



Sustainability & Climate Change



TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Purpose of Discussion Paper.....	2
1.2	Vision.....	3
1.3	Sustainability and Climate Change	4
2.0	CURRENT OFFICIAL PLAN DIRECTION.....	6
3.0	ISSUES.....	7
4.0	COMMUNITY INPUT.....	8
5.0	PROVINCIAL AND COUNTY POLICY.....	9
5.1	The Planning Act.....	9
5.2	Provincial Policy Statement, 2020.....	11
5.3	A Made-in-Ontario Environment Plan.....	12
5.4	Niagara Escarpment Plan	13
5.5	Grey County Official Plan.....	14
6.0	OTHER BEST PRACTICES.....	16
6.1	Guelph Official Plan.....	16
6.2	Thunder Bay Official Plan.....	17
7.0	ANALYSIS.....	19
8.0	RECOMMENDATIONS.....	21
9.0	NEXT STEPS	22

1.0 INTRODUCTION

The City of Owen Sound Official Plan (OP) guides long-term decisions that relate to land use and planning. It establishes the policies for implementing Provincial direction and interest, and sets out the framework that shapes our City's physical, economic, and social development. The OP is an important tool that supports our City's vision of a vibrant and thriving community that offers high-quality amenities surrounded by unique natural features.

Under the *Planning Act*, municipalities are required to conduct a review of their OP every ten years. They must complete a Provincial Plan conformity exercise to amend their OP's to ensure that they conform and do not conflict with Provincial Plans; have regard to matters of Provincial Interest; and are consistent with the Provincial Policy Statement. Municipal OP's must also be in conformity with the policy and direction provided in Regional/County plans.

Since the last OP update in 2012, several significant Provincial and local policy initiatives were completed. These include the coordinated review and update of the following:

- The *Planning Act*
- The 2020 Provincial Policy Statement (PPS)
- The Made-in-Ontario Environmental Protection Plan
- The Niagara Escarpment Plan
- Grey County Official Plan

Over the following year, our City will be undertaking a municipal comprehensive review (MCR) to determine:

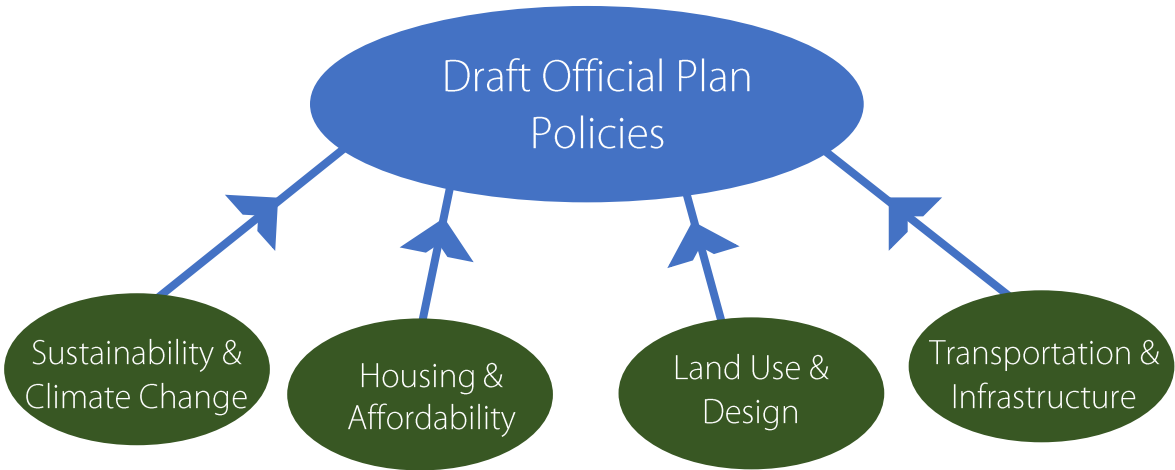
- How and where our City may grow;
- How to use and protect the land and resources within our City;
- How to anticipate, address and mitigate the impacts of climate change to create a sustainable community;
- What housing types and economic opportunities are required for all types and ages of residents; and
- How people and goods move within and across our City, and connect to the Region beyond.

This review will constitute as Owen Sound's Provincial Plan conformity exercise and will satisfy the 10-year OP update requirement, as per the *Planning Act*.

1.1 Purpose of Discussion Paper

The following paper is the first in a series of discussion papers that form part of the MCR process. Although the review will encompass all subject matters in the OP, the discussion papers will focus on key policy areas, including Sustainability & Climate Change, Housing & Affordability, Land Use & Design, and Transportation & Infrastructure. The purpose of these discussion papers is to inform and engage all of Owen Sound’s stakeholders, including local businesses, residents and frequent visitors.

CITY OF OWEN SOUND **OFFICIAL PLAN UPDATE**



The Sustainability and Climate Change discussion paper provides an overview of environmental policies in our current OP, as well as changes to the environmental protection policy framework in Ontario. It will explore possible new policy directions in relation to the environment, sustainability and climate change based upon current conditions, what has changed at the provincial and local levels, and community expectations. It will also review best practices from other municipalities.

1.2 Vision

The Vision for the City's OP provides a foundation for policy direction within the OP and offers insight into the objectives, goals, and milestones to consider when making planning related decisions. The following Vision statement reflects what the City aspires to be and acknowledges how it will get there.

“The City of Owen Sound is where you want to live. A complete community that values the natural environment, cultural diversity, historic streetscapes, vibrant waterfront and provides a sense of belonging. The City will plan to evolve as a centre for growth, opportunity and innovation while ensuring that sustainability, resiliency, and quality of life are considered in every decision.”

- ***Official Plan Vision Statement***

Consultation with members of Council, City of Owen Sound Staff, and the community provided a strong foundation for the creation of this vision statement. Visioning sessions provided an opportunity to facilitate an understanding of how the City views itself and what changes can be implemented to better reflect what the City wants to be.

Sustainability and climate change were prominent topics that were mentioned during all forms of consultation and engagement. In response to this, the Vision statement identifies that the City of Owen Sound will be a complete community, meaning that all types of services, amenities, jobs and recreation areas will be provided within the City. Complete communities strive to lower emissions and increase sustainability by providing a community with the things they need without having to travel excessive distances.

The natural environment is extremely important to the City. From picturesque waterfronts to tree covered trails, the City's natural environment provides residents and visitors with the areas needed to think, relax and discover. The Vision statement reaffirms the value of the natural environment to our City and strengthens the commitment for growth to occur in a sustainable and resilient way.

1.3 Sustainability and Climate Change

In the context of the Official Plan, sustainability is the integration of social, economic and environmental policy aspects across all components of the policy framework. Sustainable communities use their resources to meet current needs while ensuring that adequate resources are available for future generations; they seek a better quality of life for their residents while maintaining nature's ability to function over time. Sustainable communities are achieved through having a vision, planning and establishing measurable objectives with appropriate indicators.

Like many other municipalities in Canada and elsewhere, the City is wrestling with implementation of local solutions in context of broader global sustainability matters. Climate change is an important component of sustainability and in the context of planning policy an Official Plan can provide policy direction for developing and implementing effective strategies for climate change mitigation and adaptation.

Climate change is changes in climate measures – including temperature, precipitation, and wind patterns – that can be attributed directly or indirectly to human activity that alters the composition of the global atmosphere¹. These changes are in addition to natural climatic variability observed over comparable time periods and differ from weather. Weather is the short-term, day-to-day state of the atmosphere and climate is the long-term weather variability of a place. Changes to the climate may result in rising temperatures, unpredictable forecasts, extreme weather events and natural disasters such as wildfires and floods.²

The Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the United Nations Environment Program, concluded with 95% certainty in its 2014 *Climate Change Synthesis Report* that "Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems."³ The impacts that occur due to climate change will have an effect on everyone, though the specifics on each effect will differ across geographical regions. Such climatic shifts may include, amongst other things, changes to:

- Residents health and quality of life;
- How communities function, grow, and develop; and
- How agriculture, tourism, and other economic activity occur.

¹ United Nations. (1992). *United Nations Framework Convention on Climate Change*.

² National Geographic Society. (2019, March 28). *Climate Change*.

³ Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014 Synthesis Report*.

The creation of resilient communities will require coordinated and co-operative action between all stakeholders, including governments, agencies, developers, business owners, and individual residents. Land use and planning decisions need to be conducted through a sustainability lens in order to create a community that can successfully plan for, react to and adapt as the community changes within and around due to local, regional or global influences.

2.0 CURRENT OFFICIAL PLAN DIRECTION

The current Owen Sound OP was adopted by City Council on March 20, 2006 and approved by the County of Grey August 10th of the same year. It was last updated in 2012 as part of a mandatory five-year review. The 2017 Office Consolidated OP includes policies in effect and approved amendments to the Owen Sound Official Plan.

Section 3.1 of our OP provides goals and objectives for environmental integrity. This section offers strong support for the protection, conservation and enhancement of the City's environmental features. Specific objectives provide direction on implementing strategies that focus on urban forests, stormwater management, water quality and quantity, waste reduction, land remediation and transportation solutions. Objectives within section 3.1 were reviewed and analyzed to ensure consistency with Provincial and Regional policy direction. In sections where objectives can be amended or new strategies can be implemented, updates will be included in the new OP.

Section 4.10 and 4.13 provide direction pertaining to the preservation and protection of open spaces including parkland, escarpment and natural areas. Section 7.1 contains specific policies that address woodlands, hazard lands and escarpment natural features, environmental impact studies, soil contamination, air quality, water quality and conservation, waste management, energy conservation and more. As mentioned, these policies will be reviewed and analyzed to ensure consistency with Provincial and Regional policy direction.

The OP sections mentioned above provide a strong foundation for the development of climate change and sustainability policies in the new Official Plan. These policies will be updated to reflect current Provincial and Regional guidance for climate change and sustainability. Our new Official Plan will include this guidance but allow for the development of policies and objectives at a City level that is unique to the challenges Owen Sound will likely experience due to a changing climate.

3.0 ISSUES

From an Official Plan perspective, there are a number of policies that when considered together address sustainability.

Currently, there are no specific policies within our current OP that address climate change. Further, there is limited language and acknowledgement of the impact that climate change has and will have on our community. The new OP must embrace the notion of climate change and assess its implications upon our community's social, environmental and economic activities.

In developing appropriate policies to address climate change matters, we must consider the main elements of our community that are likely to be impacted by climate change and ensure that key policy initiatives are in place to address these matters. Some examples for consideration include:

- Limiting encroachment of development on natural areas that maybe affected by changes in water levels and slopes, such as beaches and water courses;
- Designing transportation and multimodal transit systems to enable efficient flow of people and goods through and within the community limiting emissions;
- Promoting appropriate densification and urban design that maintains the character of the community and allows for climate-considerate built form;
- Encouraging use of greenspace and infrastructure to manage various precipitation events to minimize potential for flooding and related impacts; and
- Assessing opportunities for renewable energy and net-zero initiatives that contribute to an adaptive and resilient community from a climate perspective.

The adoption of a climate change related approach to policies within the new OP means that we must develop suitable goals, objectives and targets to measure our community's ongoing performance. The climate change related metrics must be clear and understandable to residents, businesses, tourists and other stakeholders.

4.0 COMMUNITY INPUT

Throughout the Owen Sound OP Review consultation process, the importance of considering climate change and adaptation and mitigation efforts were identified. In the public survey posted on the Owen Sound website, 30% of respondents identified managing the impacts of a changing climate as one of their top concerns. From the commentary provided in this survey, and during other consultation and engagement processes, several “green themes” emerged.

The importance of considering all new development and redevelopment through a climate change ‘lens’ was one of the primary messages given by respondents. New buildings and construction need to embrace environmental principles such as sustainability, zero waste, renewable energy, and intensification, capitalizing on new technologies that enable low impact and energy efficient development. Located in Georgian Bay on Lake Huron, Owen Sound’s waterfront is a natural feature important to everyone – residents, businesses, and industries. It has recognizable aesthetic, environmental, social, recreational, and economic values. Therefore, the protection, rehabilitation, and wise management of the waterfront should be of the utmost concern.



Figure 1 – A Community Visioning Session at the Harry Lumley Bayshore Community Centre

Mixed use and mixed density development should be encouraged to reduce our community’s ecological footprint, including reducing required water and sewer infrastructure, transportation demand and greenhouse gas emissions, and energy use. Mixed-use development may also be beneficial for the economy and tourism, and ensure that Owen Sound is a place for people of all ages, addressing the gap there seems to be for young people.

Climate change strategies must recognize the connection between all aspects of our community – including social and economic aspects – and effectively integrate itself. In this way, our community will become truly resilient, and be able to respond to changing environmental, economic, and social pressures.

5.0 PROVINCIAL AND COUNTY POLICY

There are a number of provincial, local legislation and policy frameworks that relate to climate change and land use planning. This section provides a review of such policies as they relate to Owen Sound.

5.1 The Planning Act

The *Planning Act* (1990) is a provincial document that guides development and the various planning approvals and processes involved. Consolidated on April 12, 2018 it serves as the basis for municipalities to prepare documents related to planning and land use, including official plans that lay out a municipality's planning goals and policies to guide land use within its jurisdiction. Municipalities are required to ensure that all planning decisions and documents integrate provincial interests and comply with the Planning Act, as well as other provincial policy such as the Provincial Policy Statement.

The Planning Act identifies the following as matters of provincial interest that relate to sustainability and climate change:

- The protection of ecological systems.
- The conservation and management of natural resources including energy and water.
- The minimization of waste.
- The mitigation of greenhouse gas emissions and adaptation to climate change.

The Planning Act contains a number of tools that support development and land that contributes towards sustainable and environmental conscious communities. Table 1 below provides a further summary.

Table 1 – Planning Act direction for sustainability and climate change

Section	Related Policy	Analysis
Section 16-27	The policies in these sections relate to Official Plans. They lay out what Official Plans shall contain, the processes involved including the creation, public consultation, amending, approval, and updating of Official Plans, and more. Subsection 16(14) specifically references climate change policies and states that the goals, objectives and actions to be taken to mitigate greenhouse gas emissions (GHG) and to provide for adaption to a changing climate should be included.	Through an Official Plan, municipalities can incorporate policies that relate to climate change and can help build communities that are more resilient. This may include the identification of specific direction, objectives, targets, and action to successfully reduce GHG emissions and create more sustainable communities. Such policies may include growth management, intensification, improved transit networks or the promotion of low-impact development.
Sections 22(5), 34(10.2), 51(18), 53(3)	These policies permit municipalities to request specific information, material, or studies as part of a complete Official Plan Amendment, Zoning By-law Amendment, Plan of Subdivision, or Consent application process.	By granting municipalities the authority to request such material, matters related to climate change can be more easily addressed. For example, as part of the subdivision process a stormwater management plan or transportation demand management plan can be required to reduce the amount of runoff or GHG emissions produced from the proposed development.
Section 28	This section has regard to Community Improvement Plans (CIPs) and provides policies that address what a CIP is, what they are intended to achieve, and other details association such as designation, acquisition and financing, approval and implementation.	CIPs target specific areas of a community for development or redevelopment. When developing a CIP, grant and loan incentives can be provided to encourage climate change related features such as low-impact developments or water and energy conservation systems.
Section 34	The policies in this section relate to Zoning By-laws. It describes the authority and abilities that zoning by-laws are to possess, and also addresses the amendment, appeal and public consultation processes associated with zoning by-laws.	Through a Zoning By-law, municipalities can incorporate detailed policies that may help build more sustainable, resilient communities. For example, zoning by-laws provide the restrictions related to building height and residential density, and may be used to help promote intensification and building upwards instead of outwards within a community.
Section 42	This section addresses the conveyance of land for park or other public recreational purposes, as a condition of development or redevelopment of land.	The provision of parklands can help address the repercussions caused by climate change. Park lands often contain greater amounts of greenspace and vegetation than what is found in other parts of an urban setting. This helps to remove carbon and other pollutants from the air, as well as reduce the quantity and improve the quality of stormwater runoff. Furthermore, park lands can aid in cooling urban heat islands by providing shade, deflecting radiation from the sun and releasing moisture into the atmosphere.

Recent amendments to the Planning Act, through the introduction of Bill 68 and Bill 139, have identified climate change as a matter of provincial interest and strengthened the consideration given to climate change matters during the land use and planning decision-making process.

Bill 68, *Modernizing Ontario's Municipal Legislation Act* (2017), received Royal Assent on May 30, 2017, and amended the *Planning Act* by identifying the mitigation of greenhouse gas emissions and adaptation to climate change as a matter of provincial interest in Section 2(s). The addition of language that specifically addresses climate change mitigation and adaptation as a matter of provincial interest means that all planning authorities, including municipalities, must give consideration to and include climate related policies during the land use and planning decision-making process.

Bill 138, *Building Better Communities and Conserving Watersheds* (2017), was also introduced by the province on May 30, 2017 and recommended updates and changes to the land use planning system in Ontario, including changes to the Planning Act. These recommendations proposed an amendment to Section 16 of the *Planning Act*, which has regard to the content that must be included in an Official Plan. The proposed amendment required local councils or approval authorities to consider climate change related issues, including the identification of goals, objectives, and actions to mitigate greenhouse gas emissions and the provision of adaptations to a changing climate. With this amendment, municipalities and other planning authorities had to include within their Official Plans policies related to climate change.

5.2 Provincial Policy Statement, 2020

The 2020 Provincial Policy Statement (PPS), issued under the authority of Section 3 of the *Planning Act*, came into effect on May 1, 2020 and replaces the 2014 PPS. It establishes the policy foundation for regulating the development and use of land, as well as provides direction on matters of provincial interest related to land use planning and development. The 2020 PPS outlines visions and goals for Ontario's land use policies, and identifies how the built environment will be created and how land and resources will be managed over a 25-year horizon. It supports developments that encourages both an efficient use of land, resources, and public investment in infrastructure as well as a diverse mix of land uses in order to provide choice and diversity to create complete communities. Such development will also provide long-term prosperity, environmental health, and social wellbeing.

Section 1.1.1 of the PPS identifies the ways in which healthy, livable, and safe communities can be sustained. This includes the avoidance of development and land use patterns that may cause environmental concerns, the promotion of development and land use patterns that conserve biodiversity, and preparation for regional and local impacts that may occur due to a changing

climate. Within the sections of the PPS that provide direction for settlement areas, infrastructure, energy conservation, air quality, adaption and natural hazards there is language and policies that specifically address climate change, as summarized in Table 2 below.

Table 2 – Provincial Policy Statement direction

Section	Related Policy
Section 1.1.3	The policies within this section address settlement areas. Such areas shall be the focus of growth and development, and land use patterns within them will promote the efficient use of land, resources and energy, minimize negative impacts to air quality and climate change, prepare for the impacts of a changing climate, and support active transportation and transit. Targets for intensification and redevelopment shall be set, and compact forms with a mix of uses and densities should be encouraged.
Section 1.6	Infrastructure and public service facilities are addressed within this section. Infrastructure and public services facilities are to be provided in an efficient manner that prepares for the impacts of a changing climate while accommodating projected needs. Green infrastructure should be promoted, and adaptive re-use should be considered wherever possible.
Section 1.6.6	In regards to sewage, water, and stormwater, such systems should be prepared and able to adapt to the impacts caused by a changing climate, as well as promote water conservation and efficient water use. Stormwater management shall also minimize erosion and changes in water balance, and incorporate green infrastructure.
Section 1.8	The policies within this section directly address energy conservation, air quality and climate change. It states that planning authorities are to support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and prepare for the impacts of a changing climate through specific land use and development patterns which, are compact, mixed-use, maximizes vegetation, and promotes active transportation and transit, amongst other things.
Section 2.2	The policies in this section address water. The protection, improvement or restoration of the quality and quantity of water is to be protected by evaluating and preparing for the impacts of a changing climate to water resource systems at the watershed level.
Section 3.1	Policies regarding natural hazards are contained within this section. Planning authorities are to prepare for the impacts of a changing climate that may increase the risks associated with natural hazards.

5.3 A Made-in-Ontario Environment Plan

On November 29, 2018 the Ontario Ministry of the Environment, Conservation, and Parks released the current draft of the Made-In Ontario Environment Plan, a provincial initiative that aims to preserve and protect our land, air, and water, address litter and reduce waste, and support the

reduction of greenhouse gas emissions. Development and improvement of the plan will continue over the next 12 years, with revisions made every four.

Within the plan, actions to adapt and build resilient, environmentally conscious communities include the following:

- Improving our understanding of how climate change will impact communities, critical infrastructure, economies and the natural environment through climate data collection and sharing;
- Reviewing and updating provincial and land use planning policies and laws related to climate change to improve resiliency, including modernization of the Building Code;
- Establishing the Ontario Carbon Trust Fund (an emissions reduction fund) and an emissions reduction target of 30 percent below 2005 levels by 2030;
- Encouraging private investments in clean technologies, green infrastructure and low impact development;
- Providing home-owners with data about their home-energy use and increasing access to clean energy;
- Improve public transportation and active transportation networks to reduce vehicle dependency;
- Making climate change a cross-government priority and empowering effective local leadership on climate change; and
- Continue to support programs and partnerships to make the agricultural and food sectors more resilient to climate change.

Further, detailed direction from the Province in regards to implementation will aid in establishing the key considerations and next steps outlined above within the Owen Sound OP review.

5.4 Niagara Escarpment Plan

The Niagara Escarpment Plan (NEP), 2017, is a large-scale environmental land use plan that came into effect June 1, 2017. It upholds the biosphere reserve principles by balancing protection, conservations, and sustainable development to ensure that the Escarpment will remain substantially as a natural environment for future generations. The Escarpment is a strip-like landform between the Niagara River and the Bruce Peninsula, including much of Grey County and portions of the City of Owen Sound. The natural features found within this area serve important ecological functions and help to mitigate the effects of climate change and improve resilience.

The NEP contains policies that address designations, land-uses and development criteria. Within the boundaries of the City of Owen Sound, there are several different land use designations

provided by the NEP. These designations include Escarpment Natural Area, Escarpment Protection Area, Escarpment Rural Area, Urban Area, and Niagara Escarpment Parks and Open Space System. Section 1.3 and Section 1.4 of the NEP provide direction for those lands designated Escarpment Natural Areas and Escarpment Protection Areas. The objectives of these designation is to recognize, protect, and where possible enhance the natural heritage and hydrological systems found, such as valleylands, wetlands, and other significant environmental features.

The Escarpment Protection Area also aims to provide a buffer to prominent Escarpment features. These goals are achieved by permitting only compatible recreation, conservation, and educational land uses including limited low-density residential development, agricultural uses and forest, wildlife, fisheries, or watershed management. The maintenance of natural heritage systems is important for the continued provision of clean and reliable water, flood moderation, erosion control, improved air quality, and recreational opportunities. Such systems can aid in mitigating the negative repercussions caused by shifts in the climate.

Escarpment Rural Areas and Urban Areas are addressed in Sections 1.5 and 1.7, respectively. Escarpment Rural Areas serve as buffers for the more ecologically sensitive areas of the escarpment, and aim to encourage agricultural activity and natural resource management. Compatible rural land uses are permitted within this designation, and include agricultural uses, single residential dwellings, recreational uses and infrastructure. The Urban Area designation identifies urban areas in which the Escarpment and closely related lands are located. The objective of this designation is to minimize the impact and prevent further encroachment of urban growth into the natural Escarpment environment. Development within these areas is to be compatible with the scenic resources of the Escarpment, and should encourage reduced energy consumption, improved air quality, and reduced greenhouse gas emissions.

5.5 Grey County Official Plan

The Grey County Official Plan (referred to as Recolour Grey) is our County's updated Official Plan, approved by the Province on June 6, 2019. It serves as an upper-tier plan and lays out goals related to development, communities, and the natural resources found within the county. It aims to balance social, economic and environmental matters to ensure the health and well-being of all residents and create sustainable communities. Recolour Grey is designed to assist Council and other agencies in their consideration of public and private development planning issues.

Recolour Grey contains a number of objectives and policies in many topic areas that relate to a changing climate. These topic areas have been divided into five central themes which lay out the foundation and policy direction of Recolour Grey.

The theme “Natural Grey” focuses on the environment. Some of the purposes of this theme is to provide policies that pertain to the protection of environmental features and systems, and climate change preparedness. Key principles and priorities include:

- Monitoring the impacts of climate change on our systems to allow us to adjust management activities, to best maintain the integrity and resilience of systems
- Using green technologies and construction methods whenever possible and feasible for new construction and the replacement of civic infrastructure;
- Considering how a changing climate may cause increased risks and changes associated with natural hazards when planning for the future;
- Encourage reduction of building demolition waste through the adaptive reuse of older and existing building stock, especially heritage buildings; and
- Promoting retrofits for energy efficiency in built heritage structures while maintaining cultural integrity.

The themes Develop Grey, Live Grey, and Move Grey also contain policies necessary for the creation of a sustainable community that can help mitigate or adapt to the effects of climate change. There are policies that relate to the economic viability of our county within Develop Grey – economic objectives include supporting private and public sector proposals that consider energy conservation, which would aid in building more sustainable communities by encouraging businesses and developers to use resources more efficiently and conservatively. Live Grey contains policies that relate to the development of the housing market and healthy, sustainable communities. The policies within this theme encourage active streetscapes, intensification and mixed use development. Move Grey provides policy direction on how people, goods, information, and services move in, out and around our County. This includes policies that support the development of active transportation infrastructure, which would help to reduce the amount of greenhouse gas emissions produce, and non-renewable resources like fuel consumed within our communities.

In addition to the policies within Recolour Grey, the County is working towards the development of a Climate Change Action Plan, which will coordinate Grey County efforts to embrace and facilitate resilient, sustainable development to mitigate the effects of climate change.

6.0 OTHER BEST PRACTICES

With the repercussions of a changing climate happening around the globe, other communities have taken steps to mitigate the negative effects that have occurred or are likely to occur by implementing plans and strategies to create more sustainable and resilient places. Provided below is an analysis of two Official Plans from Ontario communities that contain strong policies and direction pertaining to climate change.

6.1 Guelph Official Plan

The City of Guelph Official Plan, Envision Guelph, was adopted by Council November 1, 1994, and has been continuously updated through comprehensive Official Plan Amendments. The most recent update was approved by the Ontario Municipal Board in October, 2017, and consolidated in March 2018. The Plan uses an integrated systems approach to create an over-arching vision and structure that demonstrates low-carbon energy opportunities, viable sustainable transportation routes and nodes, potential for expand open space, and appropriate housing densities. This integrated approach is essential to achieving many of the long-term goals of Envision Guelph, including climate change mitigation.

Several of the objectives established by Envision Guelph in its Strategic Goal section relate to climate change. These objectives include:

- Establishing and implementing policies and actions that will contribute to achieving the targets of Guelph’s Community Energy Plan;
- Designing places and buildings in a way that minimizes waste production and the consumption of energy and water to achieve an increasingly lower carbon footprint;
- Advance innovation by building on the synergies between infrastructure, built form, and climate change imperatives, including enhanced engineering standards;
- Develop a safe, efficient, convenient and sustainable transportation system that provides for all modes of travel including cycling and walking to support sustainable land use patterns;
- Build a compact, mixed-use and transit-supportive community; and,
- Encouraging intensification and redevelopment of existing urban areas that is compatible with existing built form.

Section 4.6 of Envision Guelph contains policy and language that specifically address climate change, in order to increase community resilience. Within this section, two complementary sets of

strategies are identified: mitigation and adaptation. Policies within this section include targets to reduce greenhouse gas emissions and direction to establish partnerships between the community and other levels of government in order to prepare and implement comprehensive climate change adaptation strategies and initiatives.

Policies that relate to climate change can be found in other sections of Guelph's OP. Section 4 identified features, resources, and built forms that are highly valued and essential to ensuring healthy, safe, and sustainable communities. The plan labels the City's Natural Heritage System as one such feature, and maintains that its protection and enhancement is essential to ensure its long-term sustainability and resiliency in relation to the impacts and stresses associated with a changing climate. Community Energy is another valuable resource identified within this section, and there are policies related to it that aim to reduce Guelph's overall energy use.

Section 5 of Envision Guelph addresses the City's transportation system. Within this section, modes of active transportation such as walking and cycling are priorities when designing the transportation system, in order for Guelph to achieve its transportation, sustainability, community energy, and healthy community objectives.

Section 6 contains policies that provide direction to municipal services and infrastructure, including water supply and treatment, stormwater water management, and energy supply. The conservation of water and energy is identified in programs and development standards which identify that surface water and groundwater resources are to be protected, maintained, enhanced, and restored.

The City of Guelph's OP provides direction on how future development, transit routes, and infrastructure will be developed to minimize impacts on the changing climate. Clear language and measurable targets ensure that developments are evaluated through a climate lens.

6.2 Thunder Bay Official Plan

The City of Thunder Bay Official Plan was adopted by Council April 30, 2018, and approved and modified by the Province March 11, 2019. The following are a few of the principles in the Thunder Bay Official Plan that address climate change and the creation of a sustainable community:

- Maintaining a healthy ecological relationship between human activity and the environmental resources upon which it depends, including the protection and enhancement of the natural environment through wise management and efficient land use patterns;
- Managing growth in a responsible way that supports energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptations through sustainable land use and development patterns; and

- Developing local solutions to global issues to improve the resilience of the community, including meeting targets for greenhouse gas reduction to mitigate climate change while adapting to the effects of future climate change.

The Thunder Bay OP takes a holistic approach of integrating environmental, social, economic and cultural decision making as part of the land use planning process. The approach can be broken down into four parts: Environmental Sustainability, Climate Adaption, Economics, and Healthy and Safe Communities. The Environmental Sustainability Approach identifies environmental awareness as being critical to the establishment of a culture of sustainability, and acknowledges the significant role land use planning plays in defining and shaping built and natural environments. It highlights thoughtful planning as being a key way to limit the impact of human activities on the environment and aid in its protection and enhancement. The Climate Adaption Approach values adaption over mitigation, and seeks to reduce vulnerabilities and build the resilience of infrastructure and the natural environment by protecting and enhancing biodiversity, air and water quality.

Within the areas of the Thunder Bay OP that contains policies about natural heritage systems, development constraint hazards, public infrastructure, rural areas and urban settlement areas there is language that specifically addresses climate change.

7.0 ANALYSIS

The City Official Plan will build from provincial and regional sustainability and climate change policies to become a usable document that guides planning decisions through a lens that considers sustainability and climate change in every decision. The Official Plan should also take direction from the Grey County Official Plan to identify what policies work and how they can be implemented into our local context.

Currently, the Official Plan does not contain specific policies regarding climate change and possible adaptation and mitigation measures. Our new OP will include policies that directly address sustainability and climate change in the City. These policies will be clear, comprehensive, and set objectives that will guide all planning related decisions and provide a forward-looking response to the current and anticipated effects of climate change.

Key areas of focus and some initial policy considerations are included below:

Topic	Comments / Considerations
Managing Growth	Continue to encourage development in areas planned for new development. Identify key areas or nodes for intensification. Ensure policy basis to support development that considers environment, social and cultural components through design.
Agriculture	Agriculture should be sustainable, promoting local food supply, responding to demographic changes and be economically self-sufficient. A key City role in this area is to continue to plan and promote development with the City Urban Area to minimize the need for new development in Agricultural and Rural Areas. The City should support urban agriculture initiatives, such as community gardens, in new development projects as well as support farmers markets and local food on underutilized or vacant open spaces to provide opportunities for residents and visitor to shop locally.
Air Quality	Integrate clean air objectives into recommendations of other policy areas.
Employment Lands	Focus development in appropriate places so as to foster live-work lifestyle; provide sufficient land to accommodate forecasted employment. Encourage sustainable design through policies for consideration through the detailed site design process. Encourage the reuse of vacant employment buildings for future development.
Energy	Develop policies to incent on-site, distributed energy generation for homes and businesses.
Housing	Integrate public housing into transportation policy to promote economic, social and cultural development.

Integrated Waste Management	Increase opportunities to reduce consumption and increase recycling.
Sustainability	Formally adopt sustainable development as the theme of the Official Plan; put greater emphasis on energy considerations, and underscore the urgency of actions to advance sustainability.
Transportation	Combine transportation and land use planning so that the results are complete communities that are self-sustaining with integrated land-use, employment and transportation options (including active transportation).
Natural Heritage	Protect existing natural heritage features and areas, include greater consideration for natural heritage system planning and move to restoration and linking islands of green.
Water Resources	Because water resource sustainability is so fundamental to ecological, social, economic and cultural well-being water resource policy should address all four pillars from a systems perspective.
Cultural Heritage	Protect and reuse heritage buildings for local amenities and travel accommodations to reduce the use of new building materials and construction cost.

For policies to provide meaningful direction and impact, they must be easily implemented, clearly defined, and continually reevaluated. Climate change is an evolving issue that creates unique challenges for different areas. An OP should acknowledge and anticipate these changes in a global and local context.

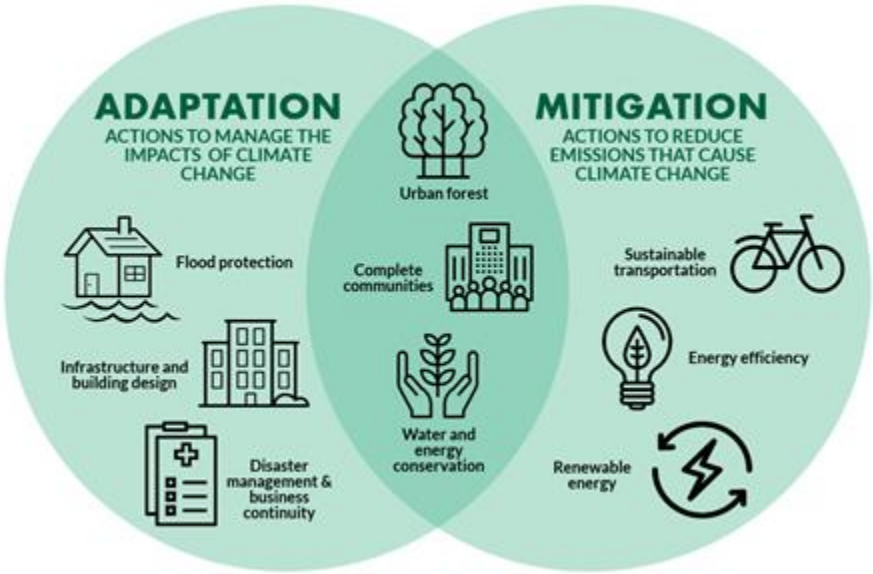


Figure 2 – Adaptation and Mitigation venn diagram from the Region’s Climate Change Action Plan

8.0 RECOMMENDATIONS

Based on the background documents reviewed, what we heard from the community, Council and City staff at engagement and visioning sessions, and the direction of the Province and County of Grey, the following is a summary of policy considerations for the City's new OP.

- 1) Review and revise policies to allow and support climate change adaptation and mitigation.
- 2) Review and revise policies to be consistent with Provincial and Regional policies for sustainability and climate change, such as the County's Climate Change Action Plan (CCAP).
- 3) Establish and implement policies and actions that contribute to achieving climate change and sustainability targets set out by the County's CCAP and City's Climate Adaptation Plan.
- 4) Establish and implement policies and actions across all areas (natural systems, transportation, infrastructure, agriculture, residential development, economic development, etc.) that will protect, enhance and create resilient communities.
- 5) Design places and buildings in a way that minimizes waste production and the consumption of energy and water to achieve an increasingly lower carbon footprint.
- 6) Support the development of safe, efficient, convenient and sustainable transportation systems, including active transportation and adaptable public transit, to support sustainable land use patterns.
- 7) Support compact, mixed-use and transit-supportive development where compatible.
- 8) Support local solutions to global issues that improve the resilience of the community, these include strategies to reduce greenhouse gas emissions and improve energy efficiency to mitigate the current effects of climate change while adapting for the future impacts.
- 9) Support planning and strategic decisions that anticipate that changes that may occur to temperature, precipitation, and other weather patterns.
- 10) Maintain a healthy ecological relationship between human activity and the environmental resources, including the protection and enhancement of the natural environment through wise management and efficient land use patterns.
- 11) Support complete communities by focusing on climate change mitigation (prepare and encourage policies that support shopping locally and exploring within the City).
- 12) Preserve existing building, especially heritage buildings, to reduce waste.
- 13) Protect slopes and hazard lands.

With the sustainability lens, objectives and policies will integrate environment, economy, society and culture to reinforce them within each sector of the Plan. Policies will address implementation through direction, encouragement and collaboration of the stakeholders. Where possible, objectives will establish targets to provide achievable performance indicators and outcomes.

9.0 NEXT STEPS

This Discussion Paper is one of the Discussion Papers released over the course of the Official Plan Update. These Discussion Papers provide an overview and background on theme-based land use planning matters to help shape future policy.

Your feedback is important to us. The City appreciates your interest and encourages your participation throughout the Official Plan Update process. To submit your comments, please visit the City's website or contact lmurphy@mhbcplan.com or acann@owensound.ca.

Following the release of these Discussion Papers, interested parties will also have opportunities to provide feedback on proposed policy directions and, a future draft of the updated Official Plan.