Collingwood Heritage Emergency Management Plan

Technical Report

May 2026

Executive Summary

NPG Planning Solutions Inc. (NPG), in association with Bray Heritage, has been retained to prepare a Collingwood *Cultural Heritage Emergency Management Plan*. As part of this process NPG has completed detailed background research, undertaken public and staff consultation, and engaged the Canadian Conservation Institute (CCI).

This Technical Report provides relevant research and background information to assist with the preparation of the Cultural Heritage Emergency Management Plan, and includes the following:

- An overview of key terms and concerns;
- A discussion of best practices relating to emergency management, disaster risk management and heritage conservation;
- An overview of the existing policy framework applicable to Collingwood;
- An overview of heritage considerations in Collingwood; and
- An overview of key hazards, risks and vulnerabilities specific to Collingwood.

It should be noted that this Technical Report represents a “work in progress” and additional materials and details may be added to the final Cultural Heritage Emergency Management Plan report.

As part of the preparation of this Technical Report and the broader Cultural Heritage Emergency Management Plan, engagement was undertaken to invite feedback on the Cultural Heritage Emergency Management Plan to ensure policy relevance for various parties. To date, engagement has been undertaken with community members and staff at the Town of Collingwood.

Key Terms & Abbreviations	Meaning Within This Plan
Disaster	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. (Source: United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Disaster". Accessed 8 April 2026. https://www.undrr.org/terminology/disaster.)
Disaster Risk Management	Disaster Risk Management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses. (Source: United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Disaster Risk Management". Accessed 8 April 2026. https://www.undrr.org/terminology/disaster-risk-management.)
Disaster Risk Reduction	Disaster Risk Reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. Annotation: Disaster Risk Reduction is the policy objective of disaster risk management, and its goals and objectives are defined in Disaster Risk Reduction strategies and plans. (Source: United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Disaster risk reduction". Accessed 8 April 2026. https://www.undrr.org/terminology/disaster-risk-reduction)
Emergency	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. (Source: *Emergency Management and Civil Protection Act* (R.S.O. 1990, Chapter E.9).
Emergency Management	Organized activities undertaken to prevent, mitigate, prepare for, respond to and recover from emergencies. (Source: *Emergency Management and Civil Protection Act* (R.S.O. 1990, Chapter E.9).
Hazard	Any source of potential damage, harm, or adverse health effects on something or someone.
Risk	The chance or probability of a hazard occurring.
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards. (Source: United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Vulnerability". Accessed 9 April 2026. https://www.undrr.org/terminology/vulnerability.)

Contents

1. Introduction

The Town of Collingwood values cultural heritage resources, which include built heritage resources such as buildings and structures, cultural heritage landscapes such as the Collingwood Downtown Heritage Conservation District, and archaeological resources.

The Town proactively protects, commemorates and celebrates cultural heritage in Collingwood in a variety of ways. However, the Town of Collingwood, like almost every other municipality in Ontario, has limited guidance for the management and conservation of cultural heritage resources before, during and after an *emergency* or *disaster*.

It is mandatory for municipalities in Ontario to prepare Emergency Management Plans for their communities. Ultimately, emergency management planning aims to:

- reduce risk to lives,
- boost resilience, and
- mitigate disasters before and after they occur.

To that end, Emergency Management Plans facilitate and guide the effective coordination of human and physical resources, services and activities. In addition, emergency management planning cannot be only reactive, it must also plan for preparedness. Proactive planning for *Emergency Management*, including mitigation and risk preparedness, has been shown to:

- reduce negative impacts and damage to communities,
- lead to efficient and coordinated responses in critical situations, and
- boost community resilience.

More specific to cultural heritage, advanced planning, mitigation and risk preparedness can ensure that in the event of an emergency or disaster, negative impacts to cultural heritage resources are minimized

WHAT ARE EMERGENCIES & DISASTERS?

Emergency

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. (Source: *Emergency Management and Civil Protection Act* (R.S.O. 1990, Chapter E.9).

Disaster

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts (Sendai Framework for Disaster Risk Reduction 2015-2030).

or even prevented. This means that cultural heritage resources can be better conserved and reduces negative economic impacts on property owners and the Town.

As defined in the *Emergency Management Act,* Emergency Management is a term used in Canada to describe "*the prevention and mitigation of, preparedness for, response to and recovery from emergencies.*" In the Province of Ontario, the *Emergency Management and Civil Protection Act* requires all municipalities to undertake emergency management programs (including emergency management plans) to be adopted by by-law. At the Federal level, the *Emergency Management Act* establishes requirements to be undertaken by Ministers, and this work is coordinated by Public Safety Canada. Internationally, particularly through the United Nations (UN) Office for Disaster Risk Reduction, *Disaster Risk Management* refers to plans that establish goals, objectives and actions for reducing disaster risks. Canada is a signatory to the Sendai Framework for Disaster Risk Reduction, which guides national approaches to disaster risk management. A key part of disaster risk management is Disaster Risk Reduction, which aims to

- prevent new disaster risk
- reduce existing disaster risk, and
- manage residual risk to strengthen resilience and achieve sustainable development.

The following sections include information relevant to the development of a Collingwood-specific policy for the management of cultural heritage resources before, during and after an emergency or disaster.

2. What is Disaster Risk Management?

Disaster Risk Management is an approach to identify, assess, and reduce natural and human-made risks and hazards to communities.

Disasters are understood to be serious disruptions to the functioning of a community at any scale. This is because hazardous events interact with conditions of exposure, vulnerability and capacity, leading to human, material, economic and environmental losses and impacts. The term emergency is sometimes used interchangeably with the term disaster but does not always result in the serious disruption of the functioning of a community or society.

In speaking about disasters, *risk* is the likelihood and the consequence of a *hazard* occurring. Risk refers to vulnerability, proximity or exposure to hazards, which affects the probability of adverse impacts. A hazard is any source of potential damage, harm or adverse health effects on someone or something (Figure 1).

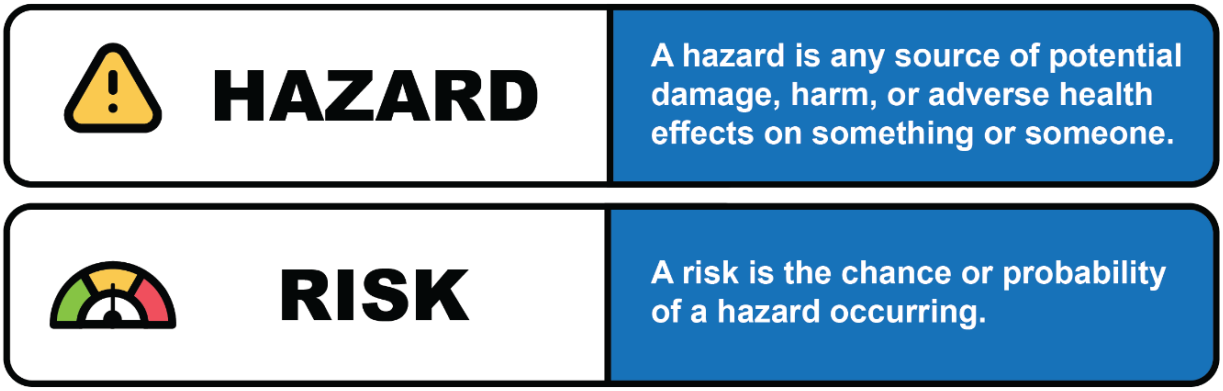
TERMINOLOGY CHECK

The term “natural disaster” was commonly used to refer to catastrophic events. However, there is no such thing as a natural disaster.

Disasters can be the result of *natural hazards*, such as wildfires or earthquakes. A natural hazard only becomes a disaster when it impacts a community. A hazard can be natural, but disasters are not. Instead, the terms “hazard” (or natural hazard) and “disaster” are used.

The term natural disaster is no longer used. The term “natural disaster” implies that there is nothing that can be done to mitigate risk. However, it is possible to reduce the risk of natural hazards from becoming disasters through proactive preparation and mitigation actions.

Figure 1 – A hazard vs. a risk



Examples of hazards that may lead to a disaster include:

- **Meteorological**: hurricanes, tornadoes, heat-waves, lightning, fire;
- **Hydrological**: floods, flash-floods, tsunamis;
- **Geological**: volcanoes, earthquakes, mass movement (falls, slides, slumps);
- **Astrophysical**: meteorites;
- **Biological**: epidemics, pests;
- **Human-induced**: armed conflict, fire, pollution, infrastructure failure or collapse, civil unrest, terrorism; and,
- **Climate change**: increased storm frequency and severity, glacial lake outburst floods (GLOFs).[1]

Disasters can vary by scale and onset and can include:

- **Small-scale disaster**: a type of disaster only affecting local communities which require assistance beyond the affected community.
- **Large-scale disaster**: a type of disaster affecting a society which requires national or international assistance.
- **Frequent and infrequent disasters**: depend on the probability of occurrence and the return period of a given hazard and its impacts. The impact of frequent disasters could be cumulative or become chronic for a community or a society.
- **A slow-onset disaster** is defined as one that emerges gradually over time. Slow-onset disasters could be associated with, e.g., drought, desertification, sea-level rise, epidemic disease.

[1] International Council for Science, 2007; World Meteorological Organization, 2018

- **A sudden-onset disaster** is one triggered by a hazardous event that emerges quickly or unexpectedly. Sudden-onset disasters could be associated with, e.g., earthquake, volcanic eruption, flash flood, chemical explosion, critical infrastructure failure, transport accident.

2.1. Emergency Management & Process

To understand the full scope of Disaster Risk Management, it is necessary to outline some broader aspects of Emergency Management. At its core Emergency Management is fundamentally about saving lives and is intended to raise awareness of risks and make communities safer and more resilient. It can also help conserve the environment and protect property and the economy.

The responsibility for Emergency Management in Canada is shared by Federal, provincial and territorial governments and partners, including Indigenous Peoples, municipalities, communities and local citizens. However, local governments are often the first to respond to disasters in their communities. Emergency Management planning requires collaboration, coordination and integration to ensure that the actions and roles of each partner are clear and can be efficiently enacted.

In the past, Canada has focused on Emergency Management preparedness and response. However, prevention and mitigation are now recognized as integral to averting or mitigating disasters and/or reducing damage when an event occurs. Emergency Management includes four (4) key components (described in Table 1 and illustrated in Figure 2) that may be undertaken together or successively:

1. ***Prevention and mitigation;***
2. ***Preparedness;***
3. ***Response; and***
4. ***Recovery.***

Table 1 - Emergency Management Components (Source: Public Safety Canada, 2017)

Area	Description
1. Prevention and Mitigation	To adapt to, eliminate or reduce the risks of disasters in order to protect lives, property, the environment, and reduce economic disruption. Prevention/mitigation includes structural mitigative measures (e.g., construction of floodways and dykes), non-structural mitigative measures (e.g., building codes, land-use planning, and insurance incentives). Prevention and mitigation may be considered independently or one may include the other.

Area	Description
2. Preparedness	To be ready to respond to a disaster and manage its consequences through measures taken prior to an event, for example emergency response plans, mutual assistance agreements, resource inventories and training, public awareness activities, equipment and exercise programs.
3. Response	To act during or immediately before or after a disaster to manage its consequences through, for example, emergency public communication, search and rescue, emergency medical assistance and evacuation to minimize suffering and losses associated with disasters.
4. Recovery	To repair or restore conditions to an acceptable level through measures taken after a disaster, for example return of evacuees, trauma counseling, reconstruction, economic impact studies and financial assistance. There is a strong relationship between long-term sustainable recovery and prevention and mitigation of future disasters. Recovery programs provide a valuable opportunity to develop and implement measures to strengthen resilience, including by building back better. Recovery efforts should be conducted with a view towards Disaster Risk Reduction.

Figure 2 – The Disaster Risk Management Cycle (Source: United Nations, n.d.)

2.2. Disaster Risk Reduction

Disaster Risk Reduction is "*a systematic, whole-of-society approach to identifying, assessing and analyzing the causal effects of disasters and reducing the risks and impacts of disaster based on risk assessments*."[2] This approach is based on the *Sendai Framework for Disaster Risk Reduction, 2015-2030* (the "Sendai Framework"). Canada has endorsed the Sendai Framework for Disaster Risk Reduction and Public Safety Canada is the federal department that implements it in Canada.

[2] Public Safety Canada, n.d. a

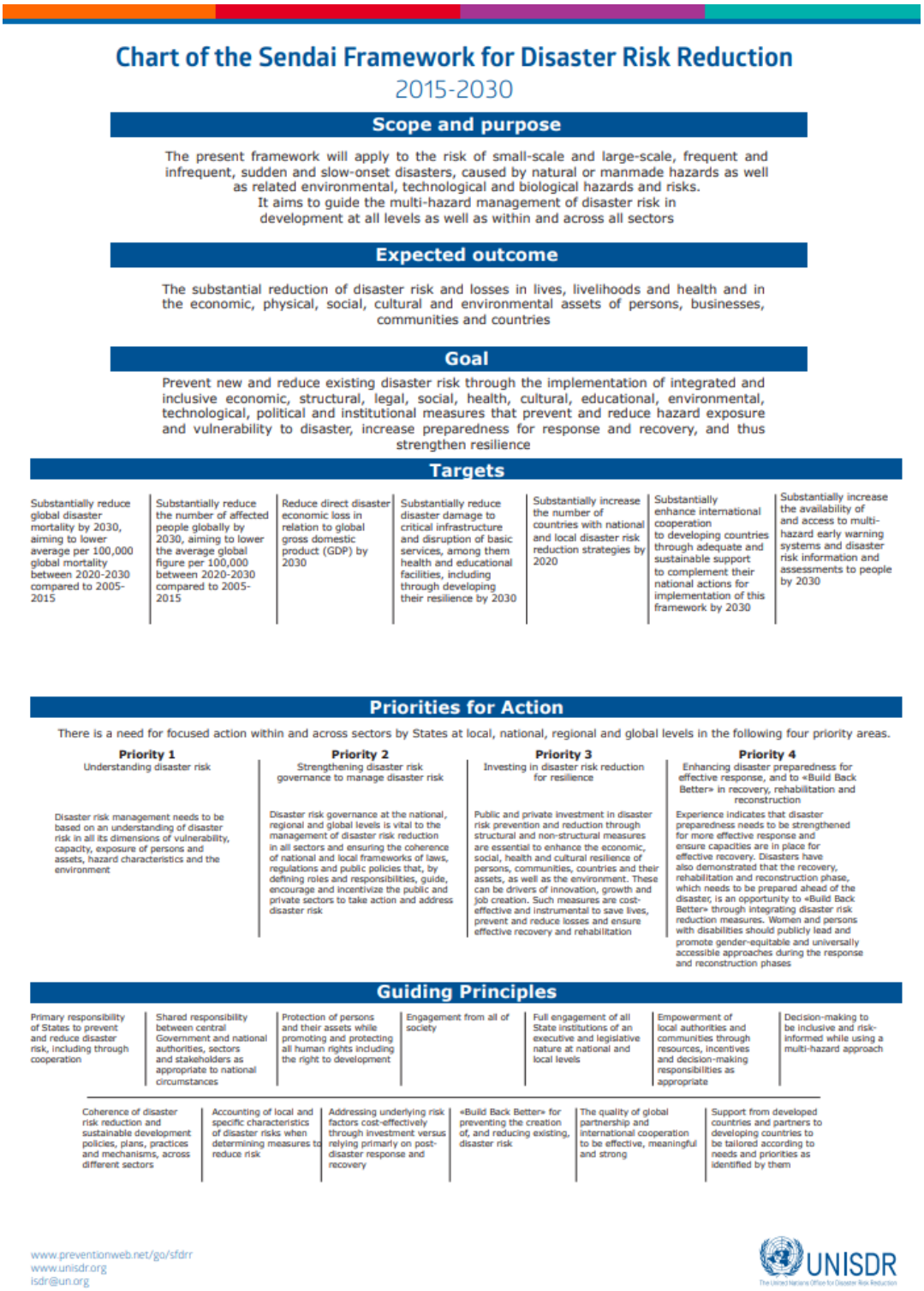
The Sendai Framework is a roadmap for reducing disaster losses (Figure 3). It aims to align international efforts in Disaster Risk Reduction with greater focus on local actions and preventing new risks. It defines risks, which include natural, human-made and technological risks, but excludes conflict-related emergencies.

Priority actions to prevent new and reduce existing disaster risks in the Sendai Framework include the following:

Table 2 – Priority Actions in the Sendai Framework

Priority	Explanation
Priority 1 **Understanding disaster risk**	Disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be used for risk assessment, prevention, mitigation, preparedness and response.
Priority 2 **Strengthening disaster risk governance to manage disaster risk**	Disaster risk governance at the national, regional and global levels is very important for prevention, mitigation, preparedness, response, recovery, and rehabilitation. It fosters collaboration and partnership.
Priority 3 **Investing in disaster risk reduction for resilience**	Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment.
Priority 4 **Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction**	The growth of disaster risk means there is a need to strengthen disaster preparedness for response, take action in anticipation of events, and ensure capacities are in place for effective response and recovery at all levels. The recovery, rehabilitation and reconstruction phase is a critical opportunity to build back better, including through integrating Disaster Risk Reduction into development measures.

Figure 3 - Chart of the Sendai Framework for Disaster Risk Reduction (Source: UNISDR, 2015)



2.3. Why Plan for Emergency Management and Disaster Risk Reduction

Emergency Management means communities have a greater awareness of risks and hazards in a community, can take preventative action, and can better prepare to respond to disasters.

Internationally, there is also growing recognition that climate change impacts are leading to greater disaster risks. The impacts of climate change are already being felt across Canada increasing the frequency and intensity of hazards such as floods, wildfires, drought, extreme heat, tropical storms, melting permafrost, coastal erosion, and, in Northern Canada, damage to seasonal ice roads. These hazards pose significant risks to communities, individual health and well-being, the economy, and the natural environment. Disasters can be traumatic for communities and can have significant economic implications with the costs for recovery afterward. It is, after all, more economical to mitigate or minimize impacts of climate change by reducing risk.

Climate Change Impacts

Canada's densification and development in urban areas currently exposed to significant flood hazard is a major driver of flood risk.[3] Although flooding can have devastating impacts on small communities, the risk is more concentrated in large urban centres with higher population densities, which are the fastest growing areas in the country and home to more than 70% of Canada's population.[4] Many Canadian cities are built on or near floodplains, and more than 6.5 million Canadians live along coastlines.[5] The growing exposure to sources of flood risk contributes to the increasing frequency and economic consequences of flood events. Recent trends in the key drivers of Canada's flood risk – climate change, growing population, increasing housing, infrastructure development, and asset concentration in flood-prone areas – are exacerbating both the flood hazard, as well as increasing Canada's exposure and vulnerability to flooding.[6]

Reducing risk, particularly through more mitigation and prevention actions has been proven more economical than the cost of response and rebuilding. Canada supports a whole-of-society approach to Disaster Risk Reduction.[7]

[3] Golnaraghi et al., 2020
[4] Statistics Canada, 2022
[5] Golnaraghi et al., 2020
[6] Canada's Task Force on Flood Insurance and Relocation, 2022
[7] Public Safety Canada, n.d. b

DID YOU KNOW:

In 2020, the Government of Canada created the Task Force on Flood Insurance and Relocation with the mandate to explore solutions for low-cost flood insurance for residents of high-risk areas and consider strategic relocation in areas at the highest risk of recurrent flooding. This interdisciplinary taskforce brought together experts from across the country in both the public and private sectors.

The Task Force's report, *Adapting to Rising Flood Risk: An Analysis of Insurance solutions for Canadians* (August 2022),[8] provides a common understanding of the evidence and information required to implement viable arrangements for a national approach to flood insurance, with special considerations for potential strategic relocation of those at most extreme risk.

It is important to consider that the impacts of disasters are not uniform across society, and that different variables can intersect and contribute to the level of risk facing vulnerable populations (e.g., gender, age, disability, socioeconomic conditions).

The concept of **resilience** is defined in the Emergency Management Framework as:
"the capacity of a system, community or society to adapt to disturbances resulting from hazards by persevering, recuperating or changing to reach and maintain an acceptable level of functioning."[9]

Resilient capacity is built through a process of empowering citizens, responders, organizations, communities, governments, systems and society to share the responsibility to keep hazards from becoming disasters (Figure 4). Resilience minimizes vulnerability or susceptibility by creating or strengthening social and physical capacity in the human and built environment to cope with, adapt to, respond to, and recover and learn from disasters. There are two (2) key facets to this definition. First, resilience refers to the dynamic quality of a system, the whole system, rather than the sum of its individual parts. Second, resilience is a *strengths-based* construct, focusing on

[8] Canada's Task Force on Flood Insurance and Relocation, 2022
[9] Public Safety Canada, 2019

capacities, assets, capabilities and aptitudes, and how these can be proactively mobilized and/or enhanced to reduce vulnerability and risk.

Figure 4 - Community engagement session in Collingwood for the development of the Town's Cultural Heritage Emergency Management Planon February 25, 2026 (Source: NPG 2026)

While the concept of community resilience can seem abstract, the following table illustrates the key aspects of resilient communities.[10]

[10] Cabinet Office, 2011; Edwards, 2009; Federal Emergency Management Agency, 2011

Members of Resilient Communities…

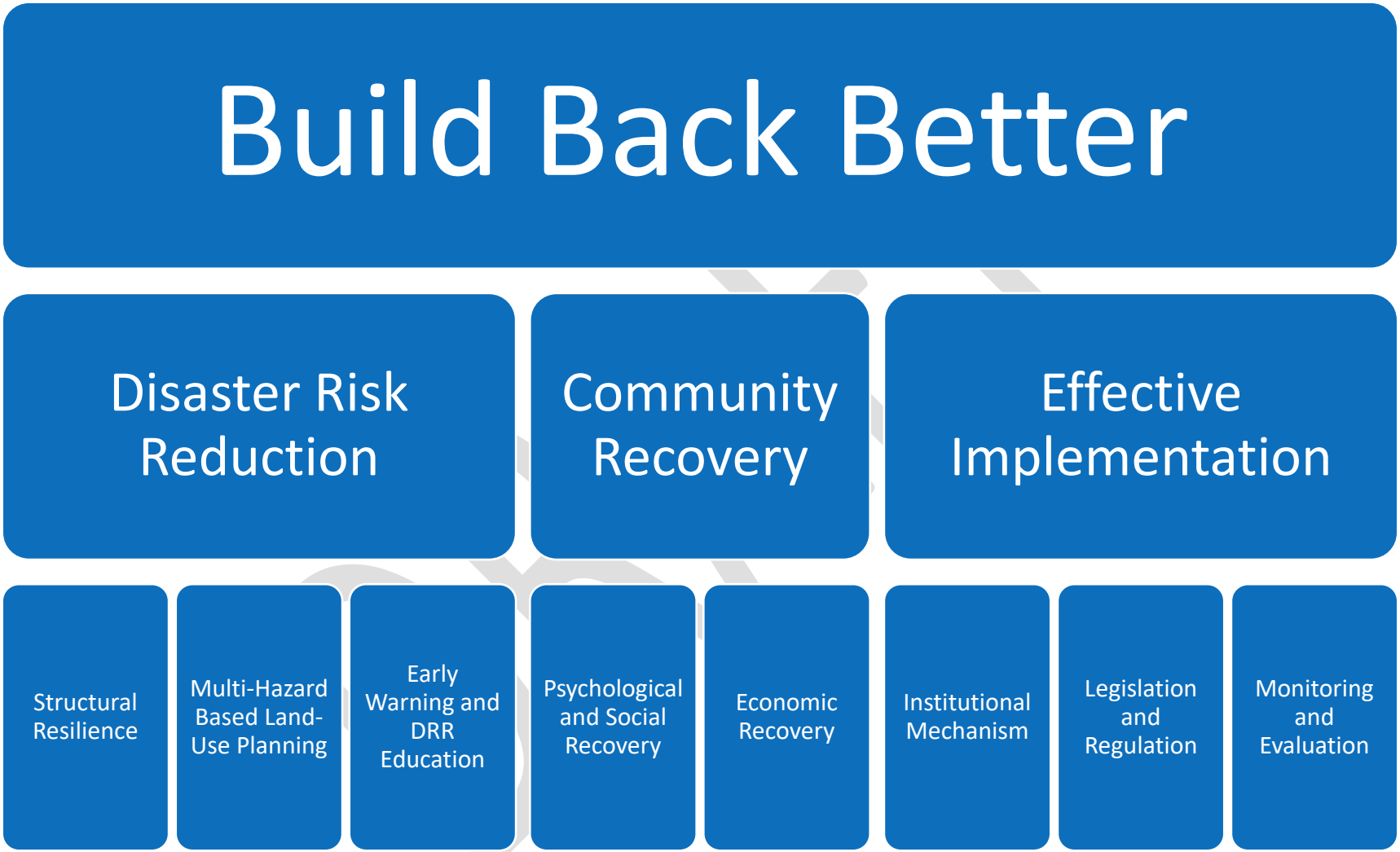
are **EMPOWERED**	to use their existing skills, knowledge and resources to prevent/mitigate, prepare for, respond to and recover from disasters. They are able to adapt their everyday skills and use them in extraordinary circumstances.
are **EDUCATED**	on the risks that may affect them. They understand the links between risks assessed at federal, provincial and territorial levels and those that exist in their communities; and how this might affect their lives, businesses and the local environment.
are **ENGAGED**	in all aspects of community life, adopting a long-term, holistic and community reflective perspective, influencing and making decisions that address the needs of their whole community. They take proactive steps today to help reduce risks tomorrow.
ENCOURAGE	trusted champions to communicate the benefits of resilience to the wider community and influence others to get, or stay, involved. These champions help strengthen the relationships and bonds already working well in the community.

As stated, the most effective Emergency Management activities are proactive prevention and/or mitigation measures that are used to eliminate, reduce or adapt to risks. These activities include structural mitigation measures (e.g., construction of floodways and dykes) and non-structural mitigation measures (e.g., building codes, land-use planning, and insurance incentives).[11]

This approach has been augmented by recent research that recommends prioritizing the principles of “Building Back Better.” Essentially the Building Back Better approach examines how, in a post-disaster scenario, to improve communities so that they are not only rehabilitated but also enhanced to support community resilience through holistic approaches that include supports for physiological, social and economic recovery. It recognizes that many rebuilding approaches often recreate preexisting vulnerabilities. Ultimately, Building Back Better recognizes that restoration is often a complex and time-consuming activity that involves many components (Figure 5).

[11] Public Safety Canada, 2019

Figure 5 – Building Back Better Model (Adapted from Neeraj et al., 2021)



3. Heritage Conservation and Disaster Risk Management: Best Practices

While Emergency Management has been a consideration globally for many years, Emergency Management planning for cultural heritage has generally lagged. This is due to a variety of factors, including the perception that cultural heritage is a "liability" during a disaster, and that saving lives and economic resilience should be the focus.[12] However, past events and research have shown that cultural heritage can be used to support these efforts and aid in recovery. Cultural heritage resources can provide psychological support to affected communities, bolstering resilience. Cultural heritage resources also provide communities with a sense of identity and a sense of place; it is important to recognize that disaster and emergency events that affect these resources can have significant negative effects on a community.

In fact, the importance of protecting of cultural heritage during times of conflict, emergency, and disaster has a long history, and is reflected in some of the earliest works in international law. The following discussion outlines some of the historical and contemporary events and documents informing current best practices, and which will be used to inform the recommendations of the Collingwood Cultural Heritage Emergency Management Plan.

Following the First World War, the inter-American *Treaty on Protection of Artistic and Scientific Institutions and Historic Monuments*, more commonly known as the *Roerich* or *Washington Pact,* was signed in Washington in 1935. This treaty, along with provisions of the 1899 and 1907 Hague Conventions, were among the first to specifically identify the need to protect cultural heritage during times of conflict. The Roerich Pact was also the first to develop a specific marker for such sites (known as the Banner of Peace). These treaties would serve as precursors of the 1954 *Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict*. The League of Nations, in advance of the Second World War, also issued a guidebook under the auspices of the International Institute for Intellectual Cooperation. This book contained specific guidance on how to protect monuments and art during times of conflict, representing one of the first risk management guides for cultural heritage (Figure 6).[13] During the Second World War, in 1943, the Monuments, Fine Arts, and Archives Section Unit, more commonly referred to as the Monuments Men, was established to help protect historic monuments and other types of cultural heritage resources (including art and books). This unit, which never numbered more than several hundred, included commissioned military officers and soldiers who accompanied military units in both Europe and the Pacific theatres of war. This unit would later serve as the inspiration of the 2014 movie *The Monuments Men*.

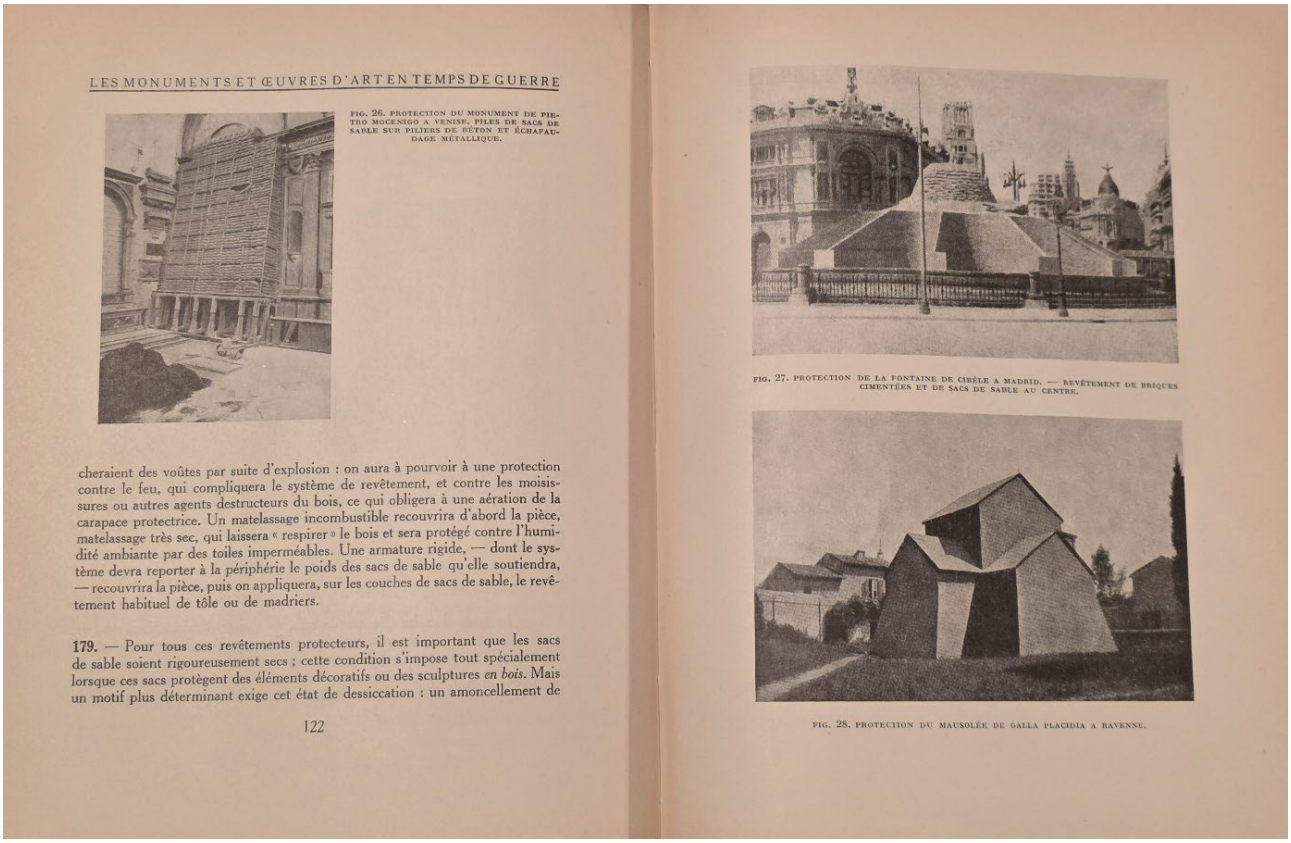
[12] UNESCO 2010.
[13] This publication, unfortunately, was not published in English.

However, Emergency Management for cultural heritage resources was not just shaped by past military conflicts. 21 years following the end of the Second World War, the 1966 flooding of the Arno River in Florence highlighted the need for new techniques and approaches for emergency recovery of both historic artifacts and buildings. The city was caught unprepared for this flood and the impact was devastating (Figure 7):

- 32 dead in Florence;
- An estimated 600,000 tons of mud, sewage and rubble;
- 15,000 wrecked cars;
- 5,000 homeless families; and,
- 6,000 shops out of business

There was significant damage to both movable cultural heritage resources (including art works, manuscripts, and books) as well as to historic structures. To this day, conservation work is still ongoing. The flood nevertheless serves as a catalyst in the heritage conservation field as it led to widespread recognition of the need for specialized techniques and training, many of which are reflected in best practices today.

Figure 6 - Images showing how to protect monuments during conflict, from the 1939 publication La Protection des Monuments et Oeuvres D'Art en Temps de Guerre: Manuel Technique et Jurisdique (Source: International Institute of Intellectual Cooperation/League of Nations)



LES MONUMENTS ET ŒUVRES D'ART EN TEMPS DE GUERRE

FIG. 26. PROTECTION DU MONUMENT DE PIETRO MOCENIGO A VENISE. PILES DE SACS DE SABLE SUR PILIERS DE BÉTON ET ÉCHAFAUDAGE MÉTALLIQUE.

cheraient des voûtes par suite d'explosion : on aura à pourvoir à une protection contre le feu, qui compliquera le système de revêtement, et contre les moisissures ou autres agents destructeurs du bois, ce qui obligera à une aération de la carapace protectrice. Un matelassage incombustible recouvrira d'abord la pièce, matelassage très sec, qui laissera « respirer » le bois et sera protégé contre l'humidité ambiante par des toiles imperméables. Une armature rigide, — dont le système devra reporter à la périphérie le poids des sacs de sable qu'elle soutiendra, — recouvrira la pièce, puis on appliquera, sur les couches de sacs de sable, le revêtement habituel de tôle ou de madriers.

179. — Pour tous ces revêtements protecteurs, il est important que les sacs de sable soient rigoureusement secs ; cette condition s'impose tout spécialement lorsque ces sacs protègent des éléments décoratifs ou des sculptures *en bois*. Mais un motif plus déterminant exige cet état de dessiccation : un amoncellement de

122

FIG. 27. PROTECTION DE LA FONTAINE DE CIBÈLE A MADRID. — REVÊTEMENT DE BRIQUES CIMENTÉES ET DE SACS DE SABLE AU CENTRE.

FIG. 28. PROTECTION DU MAUSOLÉE DE GALLA PLACIDIA A RAVENNE.

Figure 7 - The interior of the basilica of Santa Croce during the 1966 flood in Florence (Source: Mondadori Portfolio/Mondadori via Getty Images, 1966)

3.1. International Best Practices and Initiatives

At the international level, there have been several major works and initiatives highlighting the importance of Emergency Management for cultural heritage, particularly over the last 30 years.

1996 saw the establishment of Blue Shield, formerly known the International Committee of the Blue Shield (ICBS). Blue Shield is an international apolitical organization with a mandate to help protect the world's cultural heritage from threats such as armed conflict and disasters. Drawing its name from the Blue Shield symbol used to identify important cultural heritage resources protected by the 1954 Hague Convention, Blue Shield is comprised of national committees from around the world. These committees regularly work with national militaries, civil defense organizations, and disaster recovery efforts. The mission of the organization includes the following:

- *The Association is committed to the protection of the world's cultural property, and is concerned with the protection of cultural and natural heritage, tangible and intangible, in the event of armed conflict, natural- or human-made disaster.*

- *The Association, based on the Strasbourg Charter adopted in 2001 by ICBS, respects the principles of joint action, independence, neutrality, professionalism, respect for cultural identity and diversity.*
- *The Association promotes the ratification and implementation of, and respect for, the Hague Convention and its protocols; raises awareness of the importance of protecting cultural property and heritage in emergency situations; promotes and provides relevant training; promotes community engagement with and participation in protecting cultural property; and encourages co-operation with, and between, other relevant entities involved in disasters.*

Canada is currently in the process of developing its own national committee of the Blue Shield which will be focused on addressing periods of conflict as well as Emergency Management and disaster reduction/response.

Blue Shield was followed by the establishment of the International Foundation for Cultural Property Protection in 1999. Although more focused on the training of security personnel and leaders of museums and historic sites, it also integrates the principles of Emergency Management into its objectives. Specifically, the mission of International Foundation for Cultural Property Protection is to:

- *Provide a consistent source of information & education for persons responsible for the protection of cultural properties;*
- *Develop & maintain professional standards & ethical guidelines for the performance of protection related services;*
- *Conduct regional training programs, seminars, and workshops that enable practitioners at every level to participate;*
- *Offer global certification for persons responsible for the protection of cultural institutions;*
- *Facilitate the sharing of professional publications, educational material, resources and training; and,*
- *Advocate, recognize and advance the achievements of those leading the protection of cultural properties.*

At the same time as the establishment of these organizations, and referencing many of the principles of Blue Shield, Herb Stovel's *Risk Preparedness: A Management Manual for World Cultural Heritage* was published in 1998 under the auspices of International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM). This manual was one of the first to take a comprehensive approach and highlighted the importance of thinking differently about Emergency Management for cultural heritage resources:

> *We respond to tragedy when it occurs; we respond with energy, compassion and visceral frustration in the face of immediate need, but we are reluctant to extend our capacity from event-specific response to embrace larger processes for which we bear responsibility. We are reluctant to commit resources seriously to improve preparation; not just for earthquakes in Assisi or Kobe, not just for hurricanes in Savannah, but for risks of all kinds, in relation to all forms of cultural heritage. Embracing this larger perspective demands a fundamental re-think of the essence of the conservation approach developed for our built heritage, a conservation approach developed globally over the last two centuries.*[14]

Stovel highlighted the growing recognition by emergency professionals of cultural heritage protection, as well as the need for cultural heritage professionals to recognize that potential negative impacts may need to be accepted. He also noted that a risk management approach could help to conserve cultural heritage resources by positioning these resources as part of holistic management while helping to promote a wider acceptance of the importance these resources serve in communities. Ultimately, he recognized that by understanding cultural heritage as something that is at risk, it can help with proactive decision-making:

> *Cultural heritage is always at risk. It is at risk from the depredations of war. It is at risk in the face of nature's occasional eruptions and irruptions. It is at risk from political and economic pressures. It is at risk from the daily forces of slow decay, attrition and neglect. It is even at risk from the hand of the over-zealous conservator. If the cultural heritage community begins its dialogue based on this premise, then it will be able to make bridges not only to those responsible for planning for disasters, but also to ordinary people whose own vigilance must be stimulated, whose own courage in the face of disaster must be supported.*[15]

Stovel identified ten (10) principles that should be applied to cultural heritage disaster and risk management:

- *The key to effective protection of cultural heritage is advance planning and preparation.*
- *Advance planning for cultural heritage properties should be conceived in terms of the whole property, and provide integrated concern for its buildings, structures, and their associated contents and landscapes.*
- *Advance planning for the protection of cultural heritage against disasters should integrate relevant heritage considerations within a property's overall disaster prevention strategy.*
- *Preparedness requirements should be met in heritage buildings by means which will have least impact on heritage values.*

[14] Stovel, 1998, p.1
[15] Stovel, 1998, p.17

- *Heritage properties, their significant attributes and the disaster-response history of the property should be clearly documented as a basis for appropriate disaster planning, response, and recovery.*
- *Maintenance programs for historic properties should integrate a cultural-heritage-at-risk perspective.*
- *Property occupants and users should be directly involved in the development of emergency-response plans.*
- *Securing heritage features should be a high priority during emergencies.*
- *Following a disaster, every effort should be made to ensure the retention and repair of structures and features that have suffered damage and loss.*
- *Conservation principles should be integrated where appropriate in all phases of disaster planning, response, and recovery.*[16]

Another groundbreaking publication was the Getty Institute's 1999 publication *Building an Emergency Plan*. While focused on museums and cultural institutions, it nonetheless provided guidance on how to develop a team-based disaster and risk management plan.

Both these works were augmented by the research of David W. Look and Dirk H.R. Spennemann, which recognized that disasters are inevitable, and planning for such disasters should better support cultural heritage resources:

> *Planning for a disaster is planning for the inevitable; a matter of "when," not "if." As individuals and as a community we accept that disasters will occur, we come to terms with their impacts, and we try to minimize them through planning. It is the priority that often will suddenly shift—from last to first. Cultural resources take their greatest losses during or after disasters, when portions and sometimes even entire objects, buildings, structures, and districts are lost. Therefore, disaster preparedness and planning should be inextricable elements of our cultural resource stewardship*.[17]

Their work highlighted how a disaster can evoke strong emotional responses in the community after cultural heritage resources are damaged, which may take form through the establishment of memorials or the management of properties in a damaged state.

1999 also saw the adoption of the Second Protocol of the Hague Convention, which reinforced the requirements of the 1954 Hague Convention on the protection of cultural heritage resources during times of conflict. It not only served to provide opportunities for enhanced protection of cultural heritage resources but also introduced the concept of individual criminal responsibility when cultural heritage resources were deliberately targeted. In 2021, the International Criminal Court released its *Policy on Cultural Heritage*, which identifies when and how it will prosecute international criminal cases

[16] Stovel, 1998, p. 20
[17] Look and Spennemann, 2001

related to cultural heritage, including those related to violations of the 1954 Hague Convention.

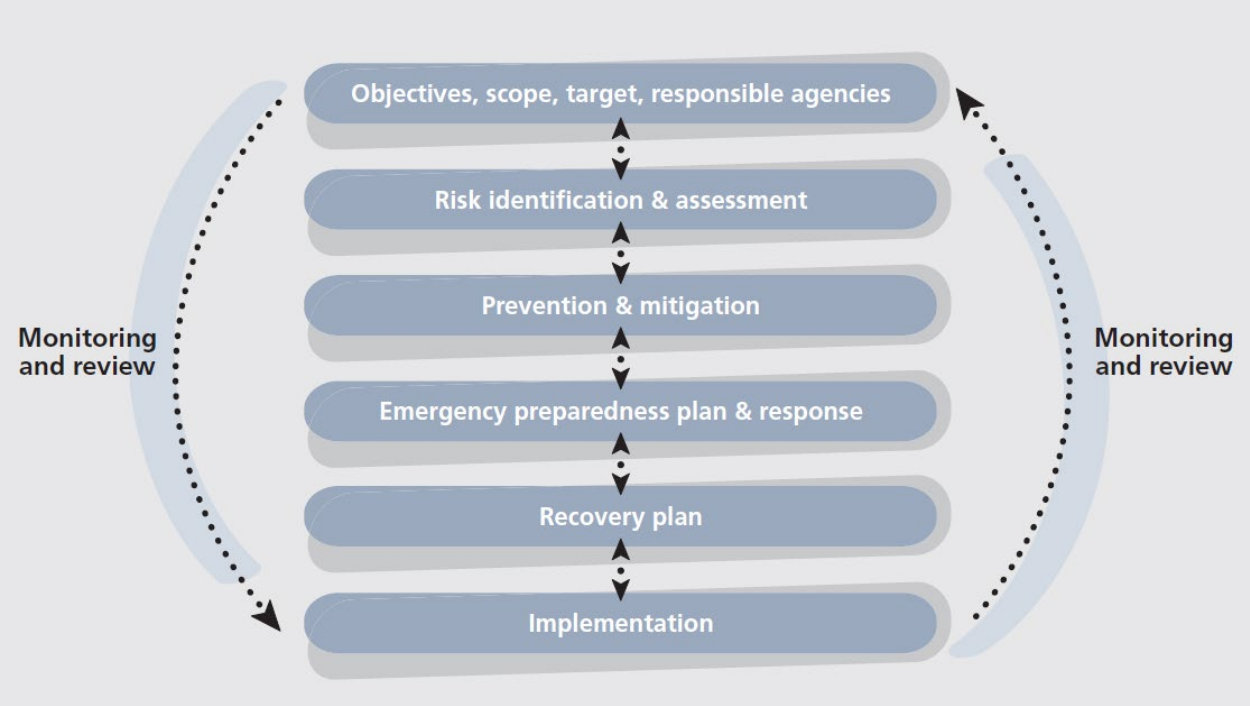
In 2010, the United Nations Educational, Scientific and Cultural Organization (UNESCO) released a resource manual to assist heritage managers of World Heritage Sites with how to prepare for and respond to disasters and emergencies.[18] Intended to complement Stovel's work, it outlines key principles for the development and implementation of disaster and risk management plans. These include the following:

- *A plan is essential for providing clear, flexible and practical guidance (rather than rigid rules) for the site manager and their team. A certain flexibility should be built into the plan from the beginning.*
- *As with a generic site management plan, a Disaster Risk Management plan should not consist merely of a list of actions. Rather, it should describe the processes which, for different situations, should be followed by the responsible authorities in deciding and implementing the appropriate actions.*
- *A plan should clearly state the main objectives and process of the plan, the scope, target audience and the agency(ies) responsible for its implementation.*
- *Essentially, a plan is based on identifying and assessing the main disaster risks that might result in negative impacts to the heritage values of the property…as well as to human lives and assets at the site.*
- *It then spells out the tools, techniques and implementation strategies for prevention and mitigation, emergency preparedness and response, recovery, maintenance and monitoring.*
- *The time periods and deadlines for periodic reviews of the plan should be defined.*
- *Depending on the nature of the property, a plan should be as comprehensive as possible.*
- *A Disaster Risk Management plan can take many forms depending on the audience, for example a brochure or poster will be suitable for raising public awareness, while a report might be needed for the state agency, and a handbook / CD ROM with checklists would be more appropriate for a site manager.*
- *Copies of the Disaster Risk Management plan for your property should be kept securely at several locations so that these can be retrieved easily when needed, especially during a disaster.*

This document outlined the key components of a disaster and risk management plan for cultural heritage resources, which are illustrated in Figure 8:

[18] UNESCO, 2010

Figure 8 – Components of a Disaster and Risk Management Plan (Source: UNESCO, 2010)



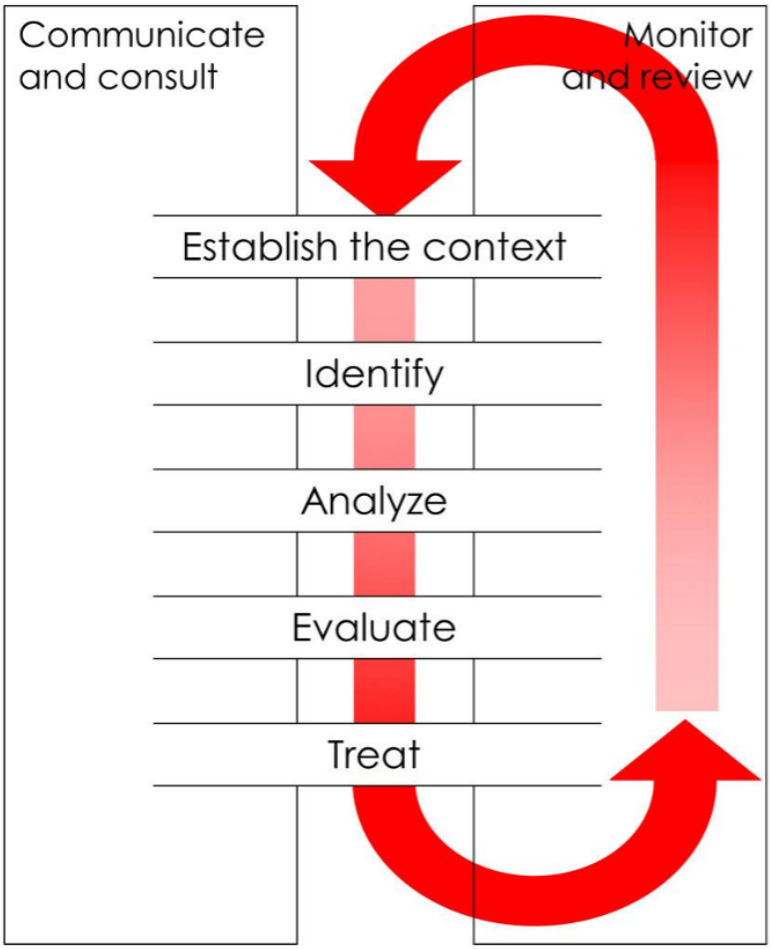
The manual introduced important concepts, such as primary and secondary hazards, while providing a methodology for identifying, assessing and reducing risks. It also highlighted how cultural heritage can support response and recovery efforts. In addition, the manual recognizes that cultural heritage resources are often foundational to community identity and their conservation in traumatic situations can contribute to social cohesion and provide psychological support.[19]

In 2016, ICCROM in association with the Canadian Conservation Institute (CCI), published *A Guide to Risk Management of Cultural Heritage*, which is a comprehensive framework for risk management. This work builds on methodologies such as *The ABC Method*, developed by CCI to support the identification and prioritization of risks.[20] Key findings from the documents includes:

- Risks are not just singular events; they can be the result of regular and cumulative events.
- Risks can impact not only tangible aspects of cultural heritage resources; risks can have an impact on intangible aspects, such as cultural heritage value.
- The risk management cycle (Figure 9) can serve as an important structuring tool for disaster and risk management for cultural heritage resources.

[19] UNESCO, 2010
[20] Canadian Conservation Institute, 2016; While CCI is a Canadian organization, it is recognized as a world leader on conservation, including on disaster and risk management

Figure 9 – The risk management cycle (Source: Canadian Conservation Institute, 2016)



At the core of this approach is an understanding that risks need to be identified, analyzed, evaluated, and treated, with an emphasis on addressing root causes of potential risks rather than just the results of a disaster or emergency event. The manual highlights the importance of undertaking a comprehensive risk assessment to assist with prioritization. It also identifies the need for an integrated (holistic) approach that considers the specific context of any emergency event (Figure 10). Also critical to this approach is active and open communication and engagement with interested and affected parties while identifying and recognizing the applicable legal and policy frameworks.

Figure 10 – Understanding context (Source: Canadian Conservation Institute, 2016)

The ABC methodology uses a scoring system to illustrate the relative magnitude of risk to a cultural heritage resource (referred to by ICCROM and CCI as a "heritage asset") (Figure 11). *'A'* refers to how often a particular event is expected to happen, *'B'* refers to the potential loss of value resulting from the event, and *'C'* refers to the potential impact on a collection or building. When combined, these result in a score out of 15 identifying the *Magnitude of Risk*. Figure 12 shows an example of how this might appear.

Figure 11 – The ABC system (Source: Canadian Conservation Institute, 2016)

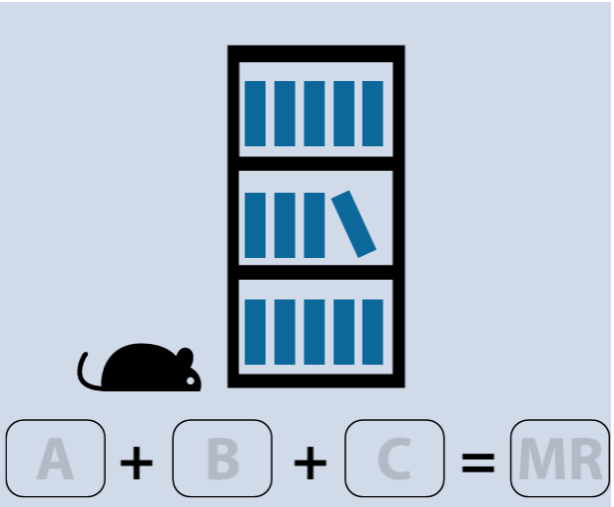


Figure 12 – Example of the ABC system illustrating prioritization based on scoring (Canadian Conservation Institute, 2016)

Level of priority	MR	Expected loss of value to the heritage asset
13½ - 15 Catastrophic priority All or most of the heritage asset value is likely to be lost in a few years.	15	100% in 1 year
	14½	30% per year
	14	10% per year = 100% in 10 years
	13½	3% per year = 30% every 10 years
11½ - 13 Extreme priority Significant damage to all the heritage asset, or total loss of a significant fraction of the heritage asset, is possible in approximately one decade. All or most of the heritage asset value can be lost in one century	13	10% every 10 years = 100% in 100 years
	12 ½	3% every 10 years = 30% every 100 years
	12	1% every 10 years = 10% every 100 years
	11½	0.3% every 10 years = 3% every 100 years
9½ - 11 High priority Significant loss of value to a small fraction of the heritage asset, or a small loss of value in most or a significant fraction of the heritage asset is likely in one century.	11	1% every 100 years
	10½	0.3% every 100 years
	10	0.1% every 100 years = 1% every 1 000 years
	9½	0.03% every 100 years = 0.3% every 1 000 years
7½ - 9 Medium priority Small damage or loss of value to the heritage asset over many centuries. Significant loss to a significant fraction of the heritage asset over many millennia.	9	0.1% every 1 000 years = 1% every 10 000 years
	8½	
	8	0.01% every 1 000 years = 0.1% every 10 000 years
	7½	
7 and below Low priority Minimal or insignificant damage or loss of value to the heritage asset over many millennia.	7	0.001% every 1 000 years = 0.01% every 10 000 years
	6½	
	6	0.0001% every 1 000 years = 0.001% every 10 000 years
	5½	
	5	0.00001% every 1 000 years = 0.0001% every 10 000 years

In 2019, the European project ARCH – Advancing Resilience of Historic Areas against Climate-related and other Hazards – released a report outlining how to address cultural heritage at risk. While building on previous reports and efforts, the report specifically links to the concepts outlined in the Sendai Framework as well as the principles of Building Back Better. Notably, the report highlights the important interconnections between culture, people-centered policies, place-based policies, economic recovery and physical reconstruction, and the need for Disaster Risk Management plans to address these ideas (Figure 13).

Figure 13 –The interconnectedness between culture, people-centered policies, place-based policies, economic recovery and physical reconstruction (Source: ARCH, 2019)

Organized by ICCROM, the 2025 Heritage-Based Climate Action conference in March 2025 assembled cultural heritage professionals from across the globe, aiming to integrate cultural heritage into climate action, Disaster Risk Reduction and peacebuilding efforts.[21] Following the end of this conference, a report was written compiling the ideas brought forward. A total of 22 recommendations were provided, which sought to merge heritage protection with Disaster Risk Management and climate action policies and plans. These recommendations, presented verbatim, are as follows:

1. *Incorporate concerns for heritage protection within disaster risk management and climate action policies and plans.*
2. *Record and transmit the traditional knowledge and practices of communities dependent on natural resources to future generations.*
3. *Focus climate adaptation and resilience efforts on coastal, arid and semi-arid regions due to their high vulnerability.*
4. *Ensure climate action strategies respect and address the rights and needs of affected communities.*
5. *Collaborate with diverse sectors to advocate for and develop accessible climate financing for heritage preservation.*
6. *Develop tools and methods to gather data on the loss and damage affecting living cultures and intangible heritage.*
7. *Enhance the capacities of heritage professionals to access and interpret climate data through targeted training and investments.*
8. *Use evidence-based approaches and cross-sector collaboration to assess and manage climate risks to cultural heritage.*
9. *Include community perspectives and traditional knowledge in climate strategies to address global challenges effectively.*
10. *Use qualitative data from diverse communities, including Indigenous groups, to inform climate action.*
11. *Integrate heritage conservation into climate emergency policies and develop robust financing models for heritage-based climate actions.*
12. *Increase the capacities of heritage professionals to access and effectively use scientific data for assessing climate risks to heritage.*
13. *Focus on documenting and preserving Indigenous and traditional knowledge, especially in the face of displacement.*
14. *Study and reintegrate traditional resource-sharing systems disrupted by colonialism and modern changes.*
15. *Address challenges in engaging diverse professionals by aligning terminologies and approaches through expert workshops.*

[21] ICCROM, 2025

16. *Avoid exclusionary heritage practices by incorporating community values and addressing inequality.*
17. *Adjust project timelines to account for community activities and seasonal cycles.*
18. *Integrate traditional and modern knowledge to address extreme and unpredictable climate conditions effectively.*
19. *Establish trust and consider social dynamics in community-based climate action and disaster management.*
20. *Create accessible early-warning systems for heritage sites to improve disaster preparedness.*
21. *Work with governments to integrate heritage needs into national climate plans and policies.*
22. *Advocate for climate financing that supports the preservation of cultural heritage and frontline communities impacted by climate change*.

Various tools have been developed internationally to assist with post-disaster recovery. This includes the Temporary Protection Plan, which was developed following the New Zealand earthquakes in 2011 (Figure 14). Intended as a risk management tool, a Temporary Protection Plan provides an overview of risks that are associated with a project and describes measures to mitigate those risks. It requires an understanding of the cultural heritage values and heritage attributes not only of the subject property but also for adjacent properties. A Temporary Protection Plan should, at a minimum, include the following:

- A clear statement of the heritage values associated with the property, including identification of assets that should be conserved;
- The documentation of existing conditions, which may require a structural assessment;
- A communication plan that shows how issues will be shared between the local approval authority, the design team, the construction team, and the community;
- The way in which access to the site and the delivery of materials will be undertaken, to minimize impacts;
- The manner of minimizing potential physical impacts to the subject property or adjacent properties;
- A description of methods for stabilization, if it is required; and,
- A fire and security plan.

A Temporary Protection Plan must include clear guidance on how risks will be minimized and provide a proposal to ensure conservation and protection, with sufficient technical detail to enable implementation. Within Ontario, Temporary Protection Plans have begun to be requested in several communities such as Niagara-on-the-Lake and Kingston to manage construction activities and ensure appropriate plans are in place.

The Temporary Protection Plans themselves have been developed both as stand-alone documents as well as part of larger Conservation Plans.

Figure 14 – The temporary protection plan produced by Christchurch City Council (Source: Christchurch City Council, n.d.)

3.2. Nationally

At the national level in Canada, Emergency Management is coordinated by Public Safety Canada. Public Safety Canada develops and implements policies, plans and programs under the authority of the Federal *Emergency Management Act S.C. 2007, c. 15*. Public Safety Canada assists communities to protect themselves from emergencies and disasters related to all kinds of hazards, including natural, human-induced and technological. As part of its program for recovery from disasters, Public Safety Canada provides financial assistance to provincial and territorial governments through the Disaster Financial Assistance Arrangements, in the event of a large-scale disaster where response and recovery costs are greater than provinces or territories can handle.

The federal government has prepared the following plans and strategies for Emergency Management in Canada:

- *An Emergency Management Framework for Canada (May 2017)*
- *Emergency Management Strategy for Canada: Toward a Resilient 2030*
- *Federal, Provincial, and Territorial Emergency Management Strategy Interim Action Plan 2021-22*

Public Safety Canada also runs the Canadian Disaster Database, which contains detailed disaster information since 1900.

DID YOU KNOW:

More specific to cultural heritage, the Canadian Conservation Institute, who are a Special Operating Agency within the Department of Canadian Heritage, advance the conservation of Canada's heritage through research, expert services, and knowledge dissemination, including heritage collections, buildings, and sites. The Canadian Conservation Institute also provides advice regarding emergencies and disaster risk to heritage communities following fire, flood, earthquake or other catastrophes.

Other initiatives in Canada include the British Columbia Heritage Emergency Response Network (BC HERN), which is supported by the Government of Canada, the BC Royal Museum and other organizations (Figure 15). The network is comprised of institutions, heritage professionals and volunteers that plan for emergencies and support cultural institutions in the event of emergencies that impact collections. To that end, they provide training and resources to support emergency preparedness and response.

Figure 15 – (Source: British Columbia Heritage Emergency Response Network, n.d.)

In association with BC HERN and BC Museums Association, Heritage BC has provided a Climate Disaster Response Fund to address immediate conservation of heritage places impacted by recent climate disasters. Ontario has also recently established a Heritage Emergency Response Network modelled on BC HERN.[22] Other Museum Associations, including those in Nova Scotia and Alberta, have developed lists of emergency resources and guidance documents.[23]

3.3. Provincially/Municipally

Within Ontario, the approach to addressing cultural heritage resources in disaster and emergency events has varied considerably. Indeed, disaster and risk management for cultural heritage resources at the municipal level is in its infancy in Canada.

Most Ontario municipalities do not have a Heritage Master/Management Plan (or Strategy). Of the thirteen Heritage Master/Management Plans examined, only two (2) had explicit references to emergency/risk management or climate change. Heritage Master/Management Plans are not required in Ontario, but Municipalities are encouraged to develop "*proactive strategies for conserving significant built heritage resources and cultural heritage landscapes*", as per Policy 4.6.4(b) of the 2024 *Provincial Planning Statement*. Currently only two (2) municipalities in Ontario have a

[22] ON HERN, n.d.
[23] See Association of Nova Scotia Museums, n.d.; Alberta Museums Association, n.d.; BC Museums Association, n.d.

specific policy for the management of cultural heritage resources related to disasters; these are Hamilton and Kitchener. Some communities, such as Ottawa, have called for the development of such policies, but these have not been implemented.[24] In other municipalities - such as the Town of Goderich, the Town of Saugeen Shores and the Town of Halton Hills - policies related to disaster and risk management for cultural heritage are embedded in other municipal documents.

3.3.1. City of Hamilton

The City of Hamilton was the first municipality in Ontario to establish a protocol for Emergency Management of cultural heritage through its Built Heritage Emergency Management Protocol developed in 2005 (**Appendix I**). The Protocol was a direct response to an emergency situation, where a building on a protected heritage property was declared to be a hazard to public health and safety. The Protocol is not prevention-focused but is responsive to specific situations.

The Protocol applies when an Emergency Order or Unsafe Order has been issued on a heritage property protected under the *Ontario Heritage Act* (*OHA*) or one of national historic significance, and (1) the City has assumed responsibility for the building's compliance with the *Ontario Building Code Act*, or (2) a property owner has assumed responsibility and is acting on an unsafe order.

The Protocol purpose is to:

1. *ensure protection of heritage resources without comprising public safety;*
2. *educate local decision makers and emergency personnel of the special requirements of these sources; and,*
3. *provide a consistent approach to the management of emergency situations involving heritage resources.*

The Protocol works in conjunction with the City's Emergency Plan and directs first responders (i.e., the responding agency or municipal department likely to be the first on-site authority to an emergency) and the Heritage Emergency Response Team (including the Chief Building Official or their representative, heritage staff, pre-qualified contractors, and other groups/organizations as necessary) regarding immediate emergency response measures subsequent conservation, and salvage and/or demolition activities.

The Protocol provides clear, step-by-step actions to be taken during an emergency beginning with an assessment of the situation **prior** to undertaking an intervention.

Where an imminent threat:

1. *compromises the structure integrity of a heritage resource'*
2. *compromises the designated features of a heritage resources; or*

[24] Flemming, 2007

3. *may have the potential to compromise the structure integrity or designated features of a heritage resource*

The Protocol provides two (2) steps:

Step 1 is to invoke the City's Emergency Plan then to invoke this Protocol.

Step 2 is to inform the Chief Building Official who is to inform a Heritage Emergency Team (City heritage staff and project managers) that assemble on site when safe to do so. A professional structural engineer with heritage experience is to take the lead on advising regarding the built heritage resource. Once heritage City staff are notified, they take the lead on advising other relevant groups.

Once the Heritage Emergency Response Team meets on site their role is to develop a strategy to remove the unsafe condition while minimizing damage to the heritage resource. The strategy is to be premised on the following principles:

1. *Ensure public health and safety.*
2. *Minimize immediate (short-term) damage to or loss of the heritage resource.*
3. *Ensure that the proposed intervention minimizes any threat to the long-term structural integrity and survival of the resource.*
4. *Ensure that the scope and cost of any intervention is reasonable in relationship to the threat to public health and safety presented by the situation.*
5. *If required, recommend suitable artifacts for documentation and recovery from the site with permission of the owner and with an agreement with the owner, or others, to cover all protection, storage and transportation costs.*
6. *Ensure any action is based on appropriate professional expert advice.*

The Chief Building Official is to implement the strategy as they deem fit. City staff are to follow-up and monitor works and activities.

3.3.2. Town of Goderich

The Town of Goderich incorporated policies related to risk management within its *Town of Goderich Heritage Conservation District Plan* (dated May 2014) which regarded the creation of a new "Downtown" Heritage Conservation District (HCD) and included broader recommendations for the existing adjacent "West" and "Square" HCDs for consistency. This was in direct response to the catastrophic 2011 tornado that caused extensive damage to its downtown core (Figure 16). The guidelines for advance planning were based on ICRROM's 1998 publication, "Risk Preparedness: A Management Manual for World Cultural Heritage." The *Town of Goderich Heritage Conservation District Plan* includes the following guidelines:

Documentation of Existing	• Identification of cultural resources within the HCDs (i.e., the West, Square, and Downtown HCDs) that would require

Heritage Resources	special care in an emergency (e.g., architectural details, cultural landscape elements); • Evaluation of cultural resources to determine heritage attributes (if not already undertaken); • As-found documentation of cultural resources (buildings, landscapes, archaeological sites) sufficient to allow reconstruction or replacement; • In the case of built heritage resources and cultural landscapes damaged in a disaster (e.g., in the tornado), documentation of the response (e.g., repair/ reconstruction/ replacement) and recording of lessons learned. In the case of Goderich, in addition to actions undertaken by the municipality, this would also entail an assessment of the actions of various outside agencies, such as the Ministry of Labour, and of volunteer groups and individuals, as well as the effects of adverse weather on physical settings in the crucial period immediately following the tornado.
Risk Analysis	• Determination of the types of threats most likely to affect the cultural heritage resources within the HCDs (hazards), the degree of threat (vulnerability) and the resulting level of risk (hazard vulnerability); • Identification of the portions of properties that would be most vulnerable to damage, and making recommendations for reducing potential damage; • Assessment of municipal services, including public and private building substructures, that could be vulnerable, and making recommendations for their protection; • Identification of the most common emergencies that could be expected on properties within the HCDs, and mapping of areas having the most risk; and • Acquisition of insurance to cover risk (public and private property), to cover all hazards to address liability for emergency response activities and post-emergency reconstruction work.
Emergency Response Plans	• Compilation of a list of qualified emergency response specialists, available for various aspects of response, including salvage/conservation rescue (e.g., heritage architects and landscape architects, skilled tradespeople, project managers, materials suppliers) and keeping the list current.

Mitigation in Advance of Disasters	• Retrofitting of vulnerable built heritage resources (and, where possible, cultural landscapes) to add strength/ cover to resist stresses (e.g., structural reinforcement, flood-proofing); • Provision of storage space and conservation measures for moveable heritage resources in the event of an emergency (e.g., archival storage); and • Provision of information on mitigation techniques and measures.
Financial Measures	• Provision, in the municipal budget and budgets of private property owners, of emergency funds for immediate response and for long-term repair and restoration of cultural heritage resources.

Other recommendations include:

- Creation of an emergency response team of conservation to assess and document the impacts of the disaster and to provide advice on short term and long term stabilization and conservation measures
- Guidelines for rebuilding and reconstruction after a disaster such as applying conservation principles, identifying suppliers of materials and skills for repair work and safe materials for salvage and reuse, and ongoing monitoring of response measures.

Figure 16 – Photos showing damage to buildings after the 2011 Goderich tornado and reconstruction after the disaster (Sources: Carl Bray & Associates Ltd)

Tornado-Damaged Buildings

Reconstruction After the Disaster

3.3.3. City of Kitchener

The City of Kitchener Built Heritage Emergency Management Policy (2016) (**Appendix II**) was modeled on the City of Hamilton's 2005 Built Heritage Emergency Management Protocol. However, Kitchener's Policy accounted for changes to the *OHA* in 2005.

This policy addresses situations where an Order has been issued for a property that is listed or designated under the *OHA* by the Chief Building Official under the *Ontario Building Code Act*. The policy addresses such situations for both private and publicly owned properties containing cultural heritage resources.

The policy enables the City to gain professional advice from qualified heritage professionals and engineers and to recover costs, where possible, under the relevant legislation. The Policy also establishes lines of communication between various departments including planning and building services.

The policy establishes processes for demolition of listed properties. It also establishes processes for designated (protected) heritage property to address orders. Where an owner does not comply with an Order, the Chief Building Official is permitted to request a Heritage Permit to effect compliance. Expedited decision-making is enabled to address Orders that may affect heritage attributes through the calling of emergency meetings for Heritage Committee and Council.

3.3.4. Town of Halton Hills

The Town of Halton Hills Cultural Heritage Strategy (September 2023) provides guidance for the municipality to effectively manage its cultural heritage resources.[25] The strategy acknowledges that climate change is a key emerging threat requiring increased resilience and mitigation in the coming decades due to growing risks such as extreme weather, higher temperatures, and increased precipitation and flooding.

Four (4) specific recommendations are provided to address anticipated climate changes:

1. **Establish grants** to facilitate climate change resiliency-related retrofits for designated heritage buildings. This may take form through compatible building upgrades that promote energy efficiency or are more resilient to the effects of climate change. Examples provided include the installation of storm windows or through a building envelope consultation to identify areas of heat loss.
2. **Support cultural landscapes and historic settlements,** many of which are located in floodplains, through the creation of different incentives that help protect properties against flooding. In collaboration with Climate Change & Asset Management Town Staff, incentives such as grants or tax rebates should be established to promote the adoption of flood-risk mitigation measures on properties.

[25] ERA Architects, 2023

3. **Coordinate flood management strategies** by pursuing landscape-based public works, such as using permeable pavers, bioswales, rain gardens and other forms of softscaping. Town heritage staff are encouraged to work with other departments to develop strategies compatible with the defined heritage value of cultural heritage resources within each settlement.
4. **Undertake a Cultural Resource Vulnerability Assessment** that identifies cultural heritage resources most at risk in the floodplain. Specialized guidance can then be provided for each assessed cultural heritage resource.

3.3.5. Town of Saugeen Shores

The Town of Saugeen Shores adopted a Cultural Heritage Master Plan in May 2025 to create a robust approach to cultural heritage planning in the Town.[26] This coincides with the Town's decision to undertake an update of its Official Plan, which is still in progress.

Recommendations are provided throughout the report that suggest policy changes to the Town's Official Plan and provide greater direction to the Town to manage cultural heritage resources. Other recommendations specific to Disaster Risk Management are also provided in the Cultural Heritage Master Plan. Emergency protocols are recommended for impacted cultural heritage sites and human remains and burials in the event that they are threatened by an emergency or a disaster. Building on this, Indigenous engagement protocols are also recommended; creating such protocols are intended not only to improve communication with these groups but to establish a framework for actions when managing heritage sites or human remains and burials associated with Indigenous communities.

3.3.6. Ontario-Focused Research

Previous research associated with cultural heritage resources and disasters has been conducted with a particular focus on Ontario. These include the following planning thesis projects.

Keeping Heritage Afloat: A Planning Framework and Evaluation Toolkit for Floodplain Management of Built Heritage (2024)

Michael Maugeri's 2024 report titled "**Keeping Heritage Afloat**" discusses opportunities to mitigate the risks that floodplains and flood vulnerable areas pose to built cultural heritage.[27] With climate change increasing the likelihood of more frequent and intense flood events, these disasters require specialized planning to support the conservation and preservation of built cultural heritage resources that represent, in part, a community's very identity. Seven (7) recommended guidelines to help enhance floodplain management plans were provided by Maugeri and adapted from organizations and government departments such as UNESCO, the Federal Emergency

[26] NPG Planning Solutions Inc. et al., 2025
[27] Maugeri, 2024

Management Agency, Natural Resources Canada, and the Canadian Conservation Institute. Themes arising from these guidelines relate to the importance of adequately planning for these disasters by organizing resources and information and developing strategies to respond to them. These prepared resources and established responsibilities are put into action during a flood, during which the lessons learned are utilized during recovery and rehabilitation activities to better prepare for the future.

Goderich: A Case Study of Conserving Cultural Heritage Resources in a Disaster (2016)

The 2016 thesis "***Goderich: A Case Study of Conserving Cultural Heritage Resources in a Disaster***", written by Kayla Allison Jonas, assesses the impact of the 2011 tornado that swept through the Town of Goderich.[28] Based on an analysis of streetscapes in Goderich before and after the disaster, it was determined that the Townscape had not been irrevocably impacted by the tornado. Based on the analysis of Goderich and through discussions with various stakeholders, a four-stage approach to manage cultural heritage resources before, during and after a disaster was put forward. This four-stage approach promoted mitigative and preparatory measures by educating property owners, protecting cultural heritage resources and establishing Emergency Management plans. It goes on to suggest actions during a disaster, such as assessing damage and documenting/salvaging buildings, and ends by suggesting the implementation of planning initiatives that guide rebuilding in a manner sympathetic to the character of the impacted area.

Preserving Built Heritage in Canada: Best Practices in Preventing Demolition by Neglect (2014)

Sara Megan Albinger's 2014 thesis, "**Preserving Built Heritage in Canada: Best Practices in Preventing Demolition by Neglect**", addresses the intentional neglect of built heritage resources that eventually leads to their demolition.[29] Neglecting built heritage resources, and buildings in general, promotes deterioration and eventual structural failure; once this occurs, threats to public safety provide the legal authority to demolish a building regardless of its status. To address this, municipalities were allowed to adopt property standards by-laws requiring the maintenance of heritage buildings through amendments made to the *OHA* in 2005. Yet the findings by Albinger suggest that adopting a property standards by-law on its own is not enough to prevent demolition by neglect. Different recommendations were put forward by Albinger to help prevent demolition by neglect, that being: disincentivizing demolition by discouraging high volumes of waste; capitalizing on compromise between heritage objectives and long-term profitability; expanding heritage incentive programs; giving citizens more voice throughout development that involves cultural heritage; improve communication and

[28] Jonas, 2016
[29] Albinger, 2014

education of property standards; and promoting the value of heritage as an important factor and reason for its continued existence.

4. Existing Policy Framework in Collingwood

The following section outlines the current policy and legislative framework applicable to the Town of Collingwood as it relates to emergency management. This framework provides an understanding of the starting point for emergency management planning and where future changes may be recommended.

4.1. County of Simcoe Emergency Response Plan (2024)

The 2024 County of Simcoe Emergency Response Plan is the centralized and coordinated response to emergencies in the County of Simcoe. The establishment of this plan promotes a coordinated approach to emergency planning that was designed to mitigate damages for the protection of residents and visitors, properties and businesses, infrastructure and economic stability. A broad spectrum of potential hazards are considered in the emergency planning methodology outlined in this plan, which is defined by five (5) core themes: prevention, mitigation, preparedness, response, and recovery. The combined consideration of these themes in the County of Simcoe Emergency Response Plan will help foster disaster resilient communities capable of responding to different disaster and emergency situations.

The County of Simcoe Emergency Response Plan is not referenced in other municipal documents such as the County of Simcoe Official Plan (Office Consolidation 2023) or County of Simcoe Archeological Management Plan (2019). However, the Archaeological Management Plan does identify high-level protocol if there are unexpected archaeological emergency findings.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The County of Simcoe Emergency Response Plan references general property protection as an objective but does not directly address cultural heritage resources.
- The Town of Collingwood has an opportunity to supplement and build upon the strategies provided in the County's Emergency Response Plan.

4.2. Town of Collingwood Official Plan (2024, Under Partial Appeal)

It should be noted that some policies in the Town of Collingwood Official Plan (2024) are under appeal, but this does not include Section 3.7. The 2024 Town of Collingwood Official Plan anticipates more intense and frequent extreme weather events. Section 3.7 - Promoting Environmental Sustainability and Adapting to Climate Change, supports a comprehensive approach for strong, liveable and healthy communities that are resilient to climate change. The Plan states "the Town recognizes the need to adopt comprehensive climate change adaption and mitigation measures to enhance the

resiliency of its built and natural environments and to protect human health and wellbeing." Policies and practices for building a resilient and environmentally sustainable Collingwood include, but are not limited to:

- Developing complete, compact communities in an urban structure;
- Avoiding development that could create environmental, public health or safety concerns or that may not be compatible with a changing climate;
- Protecting and enhancing natural heritage features and their ecological functions;
- Protecting and enhancing the urban forest; and
- Ensuring infrastructure is designed and sized for increased intensity and frequency of extreme weather events and to prevent resulting property damage.

Policies support the preparation of a Climate Change Action Plan, and the implementation of the Greener Collingwood Corporate Climate Change Action Plan, as well as the Energy Conservation and Demand Management Plan and related Town resolutions, policies, and plans. Section 3.6.c of the Official Plan also supports the preparation of a Cultural Heritage Master Plan that establishes Town-wide policies, procedures and design guidelines to support the management of cultural heritage resources.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- Proactive strategies in the Policy must include proactive measures in anticipation of a changing climate.
- The Policy should consider how to mitigate the vulnerability of cultural heritage resources that are already within hazardous areas.
- There is potential for heritage-specific emergency policies within the Official Plan.
- Any future heritage plans, such as a potential Town of Collingwood Cultural Heritage Master Plan, should reference and be consistent with the Cultural Heritage Emergency Management Plan.

4.3. Emergency Management Plan and Protocols

The Town of Collingwood has an Emergency Management Plan, as required through provincial legislation, to guide emergency responses in the municipality. The document is publicly available on the Town's website where there is a webpage dedicated to Emergency Management. The Town also operates a general Emergency Management webpage containing helpful links to relevant provincial and federal resources.[30]

4.3.1. Town of Collingwood Emergency Plan (2020)

The Town of Collingwood Emergency Plan (2020) (adopted through By-law #2016-090) provides a coordinated response to emergencies that arise in the Town of

[30] Town of Collingwood, n.d. a

Collingwood.[31] The Plan was prepared under the authority of the *Emergency Management and Civil Protection Act*, R.S.P., 1990, c. E.9.

The Emergency Plan provides assigns roles and responsibilities of key officials, agencies and departments of the Town of Collingwood. Specific aims of the Emergency Plan include: saving lives; protecting public health, the health and safety of responders, infrastructure, property, and the environment; and reducing suffering, and economic and social loss.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The Town's Emergency Plan does not provide direction for cultural heritage resources.
- Although not the focus of the Policy, it must consider similar aims as the Town's Emergency Plan, such as public health and safety, the protection of property and the environment, and reducing economic loss.

4.4. By-law in Relation to Heritage Permits (#2022-037)

The delegation of authority for heritage permits pertaining to *OHA* Part IV and Part V designated properties in the Town of Collingwood is implemented through By-law #2022-037. Council has delegated the Director of Growth and Development or their designate the authority to deal with heritage permits in accordance with the *OHA*, including establishing practices and procedures to administer the by-law, issuing notices of receipt, and issuing heritage register notices.

The Director of Growth and Development or their designate is required to refer to Council when making recommendations or decisions relating to other prescribed matters under the *OHA*, including: recommending to list a registered property or issue a notice of intention to designate a registered property under Part IV of the *OHA*, repealing designation by-laws, or providing decisions relating to the demolition of Part IV and Part V properties.

Key takeaways for the Cultural Heritage Emergency Management Plan

- The by-law does not provide the ability for the designated staff to provide approvals in an emergency.
- The Policy must consider the efficacy of delegated responsibilities to allow for a timely response to emergencies and disasters.
- Authority assigned in the Policy should consider additional roles and responsibilities assigned to them that may cause delays in emergency or disaster responses.

[31] Town of Collingwood, 2020

4.5. Property Standards By-law (#2016-040)

Property Standards By-law #2016-040 establishes the required standards for property maintenance and occupancy within the Town of Collingwood. Part 7 of the Property Standards By-law addresses properties designated under Part IV or Part V of the *OHA,* including their maintenance standards, the repair and replacement of heritage attributes, the demolition of heritage properties, vacant and damaged heritage properties, and conflict resolution between applicable policy and legislation. The below discussion summarizes these standards.

Section 7.1 of By-law #2016-040 (as authorized by Section 45.1 of the *OHA*) prescribes that heritage properties are required, at a minimum, to be maintained so that their heritage attributes and cultural heritage values are protected. This includes maintenance of any elements which hold up, support, or protect the heritage attributes/values of a heritage property, such as roofs, floors, and retaining walls.

Per section 7.2 of the By-law, when a heritage attribute can be repaired, it is to be undertaken:

a) *in a manner that minimizes damage to the heritage values and attributes;*

b) *in a manner and technique that maintains the design, colour, texture, grain or other distinctive features of the heritage attribute;*

c) *using the same types of material as the original and in keeping with the design, colour, texture, grain and any other distinctive features of the original; and*

d) *where the same types of material as the original are no longer available, using alternative materials that replicate the design, colour, texture, grain or other distinctive features and appearance of the original material.*

Per section 7.3 of the By-law, when a heritage attribute cannot be repaired, the heritage attribute is to be replaced:

a) *using the same types of material as the original;*

b) *where the same types of material as the original are no longer available, using alternative materials that replicated the design, colour, texture, grain or other distinctive features and appearance of the original material; and*

c) *in such a manner as to replicate the design, colour, texture, grain and other distinctive features and appearance of the heritage attribute.*

Section 7.4 of the By-law states that the demolition or alteration of Part IV or Part V properties is not permitted except in accordance with the *OHA.*

Section 7.5 identifies that proactive measures to conserve heritage attributes/values of vacant heritage properties are required by property owners. Section 7.5 identifies that proactive measures to conserve heritage attributes/values of vacant heritage properties are required by property owners. When a building is unoccupied for 90 days or more,

the owner is required to ensure appropriate utilities serving the building are disconnected to prevent damaged caused by fluctuating temperatures and humidity. If the property is vacant or damaged, the owner is required to protect the building to prevent the entrance of weather, unauthorized persons, or pests. Brick or masonry units are not to be used for this, unless specifically requested by the Town. Instead, weatherproofed sheet plywood boarding at least 19 millimetres thick is to be applied to the building in a manner:

a) *that completely covers the opening and is properly fitted in a watertight manner within the side jambs, the head jamb and the exterior bottom sill of the door or window opening so the exterior trim and cladding remains uncovered and undamaged by the boarding;*

b) *that is fastened securely in a manner that minimizes damage to the heritage attributes and the historic fabric and is reversible; and*

c) *that minimizes visual impact.*

Improved security of closures is required if more than once existing measures failed to exclude unauthorized entry to the building.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The Property Standards By-law does not discuss or address Disaster Risk Reduction, but some required standards help mitigate the effects of certain hazards.
- While the Property Standards By-law is mandatory, the proactive recommendations in the Policy will not be legally enforceable. The Town must increase awareness and incentivize the adoption of suggestions in the Cultural Heritage Emergency Management Plan to better prepare property owners for disasters and emergencies.
- The Policy should include a process for determining, in consultation with a heritage expert, if, and when, heritage attributes can be conserved after an emergency or disaster so that losses are minimized where possible.

4.6. Collingwood Downtown Heritage Conservation District Plan (2008)

The Collingwood Downtown HCD Plan establishes the policies and guidelines for properties within its boundaries. Disaster-risk management is briefly mentioned in the plan, specifically Section 5.1, which establishes the following relevant objectives of the HCD Plan for properties within its boundaries:

> *To encourage interior and exterior maintenance to protect heritage buildings from damage or destruction from weather, flood, fire, and other hazards.*

To enforce the provisions and best practices of fire prevention and similar regulations.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The policies in the Cultural Heritage Emergency Management Plan should reflect the proximity of Part IV and Part V designated properties located within the HCD Plan area and in the surrounding area.
- Future changes may be required to the HCD Plan to ensure conformity with the policies in the Cultural Heritage Emergency Management Plan.

4.7. Heritage Incentives

The Town of Collingwood provides financial incentives to owners of Part IV or Part V designated properties. Incentives are available through grant and tax-refund programs.

4.7.1. Heritage Grant Program

The Heritage Grant Program[32] provides a grant covering 50% of project costs, up to a maximum of $3,000, to property owners undertaking one of the following three (3) project types:

1.	The conservation of existing architectural elements that are significant;
2.	The restoration of significant original architectural features that still exist, but which are beyond conservation or repair; Note: this only includes accurate reconstructions of the original features using materials, sizes, and configurations that match the original.
3.	The reconstruction of significant architectural features that have been lost, but for which the appearance can be clearly determined from documentary sources. Note: this must be documentary evidence for the property in question, not to similar properties. This evidence may be in the form of photographs or original drawings that illustrate the feature to be restored.

Projects are required to follow good heritage conservation practice outlined by the Collingwood Heritage Committee or its designate. Additional guidelines are provided on the Town webpage for projects involving, but not limited to, roofing and siding materials, masonry, and exterior building painting.

To be eligible for this grant, the project must:

[32] Town of Collingwood, n.d. c

- Conserve or enhance heritage attributes specified in the statement of Cultural Heritage Value or Interest for a Part IV designated property; or,
- Be in accordance with design guidelines and/or policies specified in the Collingwood Downtown Heritage Conservation District Plan for a Part V designated property.

Property owners can apply for this grant once per calendar year depending on the availability of funds. A total of $50,000 is made available to applicants each calendar year, subject to Council budget approval.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The Heritage Grant program does not specify whether the grant may be used to prepare for or respond to the effects of a disaster or an emergency.
- The establishment of incentives for the purpose of disaster and emergency risk management reduces barriers for homeowners to protect their properties.

4.7.2. Town of Collingwood Heritage Incentive Programs

The Town of Collingwood provides two financial incentive programs for heritage property owners.

Firstly, it offers the Heritage Tax Refund program which refunds of up to 20% are made available to owners of Part IV and Part V designated properties containing significant heritage buildings, as are listed on Schedule “B” of By-law #2010-020.[33] Inspections of participating properties are completed annually to ensure continued compliance with the Heritage Preservation and Maintenance Agreement signed by property owner as part of this program.

Secondly, it offers the Major Redevelopment and Restoration Tax Incentive Grant which provides financial assistance to owners of designated properties. for the restoration of their historical attributes. Monies are directed to subsidize the cost of restoring or conserving properties that have been designated for their historical and/or architectural significance under the *OHA*. Through this program, owners may receive 50% of the actual project cost following satisfactory project completion, up to a maximum of $3000 per project. A maximum of $40,000.00 is available through the Heritage Grant Program per calendar year, subject to Council budget approval.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- The Heritage Tax Refund program provides financial assistance to most, but not all (for instance places of worship and non-profits), designated property owners in the Town of Collingwood.
- The Major Redevelopment and Restoration Tax Incentive Grant program subsidizes the cost of eligible restoration projects for owners of designated

[33] Town of Collingwood, n.d. d; Town of Collingwood, n.d. e

properties which have recognized historical and/or architectural significance under the *OHA.*

- Property owners eligible for specific incentives should be clearly identified and notified to increase awareness of available opportunities.

4.7.3. Other Town Resources for Emergency Management

I. Town Webpage for Emergency Management

The Town maintains a webpage dedicated to emergency management that raises awareness and educates residents about key matters and available resources.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- There is an opportunity to make this webpage the central location for people to visit when they are looking for Town-communicated information for emergencies or disasters.

II. Emergency Preparedness for the residents of Collingwood

The Town has created a document housed on the emergency management webpage entitled “Emergency Preparedness for the residents of Collingwood”.[34] This outlines steps that people can take to prepare for emergencies. Recommended steps include creating an emergency and communications plan, and learning about community-established emergency plans, as well as practical tasks such as assembling an emergency kit and learning first aid.

Key Takeaways for the Cultural Heritage Emergency Management Plan

- Residents should proactively prepare for emergencies and disasters for those within their households and for their properties and make themselves aware of the Collingwood’s Emergency Management Plan.

III. Preparation of this Cultural Heritage Emergency Management Plan

Recognizing the importance of emergency preparedness and mitigation to conserving cultural heritage resources, the Council for the Town of Collingwood commissioned the preparation of a Built Heritage Resources Emergency Policy. Cultural Heritage resources in Collingwood comprise more than just built heritage resources (such as buildings and structures), and can include archaeological remains, cemeteries and other cultural heritage resources. As such, the scope of this policy has been expanded to plan for disasters and risks that may affect all cultural heritage resources (excepting moveable artifacts) and the name of the policy has been amended to reflect this larger breadth of approach.

[34] Town of Collingwood, n.d. b

5. Cultural Heritage Resources in Collingwood

The following section provides an overview of the types of cultural heritage resources in the Town of Collingwood, including built heritage resources, cultural heritage landscapes and archaeological resources.

5.1. Cultural Heritage Resources in Collingwood Today

Uniquely, built heritage resources in Collingwood, including protected heritage properties and listed properties are largely clustered and centrally located within the Town (see mapping in Figures 17-18). Much of the Town is also identified to be an area of archaeological potential (Figure 19).

While the below map showcases heritage properties which are protected under the *Ontario Heritage Act*, it does not definitively capture all known/potential cultural heritage resources and/or landscapes within the Town. Additional cultural heritage resources in Collingwood may include buildings, moveable heritage, sites/landscapes of Indigenous cultural heritage importance, and more, which are not formally listed or designated under the *OHA.*

Figure 17 – The location of S.27 Part IV (listed), S.29 Part IV (designated) and Part V (HCD) heritage resources under the Ontario Heritage Act in Collingwood (left), many of which are concentrated in the Collingwood Downtown HCD area (right)

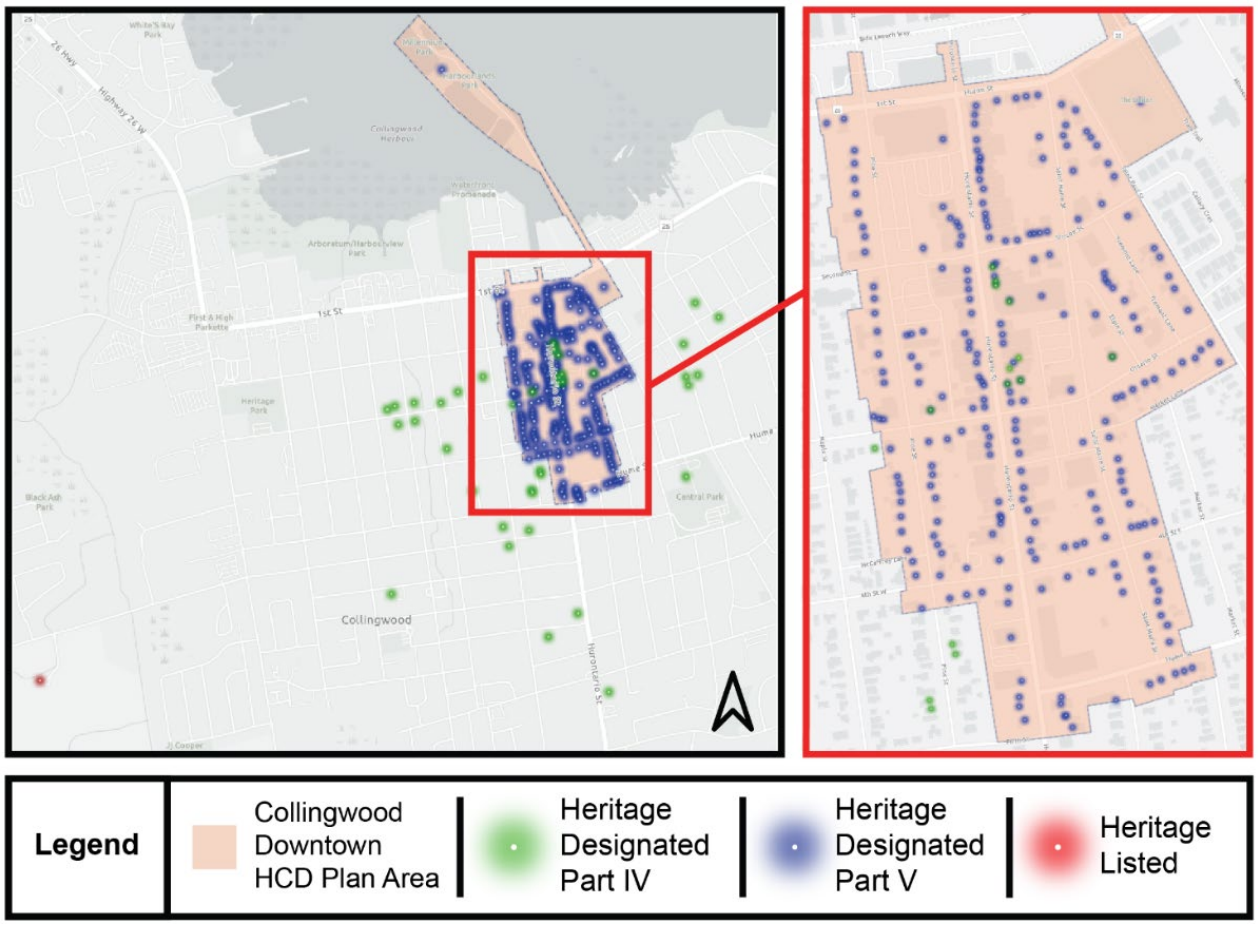
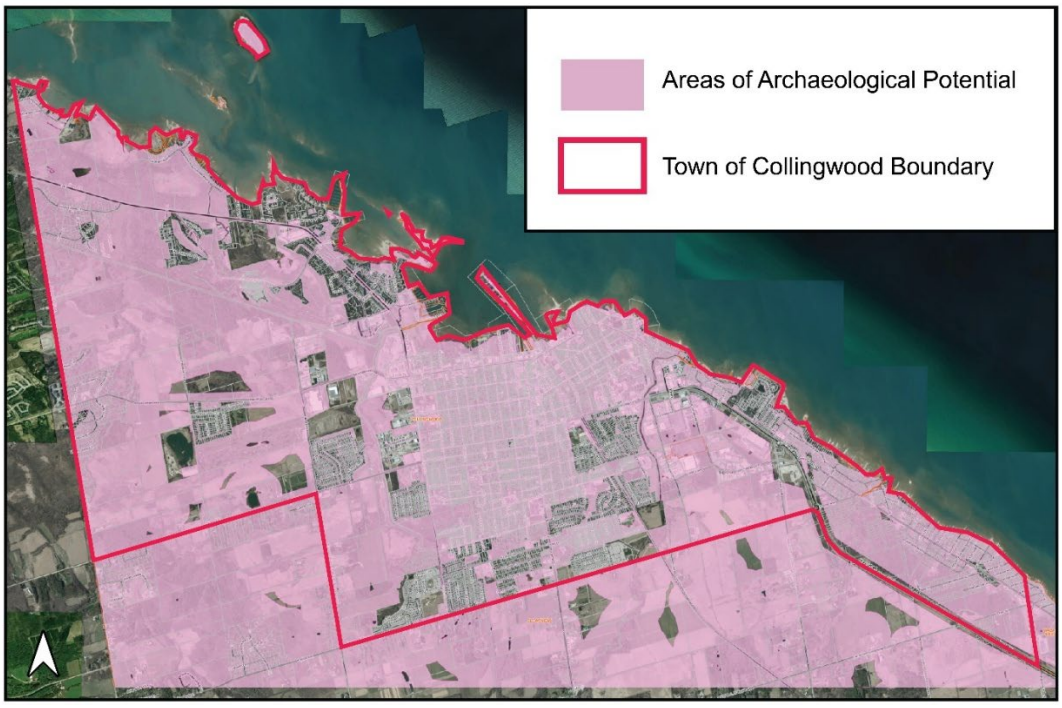


Figure 18 – OHA-protected cultural heritage resources in the Town of Collingwood

Figure 19 - Areas of archaeological potential within the Town of Collingwood (Source: County of Simcoe, n.d.)



6. Hazards, Risks, and Vulnerabilities in Collingwood

This section covers different hazards, risks and vulnerabilities in the Town of Collingwood. To better understand this, an overview of past disasters will be provided in addition to risks and hazards identified within related existing reports and studies prepared by the Town of Collingwood. Additional details have been received through public engagement to-date.

6.1. Vulnerability

6.1.1. Concentration of Cultural Heritage Resources

Vulnerabilities are understood in relation to identified hazards. For example, wooden structures are vulnerable to fire but could be more resilient in an earthquake.

One key vulnerability for cultural heritage resources in the Town of Collingwood is their geographic clustering nearby each other, particularly in the downtown area. This creates a higher risk for many cultural heritage resources to be affected by a single, widespread disaster or emergency.

For example, in areas such as Hurontario Street, many storefront buildings dating to the late 19th and early 20th century are connected to each other and are constructed using framing styles such as ballon framing. This framing technique results in uninterrupted vertical studs from the foundation to the roof and is known to increase the speed/severity of fire spreading.

6.2. Past Disasters & Emergencies in Collingwood

The area that now comprises the Town of Collingwood was originally known by settlers as the Hen and Chickens Harbour. It was later referred to as Alta Township when it was surveyed by Charles Rankin, a deputy provincial surveyor, in 1833.[35] Alta Township was renamed “Collingwood” shortly after the completion of Rankin’s survey and was inspired by a commanding officer for Lord Nelson during the 1805 Battle of Trafalgar.[36] The British Crown sought to survey these lands in order to settle retiring military and naval personnel as well as the children of United Empire Loyalists.[37]

Increased settlement of the area first began in the late 1840s, shortly after survey, and increased with the completed construction of the Ontario, Simcoe & Huron Union Railroad (later becoming the Northern Railway) in 1855.[38] This rail line connected Collingwood to Toronto through the Barrie area and attracted the establishment of

[35] Shannon, 1979, p. 13.
[36] Shannon, 1979, p.20
[37] Shannon, 1979, p.13
[38] Shannon, 1979, p. 39; Town of Collingwood, 2008, p. 11

different industries and other settlers.[39] Collingwood would be incorporated as a Town shortly after in 1858 as a result of this growth.[40] Increased connectivity between markets meant that the mercantile business sector and the milling, fishing, lumbering, grain handling and ship building industries all thrived and transported goods through the port and the different rail lines that had been established.[41] Relatedly, the Town experienced a hotel-industry boom in the late 19th century as visitors passed through the Town on journeys that took them further west from the Town port.[42] The economic successes brought on by these industries meant that Collingwood experienced a period of prosperity between 1870 and 1910, which was also evident through the construction of a number of impressive dwellings during this time.[43]

By the early 20th century, the importance of Collingwood's port declined through the construction of transcontinental rail lines.[44] Changes in the local economy would be noticeably present in the second half of the 20th century, and other regionally-significant industries grew in prominence, such as tourism.[45] This trend has continued into the 21st century, with 600,000 tourists now visiting Collingwood each year.[46] Other industries such as retail trade, health care and social assistance and accommodation and food service are among the top industries in Collingwood.[47]

The Town of Collingwood has experienced major disasters and emergencies in its past that have significantly changed the community. The following outlines several of these key events from the late 19th century and into the 21st century. Understanding these historical events is important as they can give insights into potential hazards and risks within the community.

6.2.1. "The Great Fire" (1881)

The Great Fire of 1881 destroyed many wooden buildings on Hurontario Street between First and Second Streets. Afterwards, many new buildings were constructed of brick, which significantly changed the appearance of Hurontario Street (Figures 20-21).[48]

[39] Town of Collingwood, 2008, p. 11
[40] Town of Collingwood, 2008, p. 11
[41] Town of Collingwood, 2008, p. 11
[42] Town of Collingwood Heritage Advisory Committee, 2018
[43] Town of Collingwood, 2008, p. 11
[44] Town of Collingwood, 2008, p. 11
[45] Town of Collingwood, 2008, p. 11
[46] McSweeny & Associates, 2022
[47] McSweeny & Associates, 2022
[48] Town of Collingwood, 2008, p.11

Figure 20 - Hurontario Street in 1874 prior to the fire of 1881. Note the prevalence of wood buildings (Source: Visit of Lord…, 1874)

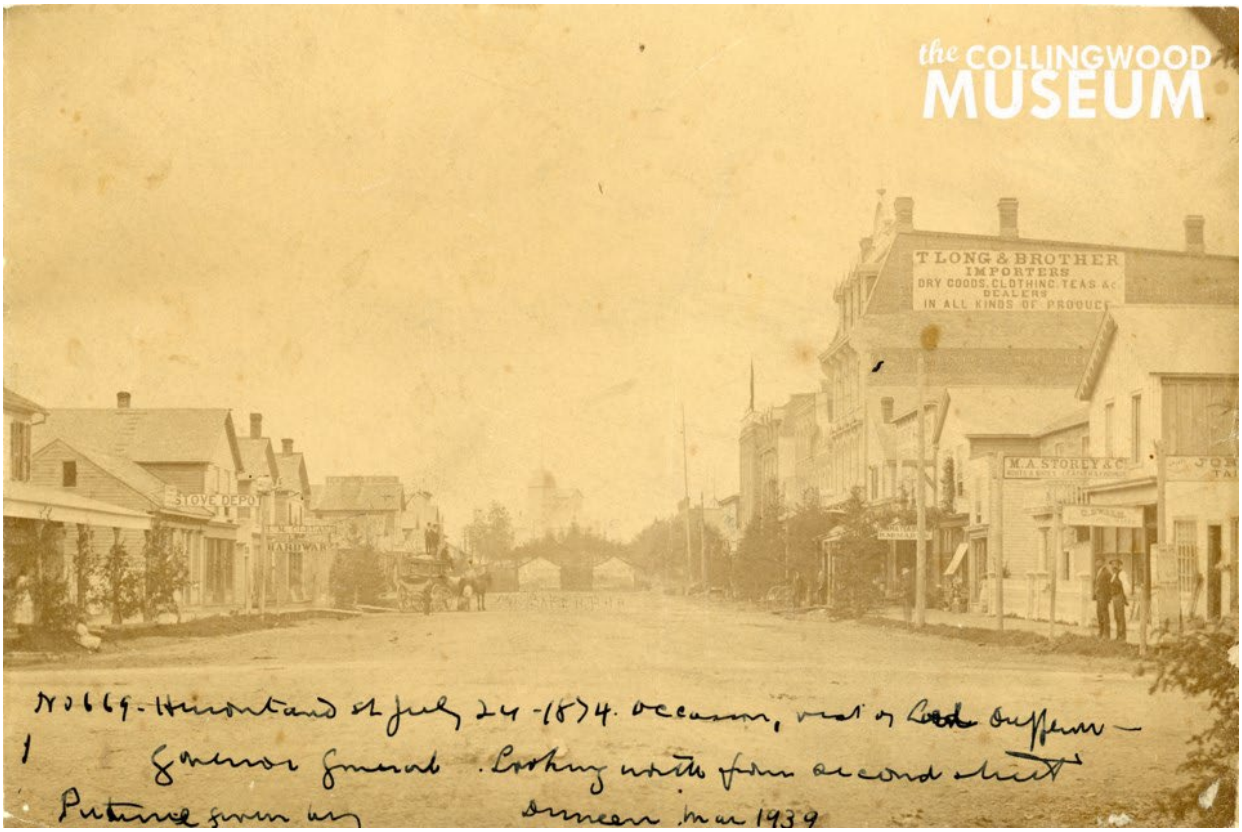
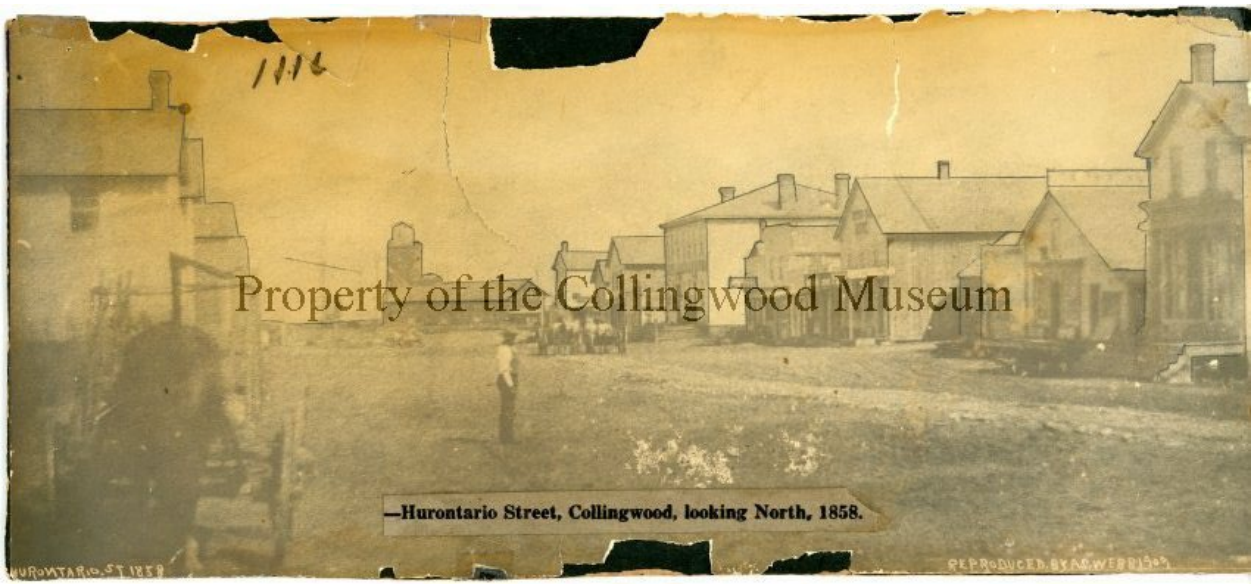


Figure 21 – Hurontario Street, looking north of Second Street in 1858 (top) and looking north of Third Street in 2026 (bottom) (Sources: Hurontario Street looking..., 1858; NPG 2026)



6.2.2. Grand Trunk Railway Freight Sheds Fire (1905)

In 1905, a fire damaged freight sheds used by the Grand Trunk Railway in Collingwood's harbour.[49] The freight sheds were clad in iron but still caught fire.[50] Rumours spread in the Town that the sheds stored 25 tons of dynamite, and people gathered to witness the fire from a distance.[51] Luckily, the information regarding the storage of dynamite was incorrect, however several lives were still lost that night and there was hundreds of thousands of dollars in damage (Figure 22).[52]

[49] Shaw, 2025
[50] Shaw, 2025
[51] Shaw, 2025
[52] Shaw, 2025

Figure 22 – Damage to the freight sheds from the 1905 fire (Source: Collingwood Museum, n.d. b)

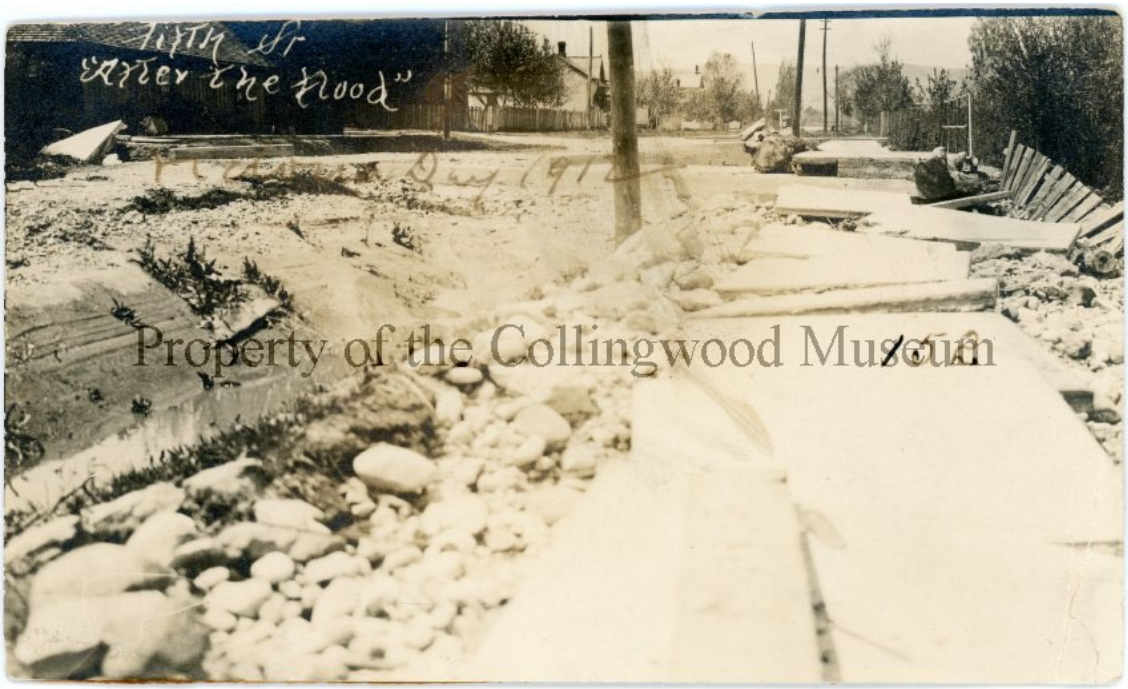
6.2.3. Town of Collingwood Flood Events (1912, 1942)

In 1912, a flood on Victoria Day caused significant damage across the Town, leading to elevated water levels for several days. Damage was caused to streets, bridges, and houses, with damages estimated at the time to be $20,000 (Figures 23-24). A newspaper article from the time indicated that the floods caused the greatest amount of damage to the Town in thirty years.[53] Thirty years later, on St. Patrick's Day in 1942 the Town would again experience a notable flood.[54]

[53] Engel, 2019
[54] Nottawasaga Conservation Authority, 2021; 77 years ago…, 2019

Figure 23 - Victoria Day flood of 1912 showing elevated water levels at the intersection of Birch Street and Second Street (Source: Birch Street Flood, 1912)

Figure 24 – Damage to Fifth Street after the 1912 Victoria Day Flood (Source: Fifth Street after…, 1912)



6.2.4. Temple Building Fire (2000)

The original Temple Building at 126 Hurontario Street was constructed in 1890 after being commissioned by the Masonic Lodge and the Independent Order of Odd Fellows to house their members.[55] After 110 years of use by these groups, the building was destroyed by fire in 2000 requiring the efforts of 55 firefighters over the course of 7 hours.[56] The Temple Building fire was a major cultural heritage loss within the community: it was significant to the local Masonic Lodge and the Order of Odd Fellows, was a recognized community landmark, and was designed by a local architect (Thomas Kieswetter [b. 1851-d. 1891]) who designed numerous other residential houses and commercial blocks in the Town.[57] Recognizing the historic importance of the building within the community, it was reconstructed a year later in 2001. A plaque references its history, construction, destruction and rebuilding as a form of community commemoration.[58]

Lessons Learned from Historic Events and Past Disasters in Collingwood

These experiences present an opportunity to learn from past disasters and to use this to inform potential risk mitigation. Key findings include:

1. Many historic risks continue to be contemporary risks;
2. The damage produced by disasters can have a profound effect on key areas of the Town and can even result in character-altering changes (as seen after the Great Fire of 1881);
3. It is important to maintain clear and accurate lines of communication for the public to uphold public safety and to ensure coordinated efforts for disaster response (as seen through the 1905 freight shed fire);
4. The concentration of cultural heritage resources reflects a vulnerability to individual, wide-reaching disasters (as seen after the 1912 Victoria Day and the 1942 St. Patrick's Day floods);
5. Brick buildings are not immune to fires, and should be equally considered when promoting and supporting fire awareness (as seen after the 2000 Temple Building fire)

[55] Vuckson, 2023
[56] Vuckson, 2023
[57] Vuckson, 2023
[58] Temple Building Plaque…, 2005

6.3. Climate Risk and Vulnerability

The Town of Collingwood is in the process of preparing a Climate Risk and Vulnerability Assessment and a Climate Adaptation Plan. These draft documents produced in 2025 forecast changes to Collingwood's climate for the years 2050 and 2080, and present findings that can be used to proactively prepare for predicted changes.

The Town of Collingwood is anticipated to be warmer, experience greater precipitation, and be subject to more extreme weather:

	**Temperature**	Relative to 2025, average annual temperatures will increase by at least 1.9°C by 2050, and by at least 3.0°C by 2080.
	**Precipitation**	Relative to 2025, total annual precipitation will increase from 906 mm to at least 950 millimetres by 2050, and to at least 980 millimetres by 2080.
	**Extreme Weather**	Increased frequency of storm events, including heat waves, lightening, hail and windstorms.

The draft Climate Risk and Vulnerability Assessment and Climate Adaptation Plan contains a list of hazards, which include different examples, as shown in Table 3.

Table 3 – Hazards identified in the Collingwood Climate Adaption Plan and organized based on their priority level

Priority Level	Risks

High	• Increased precipitation intensity may flood homes, resulting in displacement of residents, damage to residential property, and increased insurance and uninsured financial losses.
	• Warmer, wetter winters may:
	  ○ increase winter meltwater volumes, resulting in overloading of stormwater and sanitary systems;
	  ○ increase snow and ice loading on roofs, canopies, and infrastructure, resulting in higher risk of structural damage and service disruptions; and,
	  ○ increase rain-on-snow events, resulting in flooding of homes and properties.

Priority Level	Risks

	• Hotter summers with more frequent heat waves and tropical nights (>20°C) may:
	  ○ increase the consequences of power outages during heat events, resulting in rapid indoor overheating and elevated health and safety risks;
	  ○ reduce the effectiveness of passive cooling, resulting in increased reliance on mechanical cooling and increasing electricity demand; and,
	  ○ increase indoor overheating, resulting in reduced housing habitability and comfort for residents without adequate cooling.
	• Hotter summers, with more days with maximum temperatures greater than 30ºC may:
	  ○ accelerate deterioration of pavement and building materials, resulting in reduced service life of infrastructure and buildings; and,
	  ○ increase warm-weather tourism, resulting in increased use of recreational areas and visitor-serving infrastructure.
	• Increased frequency of storm events (rain, snow, lightning, hail, freezing rain, windstorms) may:
	  ○ damage buildings and vehicles, resulting in reduction in areas where insurance coverage is available, increasing insurance coverage costs becoming unaffordable, increasing uninsured costs to repair or replace damaged property;
	  ○ damage trees and vegetation, resulting in cascading disruptions to parks, power supply, transportation routes, and other public services; and,
	  ○ reduce recovery time between events, resulting in cumulative stress on infrastructure, services, and communities.

Medium	• Increased winter precipitation may increase winter maintenance requirements for transportation network and municipal facilities

Priority Level	Risks
	• Warmer winters may increase the number of freeze-thaw events, resulting in accelerated deterioration of roads, concrete structures, and other built infrastructure.
Low	• Increased precipitation intensity may increase inflow into sanitary system, resulting in sewer backups that affect homes and businesses. • Hotter, drier summers may increase the frequency and severity of wildfires, resulting in direct damage to natural environments, buildings, and critical infrastructure.

6.4. Hazards Identified in Collingwood

The following are some of the hazards identified in Collingwood.

6.4.1. Fire

The threats posed by fire can be magnified due to the concentration of built heritage resources and their adjoined form, as well as due to historic building techniques, such as balloon framing, prevalent in the 19th and 20th centuries. Balloon framing is a building technique that results in uninterrupted vertical studs from the foundation to the roof which allows fire to travel rapidly up floors. It is worth noting that this technique may be seen within brick-clad buildings, and that this was not exclusive to wood-frame buildings. Hurontario Street notably comprises part of the Collingwood Downtown Heritage Conservation District, is a main street, and contains a street wall form with many adjoined historic buildings and structures. With fire also comes the potential for explosions that could impact surrounding areas.

6.4.2. Flood

Portions of downtown Collingwood, including areas comprising the Collingwood Downtown HCD, contain floodplain and hazards lands (see mapping in Figures 26-27). Hazard lands generally refer to lands that could be unsafe for development due to naturally occurring processes such as flooding hazards. The Town of Collingwood has not experienced significant flooding in recent years but has had historical flooding events. Recognizing that there is an identified risk of flooding in the downtown area, the Town should proactively plan how to address cultural heritage resources in prone areas, such as along Third Street in the Oak Street Canal one-zone floodplain.

Figure 25 - Mapping showing floodplains and cultural heritage resources in Collingwood

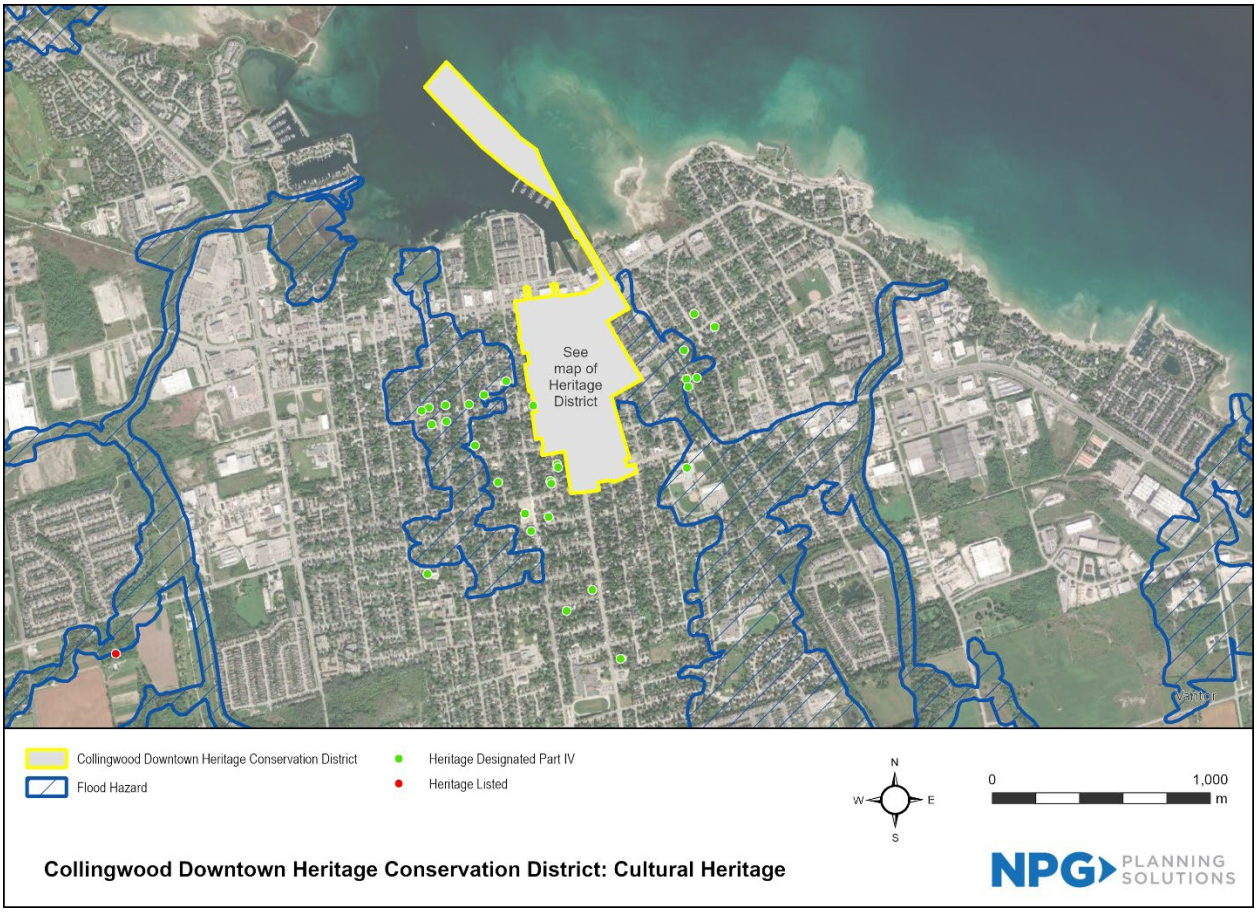
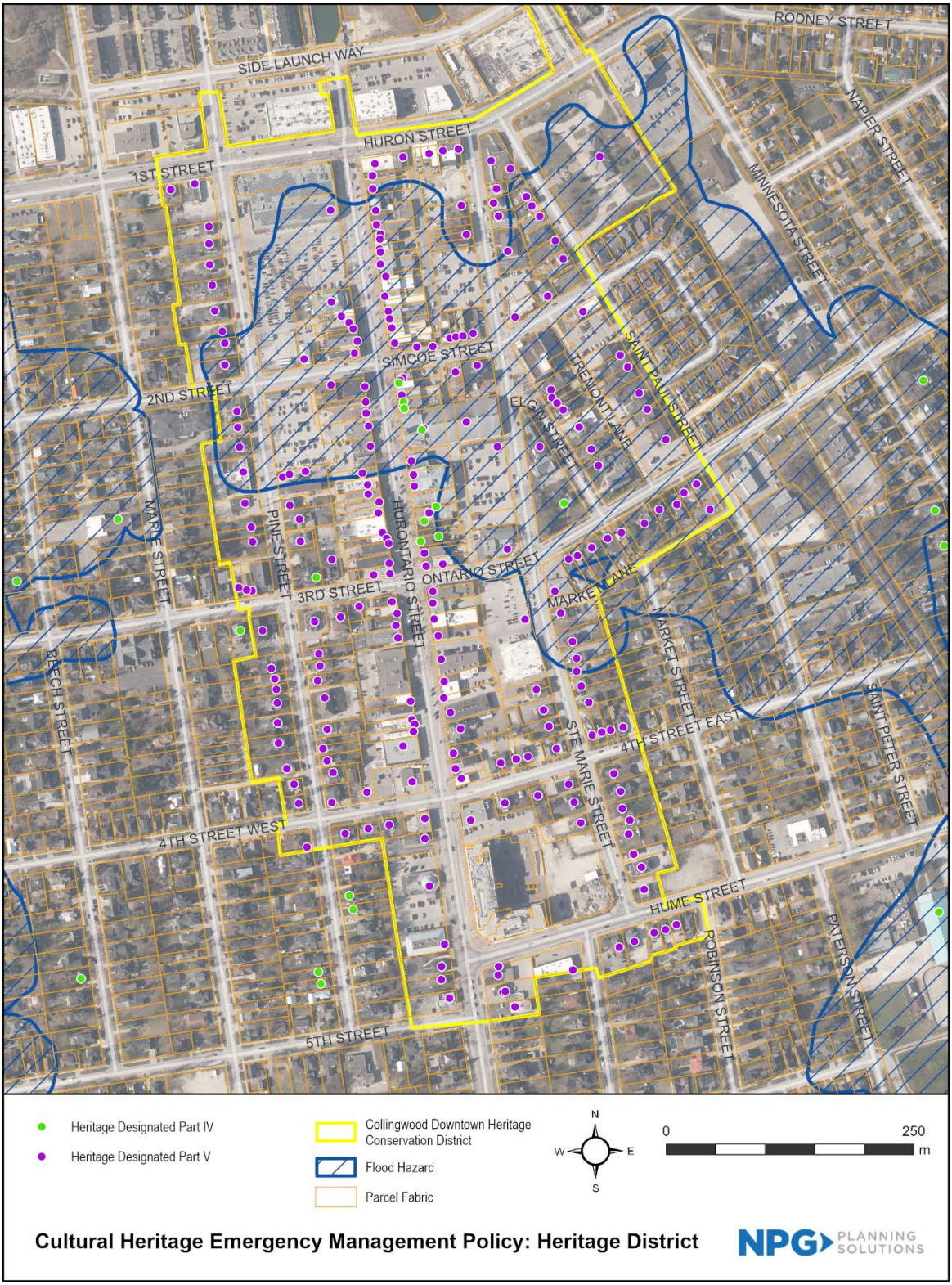


Figure 26 - Mapping showing floodplain and cultural heritage resources within the Downtown Heritage Conservation District



6.4.3. Infill Construction

New infill projects and renovation projects must ensure both such projects adhere to the *Ontario Building Code Act* requirements as well as have regard for any specific engineering or monitoring requirements to ensure the conservation of cultural heritage resources. In poorly planned projects, there is the potential for risk from damage to adjacent buildings where there is an urban street wall form comprised of multiple adjoined buildings. Damage may also occur during construction through direct means, such as accidental impacts with operating machinery, or indirect means, such as vibration impacts to foundations of nearby buildings or structures.

6.4.4. Wind and Tornadoes

Collingwood has experienced waterspouts (whirling columns of air that form over water) and tornadoes in the past. Figure 27 shows historical data relating to tornado risks. Waterspout events have occurred traveling from the water inland. The proximity of the water to the downtown core of Collingwood, which contains many of the Town's protected heritage properties (those within the Collingwood Downtown HCD and those individually designated under the *OHA*) means there is a higher risk of damage to cultural heritage resources.

A single tornado and strong wind event can cause catastrophic damage to a community and its cultural heritage resource as evidenced in Goderich, Ontario in 2011. Strong winds and tornadoes can also damage built heritage resources in various ways including loosening wall cladding and roofing materials, causing airborne debris or objects which may damage windows and weather building exteriors, toppling trees or branches onto built heritage resources or electrical wires which may damage built features and cause fires. In the latter example, implementing preventative emergency management measures related to wind and tornadoes, such as regularly identifying and managing dead or weakened trees, are effective means to mitigate these hazards.

Figure 27 – Tornado risks in southern Ontario

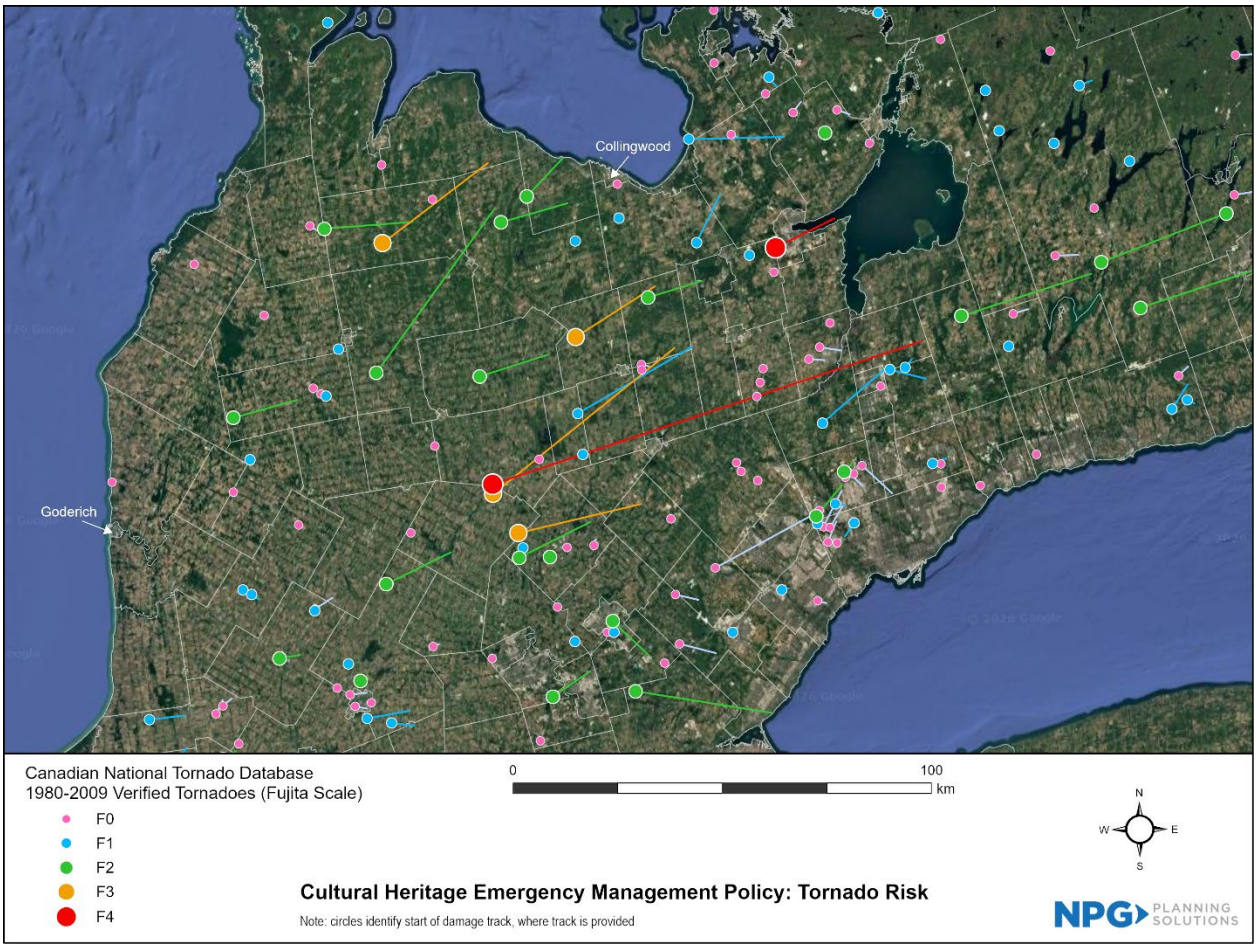


Figure 28 – Waterspout near Collingwood in 2020 (Source: CollingwoodToday)

6.4.5. Microbursts

Microbursts are strong winds that form in a thunderstorm. Despite typically affecting only a small area after forming, the damage produced can be comparable to that of a tornado. As outlined in section 6.1 of this paper, climate impacts to Collingwood include increased precipitation and extreme weather events, which could increase the number of microbursts in the Town.

6.4.6. Freeze-Thaw Cycles

Freeze-thaw cycles can cause noticeable damage to buildings over time. This cycle occurs when water infiltrates into a building and freezes during the colder month, pushing surrounding materials and causing cracks to form and worsen. Built heritage resources are particularly vulnerable, as foundations, walls and other features have already endured decades of weathering that have made it vulnerable to such cycles. Parapets particularly suffer from freeze-thaw cycles due to their exposure to the elements from more than one direction, illustrating the importance of routine maintenance on an on-going basis.

6.4.7. Damage by Vehicles

Many communities in Ontario have experienced damage to cultural heritage resources as a direct result of accidental vehicle collisions. Vehicle collisions to built heritage resources, such as private residences or commercial properties, can be traumatic and dangerous to those residing within the building. It is critical to ensure that municipal responses to such situations are regulated by clear and efficient protocols so that property owners are not inhibited in their emergency responses.

Figure 29 - Damage caused to a building in Sydenham, Ontario, due to a vehicle collision (Source: Vilela, 2023)

6.4.8. Security

Cultural heritage resources, such as Town halls, are often key places for community gathering, be they for meetings, celebrations or even democratic protests. Any interventions on a property to manage building security should be done in a manner that respects and conserve heritage attributes balancing safety and security needs with conservation best practices.

7. Closure

This Technical Report provides a basis for understanding emergency management in the Town of Collingwood as well as notable hazards, risks and vulnerabilities for cultural heritage resources. All this information will inform the preparation of a Cultural Heritage Emergency Management Plan for the Town of Collingwood.

Marcus Letourneau, PhD, MPlan, MCIP, RPP, CAHP, CIPM II
Senior Partner, Kingston
NPG Planning Solutions Inc.

Denise Horne, CAHP, MA, Dipl. Heritage Conservation
Manager, Policy & Heritage, Niagara
NPG Planning Solutions Inc.

8. Sources

Albinger, S.M. (2014). *Preserving built heritage in Canada: Best practices in preventing demolition by neglect*.

Alberta Museums Association. (n.d.). *HELP! ONLINE RESOURCES.* https://www.museums.ab.ca/what-we-do/emergency-preparedness/help!-online-resources.aspx. Accessed April 2026.

ARCH. (2019). *D7.1 State-of-the-Art Reports of concepts, approaches, standards and technologies. Deliverable of work package 7 of the ARCH project.* https://savingculturalheritage.eu/fileadmin/user_upload/Deliverables/ARCH_D7.1_SotA_reports_20191129-final.pdf. Accessed April 2026. Adapted from: UNESCO. (2018). *Culture in City Reconstruction and Recovery.* https://unesdoc.unesco.org/ark:/48223/pf0000265981. Accessed April 2026.

Association of Nova Scotia Museums. (n.d.). *Emergency Resources for Museums*. https://ansm.ns.ca/emergency/. Accessed April 2026.

Birch Street Flood, 1912. (1912). Collingwood Museum: X970.794.1. https://collingwood.pastperfectonline.com/photo/9D493BF2-55D7-4363-9095-300557474247. Accessed April 2026.

BC Museums Association. (n.d.). *BC Heritage Emergency Response Network.* https://museum.bc.ca/brain/bc-heritage-emergency-response-network/. Accessed April 2026.

British Columba Heritage Emergency Response Network. (n.d.). *Building effective emergency response for B.C.'s arts and culture communities.* https://bchern.ca/. Accessed March 2026.

Cabinet Office. (2011). *Strategic National Framework on Community Resilience*. London. Government of the United Kingdom.

Canadian Conservation Institute. (2025). *Response Ready: Developing an Emergency Plan for Heritage Institutions*. https://www.canada.ca/en/conservation-institute/services/learning-activities/response-ready.html. Accessed April 2026.

Canadian Conservation Institute. (2016). The ABC Method: A Risk Management Approach to the Preservation of Cultural Heritage. https://www.canada.ca/content/dam/cci-icc/documents/services/risk-management-heritage-collections/risk_manual_31_oct_2025-en.pdf. Accessed April 2026.

Canada's Task Force on Flood Insurance and Relocation. (2022). *Adapting to Rising Flood Risk*. https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/dptng-rsng-fld-rsk-2022/index-en.aspx. Accessed March 2026.

Christchurch City Council. (n.d.). *Temporary Protection of Heritage Items.*

Collingwood Museum. (n.d. a). Collingwood Museum: X970:401.1. As shown in Vuckson, D. (2023, January 1). T*he Temple Building 1890-2000 and Beyond*. Collingwood & District Historical Society. https://collingwoodhistoricalsociety.com/stories/f/the-temple-building-1890-2000-and-beyond. Accessed May 2026.

Collingwood Museum. (n.d. b). Collingwood Museum: X972.157.1*;* Huron Institute 1118. As shown in Shaw, M. (2025, July 5). 120 Years Ago, Collingwood Citizens Feared Town-ending Harbour Explosion. *CollingwoodToday*. https://www.collingwoodtoday.ca/then-and-now/120-years-ago-collingwood-citizens-feared-town-ending-harbour-explosion-10904740. Accessed April 2026.

Collingwood Today staff. (19 August 2020). "Good Morning, Collingwood!" *Collingwood Today*. https://www.collingwoodtoday.ca/good-morning-collingwood/good-morning-collingwood-2642734#google_vignette Accessed. May 2026.

County of Simcoe. (n.d.). *Geographical Information Systems. Interactive Maps.* https://simcoe.ca/explore/geographical-information-systems-maps/. Accessed March 2026.

Edwards, C. (2009). *Resilient Nation.* https://demos.co.uk/wp-content/uploads/2023/03/Resilient_Nation_-_web-1.pdf. Accessed March 2026.

Engel, E. (2019, May 26). Flood of 1912 leaves Oak Street looking like a river bed. *Collingwood Today*. https://www.collingwoodtoday.ca/remember-this/flood-of-1912-leaves-oak-street-looking-like-a-river-bed-1473516. Accessed March 2026.

ERA Architects. (2023). *Halton Hills Cultural Heritage Strategy: Planning for Heritage in an Evolving Landscape*. Town of Halton Hills. https://letstalkhaltonhills.ca/chmp. Accessed April 2026.

Federal Emergency Management Agency. (2011). *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*. *FDOC 104-008-1.* https://www.fema.gov/sites/default/files/2020-07/whole_community_dec2011__2.pdf. Accessed March 2026.

Fifth Street after The Flood, 1912. (1912). Collingwood Museum: X969.279.1. https://collingwood.pastperfectonline.com/photo/21F31398-526C-4145-B500-503327032361. Accessed March 2026.

Flemming, D.B. (2007). *Emergency Protocol for Heritage Buildings at Risk*. Heritage Ottawa. https://heritageottawa.org/en/news/emergency-protocol-heritage-buildings-risk. Accessed April 2026.

Golnaraghi, M., Thistlewaite, J., Henstra, D., & Stewart, C. (2020). *Flood Risk Management in Canada: Building flood resilience in a changing climate*. https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/frm_canada_web.pdf. Accessed March 2026.

HeritageBC. (n.d.). *Climate Disaster Response Fund.* https://heritagebc.ca/funding/climate-disaster-response-fund/. Accessed April 2026.

Hurontario Street looking north from Second Street, 1858. (1858). Collingwood Museum: X970.594.1. https://collingwood.pastperfectonline.com/photo/033CB40A-9C7A-41A2-870B-723771933191. Accessed March 2026.

International Council for Science. (2007). *Science Plan on Hazards and Disasters. Earthquakes, Floods and Landslides.* https://council.science/wp-content/uploads/2017/05/ICSU-ROAP-Science-Plan-Hazards-and-Disasters.pdf. Accessed April 2026.

International Centre for Waterspout Research. (n.d.). *Live Waterspout Reports.* https://www.icwr.ca/. Accessed May 2026.

ICCROM. (2025). *Heritage-Based Climate Action – Conference Report*. https://www.iccrom.org/sites/default/files/publications/2024-12/far_netzero_heritage-based_climate_action-conference_report_iccrom_2024.pdf. Accessed April 2026.

Jonas, K. A. (2016). *Goderich: A Case Study of Conserving Cultural Heritage Resources in a Disaster*. https://uwspace.uwaterloo.ca/items/16f218dd-14f0-43a0-96c0-f47cc7b0f039. Accessed April 2026.

Look, D.W. and Spennemann, D.H.R. (2001). *Disaster Preparedness, Planning and Mitigation*. https://www.researchgate.net/profile/Dirk-Spennemann/publication/303538697_Disaster_preparedness_planning_and_mitigation/links/5748367308ae14040e2a463d/Disaster-preparedness-planning-and-mitigation.pdf?origin=scientificContributions. Accessed April 2026.

Maugeri, M. (2024). *Keeping Heritage Afloat: A Planning Framework and Evaluation Toolkit for Floodplain Management of Built Heritage.* https://queensu.scholaris.ca/server/api/core/bitstreams/96001c0f-2459-400a-8307-b80a407f4447/content. Accessed April 2026.

McSweeny & Associates. (2022). *2022 Community Profile.* https://www.collingwood.ca/sites/default/files/uploads/documents/2022_collingwood_community_profile.pdf. Accessed March 2026.

Neeraj, S., Mannakkara, S., and Wilkinson, S. (2021). *Evaluating socio-economic recovery as part of building back better in Kaikoura, New Zealand.* https://www.sciencedirect.com/science/article/abs/pii/S2212420920314321. Accessed April 2026.

Nottawasaga Valley Conservation Authority. (2021). Pretty River Dyke maintenance scheduled to start this Fall.

https://www.clearview.ca/sites/default/files/uploads/publications/9.3_nvca_media_release_-_pretty_river_dyke_maintenance.pdf. Accessed April 2026.

NPG Planning Solutions Inc., TMHC Inc., Bray Heritage, and M.R. Letourneau and Associates Inc. (2025). *Saugeen Shores Cultural Heritage Master Plan*. Town of Saugeen Shores. https://hdp-ca-prod-app-saug-engage-files.s3.ca-central-1.amazonaws.com/3717/4975/5324/Saugeen_Shores_CHMP.pdf. Accessed April 2026.

ON HERN. (n.d.). https://www.instagram.com/onhern/. Accessed April 2026.

Owen, J. (2025, December 5). 'Not appropriate': Even Santa can't avoid protestors in Collingwood. *BarrieToday*. https://www.barrietoday.com/local-news/not-appropriate-even-santa-cant-avoid-protestors-in-collingwood-11570834. Accessed April 2026.

Public Safety Canada. (2019). *Emergency Management Strategy for Canada*. https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/mrgncy-mngmnt-strtgy/index-en.aspx. Accessed March 2026.

Public Safety Canada. (2017). A*n Emergency Management Framework for Canada. (Third Edition).* https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2017-mrgnc-mngmnt-frmwrk/2017-mrgnc-mngmnt-frmwrk-en.pdf. Accessed March 2026.

Public Safety Canada. (n.d. a). Canada's Platform for Disaster Risk Reduction. https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/dsstr-prvntn-mtgtn/pltfrm-dsstr-rsk-rdctn/index-en.aspx. Accessed March 2026.

Public Safety Canada. (n.d. b). *Sendai Framework for Disaster Risk Reduction (DRR) 2015-2030*. https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/dsstr-prvntn-mtgtn/pltfrm-dsstr-rsk-rdctn/snd-frmwrk-en.aspx. Accessed March 2026.

Shannon, B. (ed.). (1979). *An Illustrated History of Collingwood Township.* https://library.biblioboard.com/content/21af997b-ff49-479a-a79c-a5c630607f8d. Accessed March 2026.

Shaw, M. (2025, July 5). 120 Years Ago, Collingwood Citizens Feared Town-ending Harbour Explosion. *CollingwoodToday*. https://www.collingwoodtoday.ca/then-and-now/120-years-ago-collingwood-citizens-feared-town-ending-harbour-explosion-10904740. Accessed April 2026.

Statistics Canada. (2022). *Canada's large urban centres continue to grow and spread*.https://www150.statcan.gc.ca/n1/daily-quotidien/220209/dq220209b-eng.htm?utm_source=twt&utm_medium=smo&utm_campaign=statcan-2021census-diss-demography-en. Accessed March 2026.

Stovel, H. (1998). *Risk Preparedness: A Management Manual for World Cultural Heritage.*https://www.iccrom.org/sites/default/files/ICCROM_17_RiskPreparedness_en.pdf. Accessed April 2026.

Temple Building Plaque, 130, 132 and 134 Hurontario Street, 2005. (2005, June 11). Collingwood Museum: 006.2.117. https://collingwood.pastperfectonline.com/photo/2AA49CE4-CDD0-4A4C-8D72-044608361730. Accessed May 2026.

Town of Collingwood. (2020). *Emergency Plan*. https://www.collingwood.ca/media/file/collingwood-erp-mar2020-rev1. Accessed March 2026.

Town of Collingwood Heritage Advisory Committee. (2018). *Collingwood Heritage Walking Tours.* https://www.collingwood.ca/sites/default/files/docs/Economic-Development/heritagewalk-east-15x17-2017.pdf. Accessed March 2026.

Town of Collingwood. (2008). *Collingwood Downtown Heritage Conservation District Plan.* https://www.collingwood.ca/sites/default/files/docs/cwooddhcdplan_final-s.pdf. Accessed March 2026.

Town of Collingwood. (n.d. a). *Emergency Management.* https://www.collingwood.ca/community-safety-standards/emergency-management. Accessed March 2026.

Town of Collingwood. (n.d. b). *Emergency Preparedness for the Residents of Collingwood.* https://www.collingwood.ca/media/file/emergency-preparedness-1. Accessed March 2026.

Town of Collingwood. (n.d. c). *Heritage Grant Program Guidelines and Application*. https://www.collingwood.ca/town-services/documents/heritage-grant-program-guidelines-and-application. Accessed March 2026.

Town of Collingwood. (n.d. d). *Heritage Tax Refund Program Guidelines and Application*. https://www.collingwood.ca/town-services/documents/heritage-tax-refund-program-guidelines-and-application. Accessed March 2026.

Town of Collingwood. (n.d. e). *Schedule "B" to By-law No. 2010 - 020 (AMENDED BY BY-LAW NO. 2015-086) List of Significant & Non-significant Heritage Buildings*. https://www.collingwood.ca/media/file/2010-020-list-significant-heritage-buildings-2010-revised-aoda. Accessed March 2026.

UN Office for Disaster Risk Reduction. (n.d. a). *PreventionWeb.* https://www.preventionweb.net/. Accessed April 2026.

UN Office for Disaster Risk Reduction. (n.d. b). *What is Disaster Risk Reduction?* https://www.eird.org/americas/we/what-is-disaster-risk-reduction.html. Accessed March 2026.

UNESCO. (2010). *Managing Disaster Risks for World Heritage.* https://whc.unesco.org/en/managing-disaster-risks/. Accessed April 2026.

UNISDR. (2015). *Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030*.

https://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf?startDownload=true. Accessed April 2026.

United Nations. (n.d.). *Risks and Disasters*. https://www.un-spider.org/risks-and-disasters. Accessed March 2026.

Vilela, C. (2023, July 22). Trucks crash into Sydenham house. *kingstonist.* https://www.kingstonist.com/news/trucks-crash-into-sydenham-house/. Accessed April 2026.

Visit of Lord Dufferin, Hurontario Street, July 24, 1874. (1874). Collingwood Museum: X970.760.1. https://collingwood.pastperfectonline.com/photo/C402749D-0237-4C3F-8413-661064108502. Accessed April 2026.

Vuckson, D. (2023, January 1). T*he Temple Building 1890-2000 and Beyond*. Collingwood & District Historical Society. https://collingwoodhistoricalsociety.com/stories/f/the-temple-building-1890-2000-and-beyond. Accessed May 2026.

World Meteorological Organization (2018). *Disaster Risk Reduction (DRR) Programme*. https://web.archive.org/web/20210427170030/https://www.wmo.int/pages/prog/drr/. Accessed April 2026.

77 years ago today, Collingwood flooded (3 photos). (2019, March 17). *CollingwoodToday.* https://www.collingwoodtoday.ca/remember-this/77-years-ago-today-collingwood-flooded-3-photos-1322094. Accessed April 2026.

9. Appendices

Appendix I - City of Hamilton Built Heritage Emergency Protocol (PD05122) (April 2005)

CITY WIDE IMPLICATIONS

CITY OF HAMILTON

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Development and Real Estate Division

Report to:	Chairman and Members Planning and Economic Development Committee	**Submitted by**:	Lee Ann Coveyduck General Manager
Date:	April 29, 2005	**Prepared by:**	Joseph Muller
File:			Ext. 1214

SUBJECT: Built Heritage Emergency Management Protocol (PD05122) (City Wide)

RECOMMENDATION:

That the Built Heritage Emergency Management Protocol (attached as Appendix A to Report PD05122) be adopted as the City of Hamilton's procedures for the management of heritage buildings in situations subject to an Emergency Order or Unsafe Order under the Ontario Building Code Act.

Lee Ann Coveyduck
General Manager
Planning and Economic Development Department

EXECUTIVE SUMMARY:

The Built Heritage Emergency Management Protocol was developed to address the need for a defined heritage management process in emergency situations, spurred by a structural failure in part of the Tivoli Theatre complex. City planning staff, in concert with a working committee struck by the Hamilton LACAC (Municipal Heritage Committee), and through interdepartmental and stakeholder consultation, developed this protocol document to guide future responses to such scenarios.

BACKGROUND:

On the evening of June 29, 2004, a portion of the south wall of 108-112 James Street North suffered a structural failure. The building, a former carriage factory, was the oldest component of the Tivoli Theatre complex. The Tivoli Theatre comprises three interconnected buildings designated in 1996 under Part IV of the Ontario Heritage Act, including the three-story carriage factory, the auditorium, and a one-storey link (the lobby) between the two.

The City of Hamilton Chief Building Official was contacted, who declared that the building was a hazard to public health and safety, and the owner of the building was informed. On June 30, 2004, City planning staff was contacted, as was the Hamilton LACAC (Municipal Heritage Committee). At this time, the owner advised that they were unable to act to immediately remedy the situation. Hamilton's Chief Building Official subsequently assumed control over the building under the Ontario Building Code Act until the public health and safety concerns had been addressed. The City retained an emergency engineering team to proceed with a phased demolition of the carriage factory portion of the property. Pursuant to Part VII article 69(4) of the Ontario Heritage Act, notice was provided to the Clerk of the City authorizing these alterations to the property without a heritage permit for reasons of public health and safety.

Early in the process, the Hamilton LACAC (Municipal Heritage Committee) raised issues regarding the consideration of built heritage resource values in the emergency assessment and management of the structure. To address these items, a special meeting of the Hamilton LACAC (Municipal Heritage Committee) was convened on July 8, 2004. A working committee was struck, composed of Hamilton LACAC (Municipal Heritage Committee) members including Councillor Pearson, with City planning staff support. The working committee was charged with developing a protocol for managing built heritage resources in emergency situations.

City planning staff carried out a review of existing legislation and policy on the management of cultural heritage resources (including archaeological sites, buildings, structures, monuments, etc.) in emergency situations. Research did not find municipal policy in Canada dealing with this issue, and so source documents include the Ontario Heritage Act and Ontario Building Code Act, the International Council on Monuments and Sites (ICOMOS) Appleton Charter and Heritage at Risk adopted by the United Nations, Heritage Canada Landmark Preservation Program, International Committee of the Blue Shield (ICBS) policy, and United States National Park Service (NPS) Preservation Briefs and United States Federal Emergency Management Agency (FEMA) program. In addition, research papers on disaster management of built heritage resources in the United States, India, Australia, Croatia, Germany, Macedonia, and the International Foundation for Art Research (IFAR) were reviewed. The disaster or catastrophic event scenarios incorporated in the scope of these works include accidents, weather events, structural collapse, fire, earthquakes, geological events, civil disobedience, and war/terrorism.

Based on this research, a draft Built Heritage Emergency Management Protocol was submitted to the working committee for review on November 15, 2004. Comments received were incorporated into the final draft.

The Built Heritage Emergency Management Protocol (BHEMP) document (attached as Appendix A to Report PD05122) is the product of this process. It identifies built heritage as a resource to be considered in the management of emergency scenarios.

The BHEMP applies to properties within the City that are designated under Parts IV, V and VI of the Ontario Heritage Act (approximately 580 properties), buildings of national significance (12 buildings) as identified by the Historic Sites and Monuments Board of

Canada (HSMBC), and buildings with an Ontario Heritage Foundation (OHF) easement on title (18 properties). The BHEMP is intended to take effect when an Emergency Order or Unsafe Order has been issued on such a property and the Municipality has assumed responsibility for the building's compliance with the Ontario Building Code Act. It is anticipated that the BHEMP may be used on a voluntary basis when a property owner accepts responsibility for compliance with any order issued under the Act.

The BHEMP outlines an appropriate course of action to be adopted for the management of built heritage resources during an emergency. It identifies parties to be included in the decision-making process, those with the authority to make the decisions, and the process and criteria by which the decisions are made and stakeholders informed. Intervention strategies derived from this process will be based on the following principles:

1. Ensure public health and safety.
2. Minimize immediate (short-term) damage to or loss of the heritage resource.
3. Ensure that the proposed intervention minimizes any threat to the long-term structural integrity and survival of the resource.
4. Ensure that the scope and cost of any intervention is reasonable in relationship to the threat to public health and safety presented by the situation.
5. If required, recommend suitable artifacts for documentation and recovery from the site with permission of the owner and with an agreement with the owner, or others, to cover all protection, storage and transportation costs.
6. Ensure any action is based on appropriate professional expert advice.

The BHEMP includes relevant definitions for the terms used, and a series of appendices providing supplementary information on built heritage resources in the City, the Appleton Charter, guidance on optional use of the protocol and post-intervention strategies, and pertinent Ontario Heritage Act text.

ANALYSIS OF ALTERNATIVES:

The Hamilton LACAC (Municipal Heritage Committee) and City planning staff identified the need for a Built Heritage Emergency Management Protocol. The City can continue to function in a *status quo* manner, reacting to such emergencies through *ad hoc* responses. This approach has the potential to result in the loss of cultural heritage resources, and is not a prudent management response. Accordingly, the preferred option is to adopt a process with which to manage such situations.

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

Financial – A structural engineer with heritage expertise will be required as part of this initiative. Changes to the emergency contractor roster administered by the Building and Licensing Division may be required to ensure that each contractor specify a structural engineer with heritage expertise that could be retained and paid by the City according to need. It is anticipated by this protocol that any fees for this structural engineer with heritage expertise would be recoverable from the property owner as outlined in the Ontario

Building Code Act (15.10 [4]), with no additional cost to the City beyond current practice.

Staffing – No additional staffing is required to implement this initiative.

Legal – Legal staff reviewed the draft Built Heritage Emergency Management Protocol and their comments were incorporated into this protocol. It is noted that the City Chief Building Official, and hence the City, will assume responsibility when an owner defers compliance to the City under the Ontario Building Code Act.

POLICIES AFFECTING PROPOSAL:

All former municipal Official Plans provide for the management and conservation of built heritage in one form or another. General initiatives at all levels of government and policy are provided to protect, maintain and conserve built heritage, including the Planning Act, the *Provincial Policy Statement*, and the Federal Historic Places Initiative. The Built Heritage Emergency Management Protocol would be one component of the tool box used by the City to deal with heritage resources in crisis situations, and its adoption would be in keeping with these policies.

CONSULTATION WITH RELEVANT DEPARTMENTS/AGENCIES:

The BHEMP was circulated for comment to City of Hamilton Departments, Divisions and Sections including the Hamilton Emergency Services Department, Hamilton Police Service, Real Estate Section, Building and Licensing Division, Legal Services and Corporate Counsel Division, and the Finance and Administration Section. Comments received were reviewed by the working committee, and incorporated into the final draft. At its meeting of April 28, 2005, the City of Hamilton LACAC (Municipal Heritage Committee) considered this document together with a staff report and recommended to Council that the protocol be adopted.

CITY STRATEGIC COMMITMENT:

The application is considered to be compatible with sustainable development and the values of Vision 2020 as it complements initiatives to carefully manage valued cultural heritage resources.

:JPM
Attachs. (1)

Built Heritage Emergency Management Protocol

February, 2005.

Heritage and Urban Design
Community Planning and Design Section
Development and Real Estate Division
Planning and Development Department
City of Hamilton
February 2005

Built Heritage Emergency Management Protocol: Quick Access Guide

This protocol is divided into two sections, a glossary, and six appendices.

Section 1 comprises an introduction with subsections identifying what the protocol applies to and when it will apply.

Section 2 specifies the principles that will guide action and provides general actions to be taken.

Glossary containing the definitions of words or phrases italicized throughout the text.

References

Appendix A: Hamilton's Heritage Volume 1: List of Designated Heritage Properties and Heritage Conservation Easements under the Ontario Heritage Act

Appendix B: Appleton Charter for the Protection and Enhancement of the Built Environment – national statement of heritage conservation practices.

Appendix C: Optional Use of the Protocol

Appendix D: Ontario Heritage Act Provisions

Appendix E: Post-Intervention Activities and Conservation Strategies

Appendix F: List of pre-qualified Contractors with heritage expertise

See glossary for definitions of words or phrases *italicized* throughout the text.

Disclaimer
This protocol will be used in conjunction with other existing procedures and protocols already in place in the City of Hamilton and is not meant to replace the *City of Hamilton Emergency Plan* or other accepted practices. In the case of *owner* initiated use of this protocol, the City of Hamilton will not incur any costs.

BUILT HERITAGE EMERGENCY MANAGEMENT PROTOCOL

1.0 Introduction

The following protocol outlines the appropriate procedures to be followed when an *emergency* adversely affects a *heritage resource* within the City of Hamilton. The purpose of this protocol is to:

- ensure protection of *heritage resources* without compromising public safety;
- educate local decision makers and *emergency* personnel of the special requirements of these resources; and,
- provide a consistent approach to the management of *emergency* situations involving *heritage resources*.

The integration of *heritage resource* management and disaster preparedness has been discussed extensively at both the national and international level (ICOMOS, 2003; Library and Archives Canada, 1996). Many organizations and researchers agree that the greatest protection of *heritage resources* comes from the education and preparedness of local decision makers (Donaldson, 1995). Currently the *City of Hamilton Emergency Plan* (Hamilton, 2004) makes no provisions for the conservation of built heritage. In the event of an *emergency,* the following protocol will provide information and direction to *first responders,* and later will guide restoration, salvage, and/or demolition of the resource.

1.1 What does this protocol apply to?

The protocol applies to all properties designated under Parts IV, V and VI of the Ontario Heritage Act, buildings of national significance as designated by the Historic Sites and Monuments Board of Canada (HSMBC), and buildings with an Ontario Heritage Foundation (OHF) easement on title (See Hamilton's Heritage Volume 1: Inventory of Designated Properties and Heritage Easements under the Ontario Heritage Act attached as Appendix A).

1.2 When does this protocol apply?

This protocol applies in any situation where the Municipality has served an *Emergency Order or an Unsafe Order* under the Ontario Building Code Act on a property listed in Appendix A, the *owner* has declined to act on that *Order*, and the City has assumed responsibility for the building's compliance.

This protocol may also be partially invoked at the discretion of the Chief Building Official (CBO) to advise on any situation where an *owner* has assumed responsibility and is acting on an *Unsafe Order* that has been issued on a property listed in Appendix A to this protocol.

There are several additional situations in which the *owner* and the City may use the protocol as a guideline (See Appendix C to this protocol).

1.3 Under what authority does this protocol operate?

This protocol operates within the authority and powers outlined in the Ontario Heritage Act (see Appendix D to this protocol) and the Ontario Building Code Act (OBCA).

1.4 Who covers the costs of actions taken under this protocol?

Costs incurred by the municipality to undertake this protocol may be recoverable from a building *owner* as per the OBCA as follows:

Subsection 15.10 *Emergency Order* provides that where there is Immediate Danger, item (4) stipulates that:

"The…municipality…, or a person acting on behalf of them is not liable to compensate the *owner*, occupant or any other person by reason of anything done by or on behalf of the Chief Building Official (CBO) or an inspector in the reasonable exercise of his or her powers under subsection (3);"

Subsection 15.10 items 7 through 11 of the Ontario Building Code Act provide that the CBO must apply to the Superior Court of Justice to determine the costs recoverable by the municipality, in whole, in part or not at all. Any recoverable cost may be recovered via a lien on the subject land.

2.0 Appropriate Course of Action during an Emergency

2.1 Assessment of Situation Prior to Intervention

Where an imminent threat:

- compromises the structural integrity of a *heritage resource;*
- compromises the *designated features* of a *heritage resource*; or
- may have the potential to compromise the structural integrity or *designated features* of a *heritage resource*

the following course of action will be followed:

Step 1

The *imminent threat* to public health and safety will be assessed by the *first responders* within the existing *City of Hamilton Emergency Plan* and applicable standards. This protocol will be invoked once the *imminent threat* has been responded to and an *Unsafe or Emergency Order* has been issued

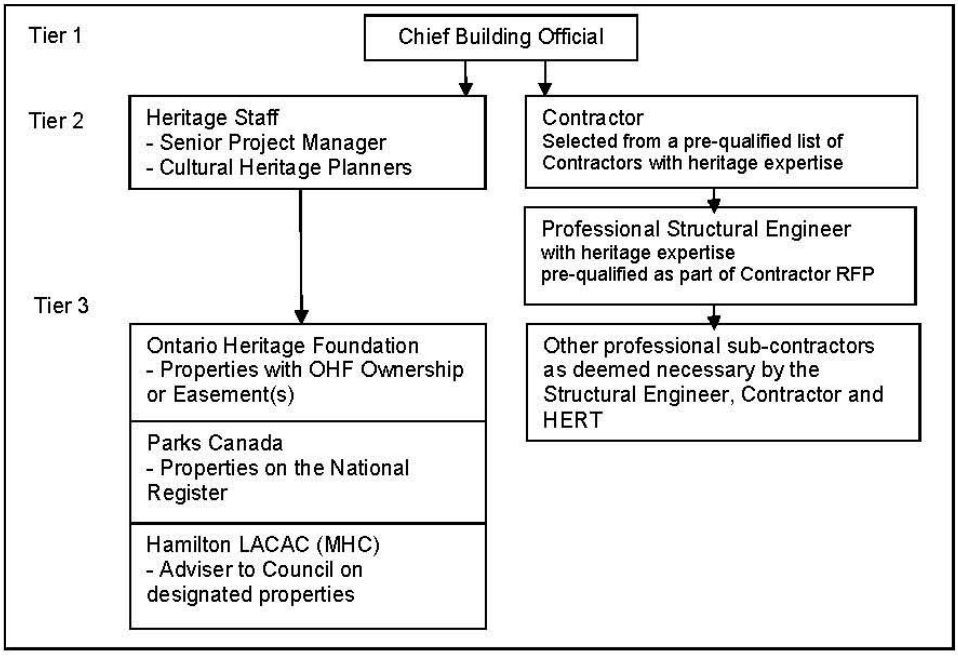
that may result in action that directly or indirectly compromises the structural integrity or *designated features* of a *heritage resource*.

Step 2

The Chief Building Official (CBO) is the first person to be notified of an *emergency* involving the integrity of any structure within the City of Hamilton. The CBO, or their representative, will contact the second tier of the *Heritage Emergency Response Team* (*HERT*) (See Figure 2.1) when the structure falls under the scope of this protocol (See Sections 1.1 and 1.2). The second tier members of *HERT* shall assemble on site as soon as it is safe to do so.

Where a pre-qualified structural engineer with heritage experience has been retained by the consultant, the engineer is the key advisor at this point. Once City heritage staff has been notified staff will assume the responsibility for notifying other third tier members of the *HERT* as required. The Contractor will have the authority to sub-contract other professionals (*e.g.* an architect) when it is deemed necessary by both the Structural Engineer and *HERT*.

Figure 2.1: The Heritage Emergency Response Team (HERT)



2.2 Assessment of degree of intervention and appropriate strategy

Once *HERT* is on site, its immediate role is to assess the situation and to develop a strategy to remove the unsafe condition while minimizing damage to the *heritage resource*, in a reasonable, cost-effective and timely manner.

An appropriate strategy for intervention will be proposed by *HERT* based on the following principles:

1. ensure public health and safety;
2. minimize immediate (short-term) damage to or loss of the *heritage resource;*
3. ensure that the proposed intervention minimizes any threat to the long-term structural integrity and survival of the resource;
4. ensure that the scope and cost of any intervention is reasonable in relationship to the threat to public health and safety presented by the situation;
5. if required, recommend suitable artifacts for documentation and recovery from the site with permission of the *owner* and with an agreement with the *owner* or others to cover all protection, storage and transportation costs; and,
6. ensure any action is based on appropriate *professional* expert advice.

2.3 Implementation of Appropriate Strategy

Guided by the above principles and the Appleton Charter (Appendix B to this protocol) the Structural Engineer, in consultation with *HERT*, will provide to the CBO a written strategy to remove the unsafe condition. The CBO will review the strategy and implement it as the CBO deems fit under their powers as described in the Ontario Building Code Act. The final decision on the appropriate strategy will rest with the CBO.

2.4 Follow-up

City planning staff comprising culltural heritage planners and managers shall, where appropriate, monitor and evaluate ongoing works and activities to ensure compliance with all applicable legislation and municipal by-laws.

Glossary

Definitions of words or phrases *italicized* throughout the text.

Designated Feature
Specific feature of the building mentioned within the *reasons for designation* in the designating By-Law (see Hamilton's Heritage Volume 5: Reasons for Designation under Part IV of the Ontario Heritage Act).

Emergency Order or Unsafe Order
These are Orders under Section 15 of the Ontario Building Code Act that require the *owner* of a property to repair or make good a condition that is unsafe and could be hazardous to the health and safety of the building users and or the public. It may allow for municipal intervention with compensation by the *owner* to remove an unsafe condition.

Emergency
An emergency is an abnormal situation which, to limit damage to persons, property or the environment, requires prompt action beyond normal procedures (Health Canada, 2004).

List of Possible Emergencies:
Accidents (Air Crashes, Marine/Motor/Rail Accidents, Explosions, Hazardous Spills/Leaks)
Weather Events (Snow, Ice, Hail, Lightening, Hurricanes, Tornados, Drought, Flooding, Wind, Rain)
Structural Collapse
Fire (including Wildfires)
Earthquakes
Geological (Landslides, Land Subsidence, Erosion, Avalanches)
Civil Disobedience (Riots, Vandalism)
War/Terrorism

First Responders
The first City representative(s) at the scene of an *emergency* is considered to be the *first responder*. In most cases this will be the fire department or a representative of the Chief Building Official.

Heritage Emergency Response Team (HERT)
A group of individuals who have knowledge and expertise in dealing with heritage buildings, *emergency* situations, and/or structural engineering. The City of Hamilton Heritage Response Team will consist of the Chief Building Official, Cultural Heritage Staff, and at least one structural engineer with expertise in heritage.

Heritage Resource
A *heritage resource* for the express purposes of this protocol is considered to be any property, building, or cultural heritage landscape located in the City of Hamilton and designated under parts IV, V and VI of the Ontario Heritage Act, owned or protected by easement by the Ontario Heritage Foundation, or of national significance as designated by the Historic Sites and Monuments Board of Canada (HSMBC), listed in Appendix A.

Imminent Threat
An impending threat to human health and safety and/or property.

Listed Property
Any building listed in Hamilton's Heritage Volume 2: Buildings of Architectural and/or Historical Interest (see Appendix C).

Mothballing
A comprehensive plan for maintaining the integrity of a *heritage resource* over an extended period of time. *Mothballing* can involve measures to ensure adequate weatherproofing, ventilation, security, fire prevention, structural soundness, public safety, etc. (see Appendix E).

Order
Under the Ontario Building Code Act, Section 12(2) an inspector who finds a contravention of the Act or the building code may make an order directing compliance with the Act or the building code. Also referred to as an Order to Comply.

Owner(s)
The *owner(s)* of the property and/or the registered corporation or holding company responsible for the property.

Reasons for Designation
The specific reason(s) that the property has been granted designation. The *reasons for designation* are text descriptions contained within the designating bylaw for each designated property and outline the features that are to be protected. The *reasons for designation* for each property in the City of Hamilton can be found in Hamilton's Heritage Volume 5: Reasons for Designation under Part IV of the Ontario Heritage Act.

References:

City of Hamilton. (2003). *City of Hamilton Emergency Plan*.

Donaldson, M.W. (1995). *The first ten days: emergency response and protection strategies for the preservation of historic structures*. Retrieved July 28, 2004 from: http://life.csu.edu.au/~dspennem/Disaster_SFO/SFO_Donaldson.html

Health Canada. (2004). *Emergency Preparedness*. Retrieved August 24, 2004 from: http://www.hc-sc.gc.ca/english/epr/contingency_plan/measures.html

International Council on Monuments and Sites (ICOMOS). (2003). *ICOMOS World Report 2002-2003 On Monuments and Sites in Danger*. Retrieved August 24, 2004 from: http://www.international.icomos.org/risk/2002/index.html

International Council on Monuments and Sites (ICOMOS). (1983). Appleton Charter for the Protection and Enhancement of the Built Environment. Retrieved October 12, 2004 from: http://canada.icomos.org/appleton_charter.html

Library and Archives Canada. (1996). *Declaration by the National Summit on Heritage and Risk Preparedness in Canada*. Retrieved August 24, 2004 from: http://www.collectionscanada.ca/04/041803_e.html

Ontario Building Code Act, 1992, S.O. 1992, c. 23

Ontario Heritage Act, R.S.O. 1990, c. O.18

Appendix A:

Hamilton's Heritage Volume 1: List of Designated Heritage Properties and Heritage Conservation Easements under the Ontario Heritage Act

Available at: http://www.hamilton.ca/cultural-heritage

Appendix B:

Appleton Charter for the Protection and Enhancement of the Built Environment – national statement of heritage conservation practices

Appleton Charter for the Protection and Enhancement of the Built Environment

Published by ICOMOS Canada under the auspices of the English-Speaking Committee, Ottawa, Canada,
August 1983

A. Preamble

This charter acknowledges The International Charter for the Conservation & Restoration of Monuments & Sites (Venice, 1964), the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (*the Burra Charter* of February 23, 1981), and the Charter for the Preservation of Quebec's Heritage (Declaration of Deschambault), without which it could not exist.

It further recognizes that the sound management of the built environment is an important cultural activity; and that conservation is an essential component of the management process.

B. Framework

Intervention within the built environment may occur at many levels (from preservation to redevelopment), at many scales (from individual building elements to entire sites), and will be characterized by one or more activities, ranging from maintenance to addition.

Though any given project may combine intervention scales, levels and activities, projects should be characterized by a clearly stated goal against which small scale decisions may be measured.

The appropriate level of intervention can only be chosen after careful consideration of the merits of the following:

- cultural significance,
- condition and integrity of the fabric,
- contextual value,
- appropriate use of available physical, social and economic resources.

Decisions concerning the relative importance of these factors must represent as broadly based a consensus as possible.

Legitimate consensus will involve public participation and must precede initiation of work.

The relationship between scales of intervention levels of intervention and intervention activities is summarized below.

	Activity			
Levels of Intervention:	**Maintenance**	**Stabilization**	**Removal**	**Addition**
Preservation	x	x		
Period Restoration	x	x	x	x
Rehabilitation	x	x	x	x
Period Reconstruction				x
Redevelopment				x

	Scales of intervention				
Levels of Intervention:	**Bldg Elements**	**Bldgs**	**Groups of Buildings**	**Bldgs & Settings**	**Sites**
Preservation	x	x	x	x	x
Period Restoration	x	x	x	x	x
Rehabilitation	x	x	x	x	x
Period Reconstruction	x	x	x	x	x
Redevelopment	x	x	x	x	x

Levels of intervention:

Preservation:

- retention of the existing form, material and integrity of site.

Period Restoration:

- recovery of an earlier form, material and integrity of a site.

Rehabilitation:

- modification of a resource to contemporary functional standards which may involve adaptation for new use.

Period Reconstruction:

- recreation of vanished or irreversibly deteriorated resources.

Redevelopment:

- insertion of contemporary structures or additions sympathetic to the setting.

Activities:

Maintenance:

- continual activity to ensure the longevity of the resource without irreversible or damaging intervention.

Stabilization:

- a periodic activity to halt deterioration and to put the existing form and materials of a site into a state of equilibrium, with minimal change.

Removal:

- a periodic activity: modification which involves the subtraction of surfaces, layers, volumes and/or elements.

Addition:

- a periodic activity: modification which involves the introduction of new material.

C. Principles

Respect for the existing fabric is fundamental to the activities of protection and enhancement.

The process of protection and enhancement must recognize all interests and have recourse to all fields of expertise which can contribute to the study and safeguarding of a resource.

In intervening at the scales, levels and activities described, measures in support of the protection and enhancement of the built environment will involve adherence to the following principles:

Protection:
Protection may involve stabilization; it must involve a continuing programme of maintenance.

Artifactual value:
Sites of the highest cultural significance are to be considered primarily as artifacts, demanding protection as fragile and complex historical monuments.

Setting:
Any element of the built environment is inseparable from the history to which it bears witness, and from the setting in which it occurs. Consequently, all interventions must deal with the whole as well as with the parts.

Relocation:
Relocation and dismantling of an existing resource should be employed only as a last resort, if protection cannot be achieved by any other means.

Enhancement:
The activities of removal or addition are characteristic of measures in support of enhancement of the heritage resource.

Use:
A property should be used for its originally intended purpose. If this is not feasible, every reasonable effort shall be made to provide a compatible use which requires minimal alteration. Consideration of new use should begin with respect for existing and original traditional patterns of movement and layout.

Additions:
New volumes, materials and finishes may be required to satisfy new uses or requirements. They should echo contemporary ideas but respect and enhance the spirit of the original.

Environmental Control:
Systems of insulation, environmental control and other servicing should be upgraded in ways which respect the existing and traditional equilibria and do not set in motion processes of deterioration.

D. Practice

Documentation:

The better a resource is understood and interpreted, the better it will be protected and enhanced.

In order to properly understand and interpret a site, there must be a comprehensive investigation of all those qualities which invest a structure with significance.

This activity must precede activity at the site. Work on site must itself be documented and recorded.

Conjecture:

Activities which involve the recovery or recreation of earlier forms must be limited to those forms which can be achieved without conjecture.

Distinguishability:

New work should be identifiable on close inspection or to the trained eye, but should not impair the aesthetic integrity or coherence of the whole.

Materials and techniques:

Materials and techniques should respect traditional practice unless modern substitutes for which a firm scientific basis exists, which have been supported by a body of experience and which provide significant advantage can be identified.

Patina:

Patina forms part of the historic integrity of a resource, and its destruction should be allowed only when essential to the protection of the fabric. Falsification of patina should be avoided.

Reversibility:

The use of reversible processes is always to be preferred to allow the widest options for future development or the correction of unforeseen problems, or where the integrity of the resource could be affected.

Integrity:

Structural and technological integrity must be respected and will require attention to performance as well as to appearance.

Appendix C: Optional Use of the Protocol

1. This protocol may also be partially invoked at the discretion of the Chief Building Official (CBO) to advise on any situation where an owner has assumed responsibility and is acting on an *Emergency Order* or *Unsafe Order* that has been issued on a property listed in Appendix A. This will allow the CBO to be in communication with heritage staff and the Municipal Heritage Committee to advise the CBO on appropriate interventions and process as per the *Reasons for Designation* and the Ontario Heritage Act.

2. The protocol may be used by owners of heritage properties to assist in the formulation of a strategy to fulfil their obligations under the Ontario Heritage Act and the Ontario Building Code Act. Accordingly, if the *owner* of a property listed in Appendix A accepts responsibility for compliance with any *order* issued under the Ontario Building Code Act then the protocol may be used as a guideline, at the owner's expense.

   If the *owner* is to undertake emergency work they must notify the City Clerk of their intent to undertake the required work and the reason for it in order to meet the requirements of the Ontario Heritage Act. Otherwise a heritage permit is required (see Appendix D).

3. The protocol may also be used by *owners* of a *listed property* (listed in "Hamilton's Heritage Volume 2: Inventory of Buildings of Architectural and/or Historical Interest" in print or online at www.hamilton.ca/cultural-heritage) as a guideline, at the owner's option and expense.

Appendix D: Ontario Heritage Act Provisions

Under normal circumstances, alterations to properties designated under Parts IV, V, and VI of the Ontario Heritage Act are managed under the City of Hamilton Heritage Permit process. Permit applications are evaluated and reported on by heritage staff to the Hamilton LACAC (Municipal Heritage Committee), which in turn makes recommendations to Council. The implementation of approved permits is monitored by staff, and the Ontario Heritage Foundation is informed on permit approval. Anyone who contravenes the Act (*i.e.* alters a property without a permit) under the Ontario Heritage Act, Section 69(1) can be charged with an offence.

However, under Section 69(4) a permit to alter a heritage building is not required in emergency situations where risks to public health or safety, or property are present.

Section 69(4) stipulates as follows:

> *A person is not guilty of an offence under subsection (1) for altering or permitting the alteration of a property designated under Part IV in contravention of section 33 or for altering or permitting the alteration of the external portions of a building or structure located in a heritage conservation district designated under Part V in contravention of section 42, if the alteration is carried out for reasons of public health or safety or for the preservation of the property, building or structure, after notice is given to the clerk of the municipality in which the property, building or structure is situate. 2002, c.18, Sched. F,s. 2(46)*

Appendix E: Post-Intervention Activities and Conservation Strategies

Once the heritage resource of concern has been stabilized and Section 69(4) of the Ontario Heritage Act no longer applies, any other work must follow the requirements of the Ontario Heritage Act (*i.e.* heritage permit). However, *HERT* may continue to advise on the continued management of the resource until further notice.

Where the intervention strategy and preferred technical solution call for stabilization/shoring and/or *mothballing* of the *heritage resource* the following should be applied wherever possible.

Methods should be consistent with those standards and guidelines located within the *Heritage Emergency Protocol Kit*, most notably:

i) Park, Sharon. (1993). *Preservation Brief No. 31 – Mothballing Historic Buildings*. U.S. National Parks Service. Available online at: http://www2.cr.nps.gov/tps/briefs/brief31.htm;

ii) The professional guidance of a restoration architect/ structural engineer or other qualified person contracted by the *owner* and approved by the *Heritage Emergency Response Team;* and,

iii) Be consistent with the principles identified in section 2.2.

Where an intervention strategy calls for the restoration, salvage, and/or demolition of a *designated feature* of a *heritage resource* the following procedures, in addition to requirements under the Ontario Heritage Act, should be performed prior to any action:

i) the *heritage resource* shall be documented and photographed by the *Heritage Emergency Response Team* or a representative thereof; and,

ii) wherever feasible and necessary to prevent further damage designated features shall be carefully removed from the *heritage resource*, and stored in an appropriate location for conservation with the permission of the *owner* and an agreement in place as to who will pay for protection, transportation and storage.

Appendix F: Pre-qualified Contractors with Heritage Expertise

A list of pre-qualified contractors will be compiled and incorporated through the roster process into this document as part of the Built Heritage Emergency Management Protocol initiative.

Appendix II – City of Kitchener Built Heritage Emergency Policy (October 2016)

KITCHENER **Staff Report**
Community Services Department www.kitchener.ca

REPORT TO:	**Heritage Kitchener**
DATE OF MEETING:	**November 1, 2016**
SUBMITTED BY:	**Brandon Sloan, Manager of Long Range & Policy Planning, 519-741-2200 x7648**
PREPARED BY:	**Leon Bensason, Coordinator, Cultural Heritage Planning, 519-741-2200 x7306**
WARD(S) INVOLVED:	**All**
DATE OF REPORT:	**October 14, 2016**
REPORT NO.:	**CSD-16-074**
SUBJECT:	**Heritage Best Practices Built Heritage Emergency Management Policy**

RECOMMENDATION:
That the Built Heritage Emergency Management policy as outlined in Appendix 'A' of Community Services Department report CSD-16-074, be adopted.

BACKGROUND:

On December 14, 2015 City Council approved eight heritage best practice measures for implementation in the immediate, short and long term. One such measure instructed City staff to draft a protocol that would outline the course of action to be adopted for the management of built heritage resources during an emergency, as follows:

> *That City staff use the City of Hamilton Built Heritage Emergency Management Protocol as a model to start drafting a similar protocol for Council consideration, and that staff use the directory maintained by the Canadian Association of Heritage Professionals or the list developed by the Ontario Heritage Trust in identifying one or more pre-qualified professional engineers who may be used by the City in emergency situations affecting heritage property.*

REPORT:

Staff from the City's Legal, Building and Planning Divisions have worked together on drafting a **Built Heritage Emergency Management** policy, outlining the appropriate course of action to be adopted for the management of built heritage resources in certain situations where an Order has been issued by the City's Chief Building Official. The

policy drafted by City staff and attached as Appendix 'A', operates within the authority and powers outlined in the Ontario Building Code and the Ontario Heritage Act.

The City of Hamilton established a Built Heritage Emergency Management protocol in 2005, prior to significant changes being made to the Ontario Heritage Act later that same year. In keeping with Council's direction, City staff used the City of Hamilton protocol as a guide in outlining when the policy is to be followed, and what the roles and responsibilities of various parties are in carrying out the policy. While the City of Hamilton protocol was used as a guide, the Kitchener policy considers and accounts for changes made to the Ontario Heritage Act in 2005.

What does this policy apply to?
The Kitchener Built Heritage Emergency Management policy applies to property designated under the Ontario Heritage Act (including property for which a Notice of Intention to Designate has been passed) and property formally listed by Council on the Municipal Heritage Register.

When does this policy apply?
The policy applies in situations where the City's Chief Building Official has issued an Order (Emergency Order or an Order to Remedy and Unsafe Building) and:

(a) the City is the owner of the built heritage resource;

(b) the owner of the built heritage resource has failed to comply with the Order and the Chief Building Official intervenes or anticipates intervention to ensure compliance;

(c) the owner of the built heritage resource proposes to comply with the Order by effecting demolition of the built heritage resource in whole or in part; or

(d) the issued Order is an Emergency Order pursuant to section 15.7(1) of Building Code Act, 1992, S.O. 1992, c. 23. (for example, where there is a threat of imminent collapse and the owner may not have an opportunity to consider or comply with the Order).

How does this policy address the appropriate management of built heritage resources when an Order has been issued?
The policy outlines the role of the Chief Building Official and of other City staff in situations where this policy applies; and establishes that when in a position to do so, advice (as defined in the policy) shall be obtained from a qualified heritage professional, meaning one or more qualified structural engineers who have relevant experience in the conservation of heritage structures (including such professionals who are also members of the Canadian Association of Heritage Professionals).

In this regard and in addressing Council's direction, the City's Chief Building Official has identified and been in contact with qualified heritage professionals who are members of the Canadian Association of Heritage Professionals and who could be retained by the City to provide advice in situations where this policy applies.

ALIGNMENT WITH CITY OF KITCHENER STRATEGIC PLAN:

The recommendation of this report supports the achievement of the city's strategic vision through the delivery of core service.

FINANCIAL IMPLICATIONS:

The cost of retaining qualified heritage professional(s) to provide advice in accordance with the policy may be recovered from owners of built heritage resources insofar as possible under applicable legislation. Costs that are not recovered or recoverable will be paid by the City from the appropriate budget.

COMMUNITY ENGAGEMENT:

INFORM – This report has been posted to the City's website with the agenda in advance of the council meeting.

CONSULT & COLLABORATE – Staff from the City's Planning, Legal and Building Divisions have consulted with other City Departments, the Ministry of Tourism, Culture and Sport, the local chapter of the Architectural Conservancy of Ontario, and the City's Heritage Kitchener Committee in drafting the Built Heritage Emergency Management policy for Council consideration.

CONCLUSION:

The establishment of a Built Heritage Emergency Management policy and the identification of qualified heritage professionals who may be retained by the City to provide advice in situations where this policy applies, will help ensure that the City's response in certain emergency situations affecting built heritage resources will be managed in a prudent and responsible way.

REVIEWED BY: Mike Seiling, CBO
Jennifer Sheryer, Assistant City Solicitor

ACKNOWLEDGED BY: Alain Pinard, Director of Planning

APPENDIX 'A': Built Heritage Emergency Management Policy (Draft)

KITCHENER	**POLICY**	Policy No: Click here to enter text.
Policy Title:	**BUILT HERITAGE EMERGENCY MANAGEMENT**	Approval Date: Click here to enter a date.
Policy Type:	ADMINISTRATIVE	Next Review Date: Click here to enter text. Reviewed Date: Click here to enter text.
Category:	Administration	
Sub-Category:	Authority & Delegations of Staff	Amended: Click here to enter a date.
Author:	Coordinator, Cultural Heritage Planning	Replaces: Click here to enter text. Repealed: Click here to enter a date. Replaced by: Click here to enter text.
Dept/Div:	Long Range and Policy Planning, Community Services Department	

Related Policies, Procedures and/or Guidelines:
Please use LINKS to related documents when appropriate

1. POLICY PURPOSE:

Concise, easy-to-understand statement, which explains the objective or philosophy underpinning the policy.

This policy outlines the appropriate course of action to be adopted for the management of Built Heritage Resources in certain situations where an Order has been issued.

2. DEFINITIONS:

Unusual or specialized language, acronym, jargon or unique application of words.

"Advice" pertains to advice with respect to a Built Heritage Resource and may include preparation of reports, inspections of a building or structure, examination of available conservation options while effecting compliance with an Order, recommendations on available options for compliance with an Order, assessment of relative costs of options for complying with an Order, and peer reviews of reports of other professionals.

"Built Heritage Resource(s)" shall include any Designated Property and any Listed Property.

"Designated Property" shall mean a property for which Council of the City has directed the Clerk to give notice of intention to designate pursuant to the Ontario Heritage Act, R.S.O., 1990, c. O.18, a property designated as having cultural or heritage significance pursuant to Part IV, V, or VI of the Ontario Heritage Act,

buildings of national significance as designated by the Historic Sites and Monuments Board of Canada, and property subject to a heritage conservation easement or covenant pursuant to section 22 or 37 of the Ontario Heritage Act.

"Heritage Staff" shall mean staff within the Planning Division who have responsibility for the City's cultural heritage planning function.

"Listed Property" shall mean a property listed on the City's register of cultural heritage property under section 27 of the Ontario Heritage Act.

"Order" shall mean an Emergency Order pursuant to section 15.7(1) or an Order to Remedy an Unsafe Building pursuant to section 15.9(4) of the Building Code Act, 1992, S.O. 1992, c. 23.

"Qualified Heritage Professional(s)" shall mean one or more qualified structural engineers who have relevant experience in the conservation of heritage structures and may include a structural engineer who has such relevant experience and is a member of The Canadian Association of Heritage Professionals ("CAHP").

3. SCOPE:

Statement as to whom the policy applies, as well as exceptions and the ramifications of non-compliance, if any and deemed appropriate to include.

POLICY APPLIES TO THE FOLLOWING:	
☐All Employees	
☐Management	☐Permanent Full-Time Employees
☐Permanent Full-Time Non Union	☐Permanent Full-Time C.U.P.E. 791
☐Temporary	☐Part-Time Non-Union
☐Student	☐Permanent Full-Time Union
☐Continuous Part-Time Employees	☐Part-Time Employees
☐Continuous Part-Time Non-Union	☐Continuous Part-Time Union
☐Council	☐Local Boards & Advisory Committees
☒Specified Positions Only: Chief Building Official; Director of Planning; Director, Facilities Management; Manager of Long Range and Policy Planning; Coordinator, Cultural Heritage Planning; Heritage Planner.	

This policy addresses situations where the City's Chief Building Official has issued an Order impacting a Built Heritage Resource and:

(a) the City is the owner of the Built Heritage Resource;

(b) the owner of the Built Heritage Resource has failed to comply with the Order and the Chief Building Official intervenes or anticipates intervention to ensure compliance;

(c) the owner of the Built Heritage Resource proposes to comply with the Order by effecting demolition of the Built Heritage Resource in whole or in part; or

(d) the issued Order is an Emergency Order pursuant to section 15.7(1) of Building Code Act, 1992, S.O. 1992, c. 23.

4. POLICY CONTENT:

Policy details, including specific roles and responsibilities relating to the policy.

Advice from Qualified Heritage Professional(s)

Any Advice obtained pursuant to this policy shall be obtained with the objective of complying with an Order by remedying the dangerous or unsafe condition.

Qualified Heritage Professional(s) giving Advice shall be requested to take into account the significance of the Built Heritage Resource and its heritage attributes while recognizing the need to obtain compliance in a reasonable, timely, and cost-effective way.

In situations where this Policy applies and when in a position to do so, the Chief Building Official and any other City staff shall only obtain Advice from a structural engineer that is a Qualified Heritage Professional.

Role of the Chief Building Official

The Chief Building Official shall take steps as permitted by legislation to ensure that Orders against Built Heritage Resources are complied with. As soon as an Order is issued against a Built Heritage Resource, the Chief Building Official shall notify the City's Director of Planning. If the Built Heritage Resource subject to the Order is owned by the City, the Chief Building Official shall also notify the City's Director, Facilities Management.

City Owned Built Heritage Resources

Where an Order has been issued against a Built Heritage Resource owned by the City, the Director, Facilities Management has primary responsibility for effecting compliance with the Order. In discharging this responsibility, the Director, Facilities Management shall have regard to Council's objective as stated in the Official Plan, to lead the community by example in the management and care of City owned cultural heritage resources.

The Director, Facilities Management may, in consultation with the Chief Building Official, retain Qualified Heritage Professional(s) to provide Advice with respect to any City owned Built Heritage Resource that is subject to an Order.

Listed Property where Demolition is Proposed

Where an Order has been issued against a Listed Property and the owner has proposed partial or complete demolition of the Listed Property, the City will receive notice of the proposed demolition in accordance with the Ontario Heritage Act. Following receipt of such notice, Heritage staff will bring a report forward to Heritage Kitchener. Heritage Kitchener will then make a recommendation to City Council on whether the property should be designated as a means of preventing the demolition. In discharging their reporting responsibilities related to Listed Properties where any demolition has been proposed, Heritage staff may, in consultation with the Chief Building Official, retain Qualified Heritage Professional(s) to provide Advice.

Designated Property

Where an Order has been issued regarding a Designated Property, the owner of the Designated Property may apply for a Heritage Permit to enable compliance with the Order. The application for a Heritage Permit may include a request for consent to demolish the Built Heritage Resource or a portion of it.

Where an owner fails to comply with an Order, or expresses or demonstrates an intention not to comply with an Order, the Chief Building Official may request a Heritage Permit (which may include a request to demolish) to effect compliance with the Order.

In situations where a Heritage Permit has been requested by either the owner or the Chief Building Official, Heritage staff may, in consultation with the Chief Building Official, retain Qualified Heritage Professional(s) to provide Advice. When the Chief Building Official applies for a Heritage Permit, the Chief Building Official may retain Qualified Heritage Professional(s) to provide Advice.

The authority of both the Chief Building Official and Heritage staff to retain Qualified Heritage Professional(s) to provide Advice does not limit any authority of Heritage staff to request information from the owner of the Built Heritage Resource pursuant to the Ontario Heritage Act.

Expedited Decision Making

In any situation where an Order has been issued and the intervention strategy may impact the Built Heritage Resource and/or its heritage attributes, consultation with the City's Municipal Heritage Committee and a decision of Council of the City may be required pursuant to the Ontario Heritage Act. In such circumstances, before complying with an Order, the Chief Building Official may request the City's Clerk or designate to schedule an emergency meeting of the City's Municipal Heritage Committee and request the Mayor to call an emergency special meeting of Council pursuant to the City's Procedure By-law

(Chapter 25 of The City of Kitchener Municipal Code) in order to expedite the decision making process.

Cost Recovery for Advice from Qualified Heritage Professional(s)

The cost of retaining Qualified Heritage Professional(s) to provide Advice in accordance with this Policy may be recovered from owners of Built Heritage Resources insofar as possible under applicable legislation. Costs that are not recovered or recoverable will be paid by the City from the appropriate budget.

Reporting of Expenditures

Any expenses incurred under this policy shall be reported to Council.

5. HISTORY OF POLICY CHANGES

There are two types of policy updates. 1) "Administrative Updates" are done to reflect the current corporate structure and job titling and do not need Council or CLT approval. 2) "Formal Amendments" are major changes to the intent and purpose of the policy and require Council or Corporate Leadership Team (CLT) approval.

Administrative Updates

The date (yyyy-mm-dd) and a short annotation on the nature of the change to reflect the current corporate structure i.e. Departmental re-organization / Titling changes / Standing Committee restructuring.

Click here to enter text.

Formal Amendments

The date of the resolution passed by Council or CLT, for example, "2020-01-20 - As per Council/CLT resolution"

Click here to enter text.