including ancillary residential and multiple residential uses, within the Bolton Special Policy Area is subject to the policies of this Plan, and in accordance with Section 7.3 Bolton Core Area Secondary Plan and the Policies contained herein.
- 5.10.4.5.13.14 A density bonus in accordance with Section 3.3.3.2.4 is not permitted for properties in any land use designation in the Special Policy Area.

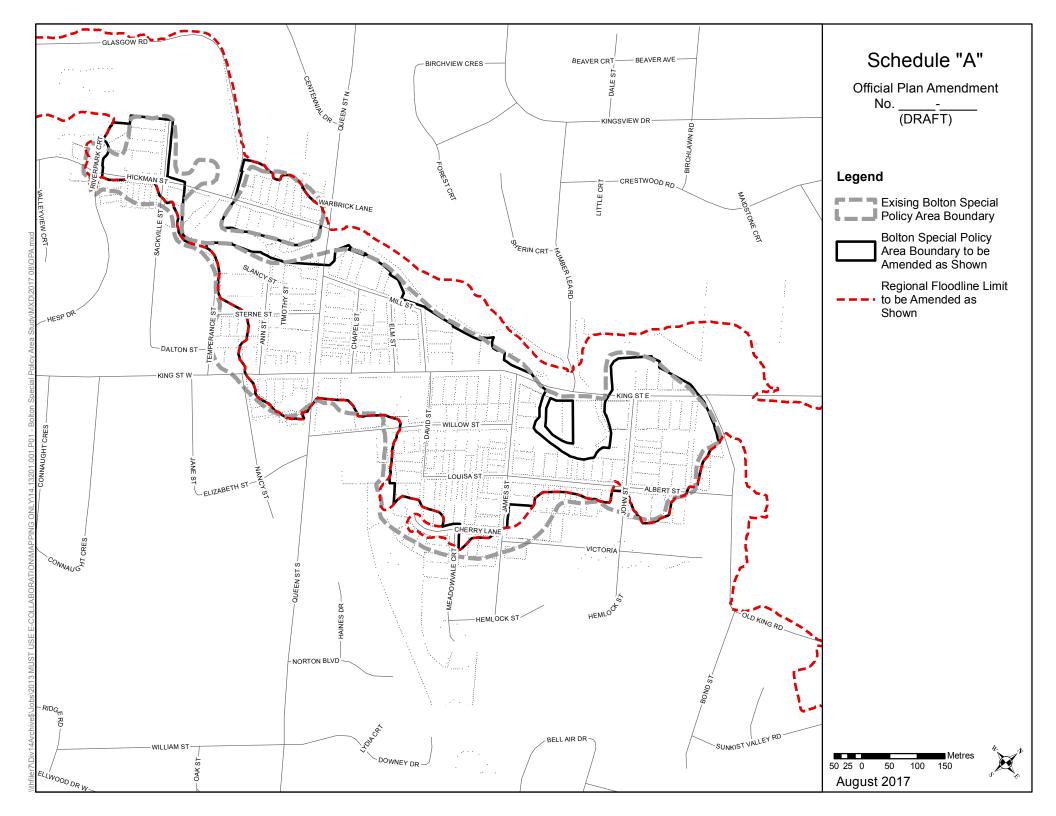
- 5.10.4.5.13.15 The Town will prepare and maintain a Community Emergency Response Plan to specifically address measures to be implemented to manage risk to life or property in the case of flooding within the Bolton SPA. It is the policy of Council to cooperate with the TRCA in the establishment and operation of a flood warning and evacuation system.
- 5.10.4.5.13.16 The proponents of new development and redevelopment within the Bolton SPA may be required to complete appropriate studies, up to, and including, an Environmental Impact Study and Management Plan, pursuant to Section 5.7.3.7. The need for such study shall be determined jointly by the Town, the TRCA and other relevant agencies.
- 5.10.4.5.13.17 New multi-unit developments shall require the preparation of an Emergency Response Plan to the satisfaction of the Town and Conservation Authority. Emergency Response Plans are to be developed in accordance with existing provincial legislation and regulations, standards and protocols that may be applicable to emergency conditions and will be implemented by all parties involved.
- 5.10.4.5.13.18 The requirements of the Town, the TRCA and other agencies, including all necessary floodproofing measures, shall be implemented as a condition of development approval of the Town.
- 5.10.4.5.13.19 The Town supports the principle of establishing a publicly owned riparian habitat zone adjacent to the Humber River within the Bolton Special Policy Area for the purposes of enhancing and restoring riparian habitat.
- 5.10.4.5.13.20 Further to Section 5.10.4.5.13.19, the Town supports the TRCA in advocating a minimum 10 metre width for the riparian habitat zone. However, it is recognized that there are sites within the SPA where this width may need to be increased or reduced in order to respond to existing site constraints, to ensure slope and river bank stability and to provide for non-intensive recreational uses, such as a linked trail system, where appropriate. In such instances, the Town shall, in consultation with the TRCA, determine an appropriate buffer width which achieves the environmental and open space policies of this Plan to the greatest extent feasible, while allowing for appropriate development.
- 5.10.4.5.13.21 Lands which are excluded from development pursuant to Sections 5.10.4.5.13.19 and 5.10.4.5.13.20 above, shall be deemed to be designated EPA and shall be zoned accordingly.
- 5.10.4.5.13.22 The creation of new lots, for the purposes of development, within the Bolton SPA shall not be permitted, with the exception of lot

creation for required public infrastructure or public works, or minor lot line adjustments.

- 5.10.4.3.13.23 Underground parking is generally discouraged. Where an underground parking garage is proposed, all openings, including those associated with ventilation, shall be floodproofed in accordance with this section.
- 5.10.4.5.13.24 The creation of new secondary suites within the Bolton SPA shall not be permitted in order to minimize the potential risks associated with flooding.
- 5.10.4.5.13.25 The policies of Section 5.13 (Existing Uses) shall apply with respect to non-conforming uses. The Town will strongly encourage non-conforming uses with the SPA to cease to exist so that the land affected may revert to a use in conformity with the intent of the Official Plan and the provisions of the implementing Zoning By-law. The Town shall undertake further studies to assess the future relocation of non-conforming uses to lands located outside of the SPA.
- 5.10.4.5.13.26 The Town will monitor growth in relation to the level of flood risk and the existing development permissions provided through the applicable Official Plan designations and the requirements of the implementing zoning by-law for lands within the SPA. The Town will not support Official Plan Amendments that propose an increase in development beyond that which is currently permitted by the policies of this Plan. Such monitoring will be undertaken through the development and ongoing maintenance of a database of development approved within the SPA.
- 2. Schedule "C" Bolton Land Use Plan and Schedule "C-1" Bolton Core Land Use Plan of the Town of Caledon Official Plan shall be amended in accordance with Schedule "A" attached hereto.
- 3. Schedule "C" Bolton Land Use Plan is further hereby amended by deleting "100 Year Floodline Limit".

Implementation and Interpretation

The implementation and interpretation of this Amendment shall be in accordance with the policies of the Town of Caledon Official Plan.



APPENDIX F – Zoning By-law Amendment (Draft)

THE CORPORATION OF THE TOWN OF CALEDON BY-LAW NO. _____ - ___

Being a by-law to amend Comprehensive Zoning By-law 2006-50, as amended, with respect to the Bolton Special Policy Area in the Town of Caledon, Regional Municipality of Peel,

WHEREAS Section 34 of the *Planning Act*, as amended, permits the councils of local municipalities to pass zoning by-laws for prohibiting the use of land or the erecting, locating or using of buildings or structures for or except for such purposes as may be set out in the by-law;

AND WHEREAS the Council of The Corporation of the Town of Caledon considers it desirable to pass a zoning by-law to implement the policies of Official Plan Amendment No. ____ with respect to the Bolton Special Policy Area to regulate the use of land within the Bolton Special Policy Area within the Town of Caledon, Regional Municipality of Peel.

NOW THEREFORE the Council of The Corporation of the Town of Caledon enacts that By-law 2006-50, as amended, being the Comprehensive Zoning By-law for the Town of Caledon, shall be and is hereby amended as follows:

1. Section 4, General Provisions Table of Contents is amended by adding the following proper sequential order and renumbering subsequent sections accordingly:

4.6 BOLTON SPECIAL POLICY AREA FLOODPLAIN REGULATIONS (Zoning Suffix "- SPA")

2. The following section is added to Section 4, General Provisions and renumbering the following subsections accordingly.

4.6 BOLTON SPECIAL POLICY AREA FLOODPLAIN REGULATIONS (Zoning Suffix "- SPA")

Notwithstanding any other provisions of this By-law to the contrary, the following additional regulations shall apply to lands where the *zone* category is followed by the suffix "- SPA" on Schedule "A" to this By-law:

a) All new *buildings* and *structures* shall be *floodproofed* to the *Regulatory Flood level*. Where it has been demonstrated to the satisfaction of the Town and the Conservation Authority that it is technically impractical to *floodproof* a *building* or *structure* to the *Regulatory Flood level*, *floodproofing* must be to the highest level technically feasible.

- b) The minimum *floodproofing* level shall be to the 1:500 year flood level, as determined by the Conservation Authority.
- c) All newly constructed *habitable rooms* within a *building* or added to an *existing dwelling unit* shall not be constructed below the *Regulatory Flood level*.
- d) All new *buildngs* and *structures* constructed after _____ (the date of the passing of this By-law), shall locate primary *building* system controls such as service units and panels, at or above the *Regulatory Flood level*, as established by the Conservation Authority.
- e) Notwithstanding any other permissions set out within the applicable zone category, for public safety purposes, the following primary uses and accessory uses shall not be permitted on any parcel of land which is zoned with the suffix "-SPA" on Schedule "A" to this By-law:
 - The following uses are not permitted in Residential Zones, notwithstanding S. 6.2:
 - Apartment, Accessory
 - Day Care, Private Home
 - ii. The following *uses* are not permitted in Commercial *Zones*, notwithstanding S. 7.2:
 - Motor Vehicle Gas Bar
 - Motor Vehicle Repair Facility
 - Motor Vehicle Service Centre
 - iii. The following *uses* are not permitted in Institutional *Zones*, notwithstanding S. 9.2:
 - Crisis Care Facility
 - Day Nursery
 - Emergency Service Facility
 - Hospital
 - Long Term Care Facility
 - School
 - Adult Day Centre
 - iv. The following *Public Uses* are not permitted, notwithstanding S. 4.29:
 - Emergency Service Facility
 - Hospital
 - School
 - v. The following uses are not permitted in Serviced Industrial (MS) *Zone*, notwithstanding S. 8.2:

- Bulk Storage Facility
- Gasoline Pump Island, Accessory
- Motor Vehicle Body Shop
- Motor Vehicle Repair Facility
- f) The general by-law provisions with respect to *non-complying uses* (S. 4.21) and *non-conforming uses* (S. 4.22) shall apply.
- 3. The Zone Exceptions (Section 13.1) are amended as follows:
 - i. Section 13.1 (Table 13.1 CC-247) is hereby amended by deleting the following permitted *uses*:
 - Day Nursery
 - ii. Section 13.1 (Table 13.1 RT-79) is hereby amended by deleting the following permitted *uses*:
 - Day Care, Private Home
 - iii. Section 13.1 (Table 13.1 I-31) is hereby amended by deleting the following permitted *uses*:
 - Crisis Care Facility
 - Day Nursery
 - Emergency Service Facility
 - Hospital
 - Long Term Care Facility
 - School
 - Adult Day Centre
 - iv. Section 13.1 (Table 13.1 R1-478) is hereby amended by deleting the following permitted *uses*:
 - Apartment, Accessory
 - Day Care, Private Home
 - v. Section 13.1 (Table 13.1 R1-479) is hereby amended by deleting the following permitted *uses*:
 - Apartment, Accessory
 - Day Care, Private Home
- 4. The Definitions (Section 3.2) is amended by adding the following definitions:

Floodproof – means the combination of measures incorporated into the basic design and/or construction of *buildings*, *structures* or properties to reduce or eliminate flooding hazards along rivers, stream and small inland lake systems.

Regulatory Flood level – the area adjacent to a watercourse that would be inundated by a flood resulting from the most severe of the Hurricane Hazel Flood Event Standard (Regional Storm).

Regional Storm – the rainfall event and soil conditions existing during Hurricane Hazel that occurred within the Humber River watershed in Toronto in 1954, transposed over a specific watershed and combined with local conditions.

5. Schedule "A" Zone Maps 1b, 1c, and 1d, of By-law 2006-50, as amended, is further amended by adding the suffix "- SPA" to the zone categories on lands located within the Bolton Special Policy Area, as indicated on Schedule "A" to this By-law.

Read three times and finally passed in open Council on the	
day of, 2017.	
_	Mayor
_	Clerk

