

Summary of Climate Change Policies in the Official Plan

Introduction

To achieve its vision to be the most livable mid-sized city in North America, Ottawa must be an energy conscious city where people can live, work and play in all future climate conditions. While climate change is a global issue, the impacts are felt at the local scale. Municipalities must now use their planning policies and rules to facilitate local action on climate change.

Applying a climate lens to the new Official Plan and supporting documents is one of the eight priority actions of the Climate Change Master Plan. The Official Plan contains the City's goals, objectives, and policies to guide growth and manage physical change to 2046. The Plan also provides direction to other city plans such as the master plans for transportation, infrastructure, solid waste, parks, and greenspace. The City's new Official Plan was adopted by Council in November of 2021, as By-law 2021-386. The Official Plan policies related to climate change are summarized below.

Climate Change as a Strategic Direction

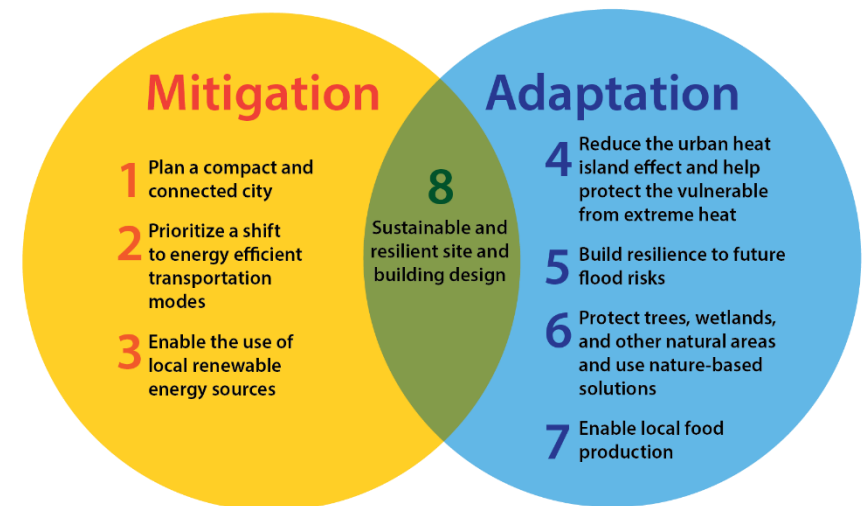
A Strategic Direction of the plan is to embed environmental, climate and health resiliency and energy into the framework of our planning policies. Energy and Climate Change is described in Section 2.2.3 as one of five 'cross cutting issues,' or themes that are essential to the achievement of a liveable city. Using a climate lens, a set of strategic goals were applied to multiple sections in the Plan using two distinct pathways:

1. Mitigation: Policies that reduce the amount of greenhouse gases the city emits; and,
2. Adaptation: Policies that prepare us for the impacts of a changing climate.

Mitigation policies

1. Plan a compact and connected city

Ottawa is projected to grow by 402,000 people by 2046, requiring 194,800 new private households. The City will accommodate the majority of this growth within its existing neighbourhoods and villages, in undeveloped 'greenfield' areas within Ottawa's urban boundary and by expanding the city's urban boundary. Promoting a compact urban



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built form and an energy efficient pattern and mix of land-uses within existing and new neighbourhoods close to hubs and corridors and within walkable 15-minute neighbourhoods will have a significant impact on reducing emissions associated with growth. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
3.1 – Designate sufficient land for growth (Growth Management)	7	Projected demand for urban expansion will be reported on as part of the Climate Change Master Plan’s annual status updates to monitor objectives on alignment with local energy distribution infrastructure, compact form, energy and emission reduction performance, and access to sustainable transportation infrastructure.	<ul style="list-style-type: none"> • Climate Change Master Plan Annual Updates
3.2 – Support Intensification (Growth Management)	3	Residential intensification shall be focused within 15-minute neighbourhoods (i.e. Hubs, Corridors, and adjacent Neighbourhood designations that are within 15-minute walk to a Hub or Corridor designation).	<ul style="list-style-type: none"> • Zoning By-law • Development Review Process
	5	Intensification opportunities on former industrial or commercial sites is permitted and encouraged where feasible to achieve intensification and sustainable and resilient design goals and targets.	<ul style="list-style-type: none"> • Development Review Process • Zoning By-law • Community Improvement Plans (CIP)
	7	Intensification will be reported on as part of the Climate Change Master Plan’s annual status updates to monitor objectives on alignment with local energy distribution infrastructure, compact form, energy and emission reduction performance, and access to sustainable infrastructure.	<ul style="list-style-type: none"> • Climate Change Master Plan Annual Updates
	10	Residential density targets are established for Hubs, Mainstreets, and protected Major Transit Station Areas to ensure intensification is supported.	<ul style="list-style-type: none"> • Local Plans • Zoning By-law • Development Review process

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3.3 – Design new neighbourhoods to be 15-minute neighbourhoods (Growth Management)	1	Greenfield areas shall be planned to be complete 15-minute neighbourhoods with compact design, a mix of uses and densities, a fully-connected street grid, and viable options for sustainable transportation modes.	<ul style="list-style-type: none"> Local Plans Zoning By-law Development Review Process
	5	New neighbourhoods shall be designed around the principles of easy pedestrian access to a rapid transit station, or frequent transit street bus route, so that first residents can have easy access to areas of the city that are already 15-minute neighbourhoods.	<ul style="list-style-type: none"> Local Plans Development Review Process
4.1.2 – Promote healthy 15-minute neighbourhoods (City-wide Policies)	16	The timing and phasing of new subdivisions shall be coordinated with the timing and provision of transit service, where feasible and where such transit is planned.	<ul style="list-style-type: none"> Development review process Zoning By-law
5.4.4 – Provide direction for new development in the Suburban Transect (Suburban Transect)	1	Greenfield development shall incorporate a planned design which optimizes the available supply, means of supplying, efficient use and conservation of energy.	<ul style="list-style-type: none"> Local Plans Plan of Subdivision
6.1.1 - Define the Hubs and set the stage for their function and change over the life of this Plan (Hubs)	2	The strategic purpose of Hubs includes reducing greenhouse gas emissions and contribute to the goals of 15-minute neighbourhoods by concentrating residential and non-residential uses, including compatible employment uses.	<ul style="list-style-type: none"> Development review process Zoning by-law
6.3.2 - Guide the evolution of neighbourhoods based on their context, location, age, maturity and needs, generally towards the model of 15-minute neighbourhoods (Neighbourhoods)	1	Innovative building forms, including adaptive reuse of existing buildings into a variety of new uses, development of existing shopping centres, and co-location of housing above City facilities will be allowed through the Planning Act and Zoning by-law. Sites that are underutilized or non-residential uses may be converted to residential provided certain criteria are met.	<ul style="list-style-type: none"> Zoning by-law Development review process

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2. Prioritize a shift to energy efficient transportation modes

The second highest source of emissions in Ottawa is transportation. In order to reduce greenhouse gas emissions, the reliance on the personal automobile needs to be replaced with active and zero emission transportation modes such as public transit, walking and cycling. The societal uptake of electric vehicles also offers a low carbon alternative for Ottawa residents. To support Ottawa's transformation to low carbon transportation options, land use patterns and mobility considerations will require frequent and efficient public transit service as well as sustainable transportation infrastructure and other investments. Transportation policies in the Official Plan are tailored by transect based on its current context and on appropriate measures to increase sustainable mode shares. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
4.1.4 – Support the shift towards sustainable modes of transportation (Mobility)	4	The Zoning By-law may determine minimum electric vehicle equipment requirements where private parking is provided for larger-scale mixed use, mid-rise and high-rise residential, office and industrial developments.	<ul style="list-style-type: none"> • Zoning By-law
	7	The City may consider allocating parts of streets for uses such as electric vehicle charging.	<ul style="list-style-type: none"> • Municipal right-of-way standards
	11	Surface parking lots should be designed to encourage the provision of electric vehicle charging spaces and dedicated car share spaces.	<ul style="list-style-type: none"> • Site Plan Control • Zoning By-law
4.1.6 – Guide the inter-urban flow of people and goods (Mobility)	5	The Transportation Master Plan (TMP) and associated plans, policies and strategies will support the use of smaller, lower-impact, low- or no-emission vehicles and delivery methods.	<ul style="list-style-type: none"> • Transportation Master Plan
4.3.2 – Designing large-scale institutions and facilities (Large Scale Institutions and Facilities)	1	Evaluation of development that is establishing or expanding an existing large-scale institution or facility may require co-locating or providing a mix of land uses at a density that is transit supportive, and sites shall be designed in a way that makes pedestrian access the most convenient option.	<ul style="list-style-type: none"> • Development review process • Zoning By-law

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5.1.2 – Prioritize walking, cycling and transit within, and to and from, the Downtown Core (Downtown Core Transect)	1, 2, 3	Within the Downtown Core Transect, new automobile-oriented land uses shall be prohibited; walking, cycling and transit shall be prioritized over motor vehicle access and movement; parking shall not be required as part of new development other than visitor parking for large-scale residential development, and new surface parking lots shall be prohibited.	<ul style="list-style-type: none"> • Development Review Process • Local Plans • Zoning By-law
5.2.2 - Prioritize walking, cycling and transit within, and to and from, the Inner Urban Transect (Inner Urban Transect)	1, 2, 3	Within the Downtown Core Transect, new automobile-oriented land uses shall be prohibited; walking, cycling and transit shall be over motor vehicle access and movement; and vehicle parking may only be required for large-scale developments, only to offset sudden large increases in parking demand.	<ul style="list-style-type: none"> • Development Review Process • Local Plans • Zoning By-law
5.3.2 – Enhance mobility options and street connectivity in the Outer Urban Transect (Outer Urban Transect)	1	Within the Outer Urban Transect, opportunities will be taken as they arise to improve the convenience and level of service for walking, cycling, and public transit modes, including introducing mid-block connections to and from residential areas, and reducing automobile trips to the inner transects by establishing park-and-ride facilities and pedestrian connectivity around transit stations.	<ul style="list-style-type: none"> • Development Review Process • Local Plans • Transportation/Active Transportation Master Plan
5.3.3 – Provide direction to the hubs and corridors located within the Outer Urban Transect (Outer Urban Transect)	2	Minimum parking requirements in Outer Urban Hubs may be reduced or eliminated.	<ul style="list-style-type: none"> • Zoning By-law • Development Review Process
5.4.2 – Enhance mobility options and street connectivity in the Suburban Transect (Suburban Transect)	1	In the Suburban Transect, the City shall take opportunities to support the rapid transit system by supporting higher-density mixed-use urban environments close to rapid transit stations and supporting pedestrian shortcuts around rapid transit stations.	<ul style="list-style-type: none"> • Development Review Process • Zoning By-law
6.1.1 – Define hubs and set the stage for their function and change over the life of this plan (Hubs)	3 & 4	Development with a Hub shall direct the highest density close to the transit stops; shall establish safe, direct and easy-to-follow public routes for pedestrians and cyclists; shall create a public realm that prioritizes the needs of pedestrians, cyclists, transit	<ul style="list-style-type: none"> • Development Review Process • Zoning By-law

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		users; and shall be subject to motor vehicle parking regulations that support the prioritization of transit, walking and cycling.	
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3. Enable the use of local renewable energy sources

Only 5% of the city’s total energy consumption is currently generated or supplied from local, renewable sources (2017). Ottawa must transition quickly to the use of local renewable energy sources over fossil fuels in order to achieve its established emission targets. Locally generated renewable energy will play an increasingly important role to support current and future housing, transportation, and employment, protect long-term energy security and stimulate the local economy. The applicable policies are:

Section	Policy	Policy intent	Implementation tool
4.6.4 – Encourage innovative design practice and technologies in site planning and building design (Urban Design)	2	New developments will consider opportunities to conserve energy, reduce peak demand and provide resilience to power disruptions as part of new development. Local integrated energy solutions that incorporate renewable energy such as district energy in high-thermal density areas, geothermal and waste heat energy capturing systems and energy storage are supported.	<ul style="list-style-type: none"> • Site Plan • Subdivision
4.6.4 – Encourage innovative design practices and technologies in site planning and building design (Urban Design)	3	The installation of photovoltaic panels on expansive roof structures, such as large-format retail buildings and large-scale institutions and facilities are encouraged. Alternative rooftop such as greenhouses, green roofs or rooftop gardens are also permitted.	<ul style="list-style-type: none"> • Site Plan
4.11 – Generally Permitted Uses (City-wide policies)	3	Renewable energy generation facilities that are subject to applicable provincial approvals and zoning permissions will be generally permitted as a principal use within Rural Countryside, Greenbelt Rural and Greenbelt Facility, Natural Environment Area sub-designation, and permitted as subordinate uses in the Agricultural Resource Area and Rural Industrial and Logistics designations	<ul style="list-style-type: none"> • Renewable Energy Approval process (provincial) • Zoning By-law

Adaptation policies

4. Reduce the urban heat island effect and help protect the vulnerable from extreme heat

Local climate projection studies show that in the coming decades, Ottawa will be much warmer year-round and could have four times as many very hot days (over 30°C) by the 2050s as during the 2010s. The design of the built and natural environment impacts how temperatures are felt. In built-up areas with limited greenspace temperatures can increase by several degrees in the day due to the urban heat island effect, and by as much as 12°C at night. The Official Plan includes policies to mitigate the impacts of heat and protecting those most vulnerable. Policies that refer to trees and nature-based heat mitigation are also addressed in Section 6 of this document. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
4.1.3 – Support growth management and a greener and more resilient city (Mobility)	6	New streets and reconstructed streets shall, wherever possible, include street trees.	<ul style="list-style-type: none"> • Transportation Master Plan • Municipal right-of-way standards • Plan of Subdivision
4.4.6 – Design parks that contribute to quality of life and respond to climate change (Parks and Recreation Facilities)	1	<p>Parks have a tree canopy target of 40% and shall preserve existing mature trees where possible. New park space should be co-located with an existing or proposed park or another element of urban or rural greenspace, where possible.</p> <p>Cooling amenities such as splash pads, wading pools, shade trees and shade structures should be included in park design where possible.</p>	<ul style="list-style-type: none"> • Parks Master Plan • Park Development Manual

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4.6.1 - Promote design excellence in Design Priority Areas (Urban Design)	5	Development and capital projects within Design Priority Areas shall consider four season comfort, enjoyment, pedestrian amenities, beauty and interest and will mitigate micro-climate impacts, including in the winter and during extreme heat conditions in the summer, on public and private amenity spaces e.g. strategic tree planting, shade structures, setbacks, and providing south facing exposures where feasible.	<ul style="list-style-type: none"> • Design Guidelines • Site Plan
4.6.6 - Enable the sensitive integration of new development of low-rise, mid-rise and high-rise buildings to ensure Ottawa meets its intensification targets while considering livability for all (Urban Design)	4	Amenity areas shall provide protection from heat, wind, extreme weather, noise and air pollution. Indoor amenity spaces shall be multifunctional, include some access to natural light, and be designed to support residents during extreme heat events, power outages or other emergencies.	<ul style="list-style-type: none"> • Site Plan
	7	Mid-rise buildings should provide sufficient setbacks and step backs to provide landscaping and adequate space for tree planting, and minimize microclimate impacts on the public realm and amenity areas.	<ul style="list-style-type: none"> • Zoning By-law • Development Review Process
	8	Space at grade should be provided for soft landscaping and trees for high-rise buildings.	<ul style="list-style-type: none"> • Zoning By-law • Development Review Process
5.2.1 – Enhance or establish an urban pattern of built form, site design and mix of uses (Inner Urban Transect)	5	In the Inner Urban Area, maintaining or enhancing front yard space for trees and intensive landscaping, is given priority over private approaches.	<ul style="list-style-type: none"> • Zoning By-law • Site Plan • Private Approach By-law
5.1.1 – Maintain and enhance an urban pattern of built form, site design, and mix of uses (Downtown Core Transect)	5	Particular measures to ensure climate resilience in the Downtown Core Transect should consider reducing urban heat island effect through cool or green roofs, light coloured reflective materials, retention of mature trees, tree planting, and other	<ul style="list-style-type: none"> • Development review process • Zoning By-law

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		urban greening; shaded sidewalks, streets, transit stops, bike lanes and paths, public realm; high-quality and intensive urban greenspace, such as parks, shaded public realm and access to cooling amenities, and on-site stormwater management to mitigate increased imperviousness.	<ul style="list-style-type: none"> • Tree Protection By-law
	6	In relation to parking spaces, maintaining or enhancing unbroken curb space for trees and intensive landscaping, is given priority over private approaches.	
10.3 – Build resiliency to the impacts of extreme heat (Protection of Health and Safety)	1 & 2	Trees will be retained and planted to provide shade and cooling by applying tree canopy policies in this plan; prioritizing trees in the design, and operation of parks and the pedestrian and cycling networks, and at transit stops and stations for users wherever possible; and encouraging maintenance and growth of the urban tree canopy on residential, commercial and private property will be encouraged.	<ul style="list-style-type: none"> • Municipal right-of-way standards • Development review process • Tree Protection By-law
	2	Shade structures shall be considered for transit stops where the planting of trees is not feasible to provide shelter from the sun and ensure comfort and transit mobility during extreme heat conditions.	<ul style="list-style-type: none"> • Municipal right-of-way standards • Site Plan • Plan of Subdivision
	3	Office buildings, commercial shopping centres, large-format retailers, industrial uses, and large-scale institutions and facilities shall incorporate heat mitigation measures.	<ul style="list-style-type: none"> • Site Plan
11.1 – Set the stage for Site Plan Control requirements and provisions (Implementation)	3	Heat mitigation measures are included in High-performance Development Standard (HPDS) such as high reflective materials, shade trees, green and cool roofs to reduce ambient surface temperature to minimize the urban heat island effect.	<ul style="list-style-type: none"> • Site Plan

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5. Build resilience to future flood risks

Local climate projections indicate that Ottawa will see an increase in the total amount and intensity of rainfall in the coming decades. Flooding occurs when sewer systems are overwhelmed in heavy rainfall or when water overflows creek and riverbanks. Mitigating the risk of floods is important to protect health and safety, reduce damage to property and infrastructure, and protect the health of our watercourses. The Official Plan can build resilience to future flood risks through policies that manage stormwater and mitigate impacts from riverine flooding. Policies that support low impact development – i.e., practices which help manage stormwater and protect water quality - are also referred to here. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
4.1.4 – Support the shift towards sustainable modes of transportation (Mobility)	6	Parts of the street and road network right-of-way may be repurposed and dedicated to public spaces including street trees or low impact development (LID) stormwater features if it contributes to the implementation of land-use objectives of this Plan, such as reducing total imperviousness of the street and road network.	<ul style="list-style-type: none"> • Municipal right-of-way standards • Local Plans • Plan of Subdivision
4.1.4 – Support the shift towards sustainable modes of transportation (Mobility)	11	Surface parking lots should be designed to include regular spacing of tree islands and incorporate low impact development measures for stormwater management where feasible.	<ul style="list-style-type: none"> • Zoning By-law • Site Plan
4.7.1 – Provide adequate, cost-effective drinking water, wastewater and stormwater infrastructure, and assist in meeting growth targets in the urban area (Infrastructure)	2	Infrastructure will be required to be durable, adaptive, and resilient to the current climate and future climate, including extreme weather events.	<ul style="list-style-type: none"> • Infrastructure Master Plan • Local Plans • Plan of Subdivision • Site Plan
	3	Local plans will identify requirements for Low Impact Development and implementation plans in order to mitigate the impacts of development and climate change on drainage systems.	<ul style="list-style-type: none"> • Local Plans

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	6	As part of a complete application, all redevelopment applications will be required to implement site grading, building and servicing design measured to protect new development from urban flooding.	<ul style="list-style-type: none"> • Development review process
10.1.1 – Natural hazards: Flooding Hazards and Erosion Hazards (Protection of Health and Safety)	1-4	Development and site alteration shall not be permitted in the 1 in 100-year floodplain or in an erosion hazard area, or within areas that would be rendered inaccessible to people and vehicles during times of flooding hazards, with limited exceptions where specific criteria are met.	<ul style="list-style-type: none"> • Zoning By-law • Conservation Authorities Act • Flood Plain Studies
10.1.2 – Two-Zone Flood Plain Areas and Areas of Reduced Flood Risk (Protection of Health and Safety)	1-6	Development and site alteration may be permitted in the flood fringe and areas of reduced flood risk (areas with flood protection control structures), where the risk to public safety is minor and can be mitigated through floodproofing standards. No new lot creation and no increase in permitted dwelling units on a lot are permitted.	<ul style="list-style-type: none"> • Zoning By-law • Conservation Authorities Act
10.1.3 – Areas Vulnerable to Flooding under Climate Change (Protection of Health and Safety)	1-3	The Climate Change Flood Vulnerable Area is the area between the 1 in 100-year flood plain and the climate change scenario flood limit (1 in 350-year flood plain). Measures to protect people and property from the increased risk of extreme flooding events will be followed, including working with conservation authorities to identify climate change flood vulnerable areas in publicly available maps, evaluating flood risks in climate vulnerable areas through new secondary plan and area-specific policy areas, and evaluating flood risk and applying mitigation measures through site plan control for vulnerable areas.	<ul style="list-style-type: none"> • Local Plans • Flood Plain Studies • Site Plan Control and Plan of Subdivision

6. Protect and enhance tree canopy and protect wetlands and other natural areas and use nature-based solutions

Nature builds resilience to the impacts of climate change through flood protection, heat mitigation, stormwater management, biodiversity and improved mental, social and physical health. The applicable policies are:

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Section	Policy #	Policy intent	Implementation tool
3.1 – Designate Sufficient Lands for Growth	5	When urban expansion is considered, lands designated as part of a natural heritage system are excluded, while maintaining the possibility of minor, site-specific adjustments.	<ul style="list-style-type: none"> • Official Plan Comprehensive Review • Local Plans
4.1.3 – Support growth management and a greener and more resilient City (Mobility)	6	New and reconstructed streets shall include street trees wherever possible.	<ul style="list-style-type: none"> • Plan of Subdivision • Transportation Master Plan • Municipal right-of-way standards
4.1.4 – Support the shift towards sustainable modes of transportation (Mobility)	11	Reduce total impervious area of parking lots - surface parking will be designed to incorporate regular spacing of tree islands that support mature shade trees where feasible.	<ul style="list-style-type: none"> • Zoning By-law • Site Plan
4.4.6 – Design parks that contribute to quality of life and respond to climate change (Parks and Recreation Facilities)	1	New parks should be designed to preserve existing mature trees where possible and target a 40 per cent tree canopy cover target.	<ul style="list-style-type: none"> • Park Development Manual • Local Plans • Development review process • Tree-Protection By-law
4.6.6 – Enable the sensitive integration of new development of low-rise, mid-rise and high-rise buildings to ensure Ottawa meets its intensification targets while considering livability for all (Urban Design)	6, 7, & 8	Designs should provide space for soft landscaping and trees for low rise, mid-rise and high-rise developments.	<ul style="list-style-type: none"> • Site Plan
4.8.1 Protect the City’s natural environment through identification of a Natural	1 & 2	The Natural Heritage System (core natural areas and natural linkage areas) and Natural Heritage Features are subject to a higher standard of protection, and the City shall seek to	<ul style="list-style-type: none"> • Development review process (including

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Heritage System, natural heritage features, and related policies (Natural Heritage)		improve the long-term integrity and connectivity of the System through land use planning, development processes, acquisition and conservation of land.	Environmental Impact Studies) <ul style="list-style-type: none"> • Site Alteration By-law • Tree Protection By-law
	5	The City shall take a “no net loss approach” with respect to wetlands deemed not provincially significant and forest cover outside the urban area and designated villages. No net loss mechanisms include land use planning, development processes, acquisition and conservation of land, and support for voluntary, private land conservation and stewardship.	
	7	The City will manage City-owned forests and natural lands to maximize carbon storage and sequestration in vegetation and soils where feasible.	<ul style="list-style-type: none"> • Urban Forest Management Plan • Forested Areas Maintenance Strategy
4.8.2 - Provide residents with equitable access to an urban forest canopy (Natural Heritage)	1	The City shall pursue an urban forest canopy cover target of 40% with equity as a guiding principle, in part through the development of sub-targets based on evolving form, climate resiliency, and environmental factors.	<ul style="list-style-type: none"> • Development review process • Committee of Adjustment Process • Tree Protection By-law • Park Development Manual
	2	Growth, development and intensification shall maintain the urban forest and its ecosystem services by preserving space and soil volumes for mature healthy trees through site plan control or community planning permits, committee of adjustment decisions, and planning and development review processes.	
	4	The City shall consider trees to be an important element in infrastructure design, good urban design, good park design, the design of the City’s active mobility network, and the design of local connections to the City’s transit network.	

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4.8.3 - Provide residents with equitable access to an inclusive urban greenspace network (Natural Heritage)	1	The City shall protect all types of greenspaces for their ecosystem services and their contributions to healthy, active communities.	<ul style="list-style-type: none"> • Urban Forest and Greenspace Master Plan • Local Plans • Development review process
	2	The City shall seek to provide all urban residents with access to high quality greenspace including a public greenspace providing space for passive or active recreation within a 5-minute safe walking distance, two green public spaces within a 10-minute safe walking distance; and a publicly owned natural area within a 15-minute trip by transit.	
4.9.1 – Protect, improve or restore the quality and quantity of surface water features and groundwater features (Water Resources)	1	Subwatershed and watershed planning will guide growth, intensification and development for the long-term protection of the environment.	<ul style="list-style-type: none"> • Local Plans • Master Servicing Studies
	4	Consideration of future climate conditions shall be made in the development of subwatershed plans.	
4.9.3 – Restrict or limit development and site alteration near surface water features (Water Resources)	1 & 3	Watershed, subwatershed or environmental management plans should establish the minimum setback of development limits from surface water features, and lands within the minimum setback shall remain in a natural vegetated condition to protect the ecological function of surface water features from adjacent land-use impacts.	<ul style="list-style-type: none"> • Watershed, Subwatershed, and Environmental Management Plan • Development review process
4.9.4 – Restrict or limit development and site alteration near groundwater features (Water Resources)	1	The City shall protect groundwater features that have the potential to be used as drinking water or where groundwater contributes to a surface water feature.	<ul style="list-style-type: none"> • Watershed, Subwatershed, and Environmental Management Plan
4.10.3 – Make trees an important component of a school’s outdoor space (School Facilities)	1-2	Incorporate existing trees and new tree planting in school site design. Trees should be incorporated into functional spaces (e.g. natural play areas or outdoor classrooms) on site or	<ul style="list-style-type: none"> • Local Plans • Plan of Subdivision • Site Plan

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		through a pathway connection to adjacent sites where appropriate and feasible.	<ul style="list-style-type: none"> • Tree Protection By-law
5.6.4.1 - Protect the Natural Heritage System and Natural Heritage Features (Natural Heritage Overlays)	3-5	The City shall protect natural heritage features for their natural character and ecosystem services. Development or site alteration proposed in or adjacent to natural heritage features shall be supported by an environmental impact study prepared in accordance with the City's guidelines. Development and site alteration shall have no negative impact on the Natural Heritage System and Natural Heritage Features.	<ul style="list-style-type: none"> • Development review process (including Environmental Impact Studies) • Site Alteration By-law • Tree Protection By-law
7.3 – Protect the ecosystem services of natural features and recognize their role in building resilience to future climate conditions (Greenspace)	1-3	Prohibit development and site alteration in Urban Natural Features. Protect Significant Wetlands, Natural Environment Areas and Conservation Areas.	<ul style="list-style-type: none"> • Local Plans • Zoning By-law • Development review process (including Environmental Impact Studies) • Site Alteration By-law • Tree Protection By-law
8.1 – Ensure resilience by protecting lands in the Greenbelt Transect area (Greenbelt Designations)	1-3	Where greenbelt lands are not subject to other policies established under federal or provincial legislation or regulations, the policies for Natural Environment Areas shall apply.	<ul style="list-style-type: none"> • Development review process
10.1.5 Natural Hazards: Wildland fire hazard (Protection of Health and Safety)	1	Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire, unless that development conforms to Provincial wildland fire assessment and mitigation standards.	<ul style="list-style-type: none"> • Development review process • Wildland Fire Risk Assessment (to be completed)

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7. Enable sustainable local food production

Climate change will impact global food production through rising temperatures, shifting precipitation patterns, risk of drought and extreme weather. Global climate impacts can affect the availability and price of food in Ottawa as supply chains are disrupted. Ottawa is fortunate to have a robust agricultural sector and can enhance food security and build resilience to these global impacts by protecting agricultural lands, supporting the agricultural economy, supporting community gardens and enabling produce to be grown, processed and distributed across the City. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
4.11 – Generally Permitted Uses (City-wide policies)	2	Land uses related to food production, processing, distribution, storage and farmer’s markets are supported throughout the city. In urban areas and villages, community gardens and indoor and outdoor crop production which does not have an adverse affect on surrounding areas, are permitted.	<ul style="list-style-type: none"> • Zoning By-law
5.5.1 – Recognize a rural pattern of built form and site design (Greenbelt and Rural Transect Areas)	3	States that nothing in this Plan is intended, or may be applied, to restrict a normal farm practice from being carried on as part of an agricultural operation on lands designated as Agricultural Resource Area or Rural Countryside.	<ul style="list-style-type: none"> • Development review process
9.1.1 – Protect farmland for regional food security (Rural Designations)	1, 2 & 3	Protects Agricultural Resource Areas from development and prohibits the potential for adverse impacts to any adjacent agricultural land and operations, or mitigation to the extent feasible, if re-designation on adjacent land occurs.	<ul style="list-style-type: none"> • Zoning By-law • Development review process
9.1.2 – Support diversification of farming operations to increase local supply of goods and services in the rural regional economy (Rural Designations)	1 & 2	Permits a variety of types, and intensities of agricultural uses and normal farm practices on lands designated as Agricultural Resource Area. Permits on-farm diversified uses and agriculture-related uses given that they are compatible with and do not hinder surrounding agricultural operations.	<ul style="list-style-type: none"> • Zoning By-law • Development review process
9.1.3 – Protect farmland from uses that would impede	1-7	Limiting the size and type of residential uses in Agricultural Resource Areas and protecting farmland operations by providing	<ul style="list-style-type: none"> • Development review process

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productive farming operations (Rural Designations)		guidance for when lot line adjustments, lot creation, and applications for consent to sever should be considered.	<ul style="list-style-type: none"> Committee of Adjustment
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Policies that support both Mitigation *and* Adaptation

8. Apply sustainable and resilient site and building design as part of new construction

Buildings are the largest energy consumer in Ottawa and account for the largest share of emissions. Site design influences healthy communities, transportation choices and resilience to climate change. Sustainable and resilient design refers to the principles in site and building design to protect against the depletion of critical resources like energy, water, land, and raw materials, reduce greenhouse gas emissions, prevent environmental degradation throughout its life cycle, and create built environments that are livable and comfortable while being safe and resilient to the impacts of a changing climate. The applicable policies are:

Section	Policy #	Policy intent	Implementation tool
4.3.2 – Designing large-scale institutions and facilities (Large-scale Institutions and facilities)	1	Large buildings are recognized as priority locations in support of their rooftop photovoltaic electricity potential to generate local renewable energy while reducing greenhouse gas emissions.	<ul style="list-style-type: none"> Site Plan Control
4.6.4 – Encourage innovative design practices and technologies in site planning and building design (Urban Design)	1	The High Performance Development Standard will support innovative, sustainable and resilient design practices and technologies. The standard will address matters of exterior sustainable design and will align urban design with climate change mitigation and adaptation goals and objectives.	<ul style="list-style-type: none"> Site Plan Draft Plan of Subdivision Local Plans High Performance Development Standard (not yet in effect)
4.6.6 - Enable the sensitive development of low-rise, mid-rise and high-rise buildings to ensure Ottawa meets its intensification targets while	4	Amenity areas shall be designed to serve as multi-functional spaces that support residents during extreme heat events, power outages or other emergencies.	<ul style="list-style-type: none"> Zoning By-law

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considering livability for all (Urban Design)			
5.4.4 – Provide direction for new development in the Suburban Transect (Suburban Transect)	1	Greenfield development in the Suburban Transect will contribute to the evolution toward 15-minute neighbourhoods by incorporating a planned design which optimizes the available supply, and means of supplying, efficient use and conservation of energy.	<ul style="list-style-type: none"> • Local Plans • Plan of Subdivision • Zoning By-law
5.1.1 Maintain and enhance an urban pattern of built form, site design, and mix of uses (Downtown Core Transect)	5	To offset the dense built environment in the Downtown Core Transect, measures to ensure climate resilience shall be required, including cool or green roofs, light coloured reflective materials, retention of mature trees, tree planting, and other urban greening; shaded sidewalks, streets, transit stops, bike lanes and paths, urban greenspace, shaded public realm, and innovative stormwater management approaches.	<ul style="list-style-type: none"> • Site Plan • Zoning By-law • Tree Protection By-law
11.1 – Set the stage for Site Plan Control requirements and provisions (Implementation)	3	The City may adopt a High-Performance Development Standard to achieve environmentally sustainable development and to secure sustainable and resilient design features in development, such as measures: to encourage cycling and walking, to minimize the urban heat island, for sustainable active and passive design, for renewable energy production, low impact development, to promote trees, and others.	<ul style="list-style-type: none"> • Site Plan • Plan of Subdivision • High Performance Development Standard
11.2 – Create the framework for a Community Planning Permit System (Implementation)	4	The Community Planning Permit system is a tool under the Planning Act which combines multiple approval processes into a streamlined process. Conditions that may be required as part of a development agreement may include sustainable and resilient design features.	<ul style="list-style-type: none"> • Community Planning Permit (not yet in effect)

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11.3 – Establish direction for Community Improvement Plans (Implementation)	2	Community Improvement Plans are a tool under the Planning Act to target a designated area in order to fulfil required improvements. The designation of community improvement project areas may be based on opportunities to renovate and retrofit existing older buildings or climate resiliency improvements, and other environmental, energy efficiency, or climate resiliency reason.	<ul style="list-style-type: none"> • Brownfields Community Improvement Plan (existing) • Deep energy retrofit Community Improvement Plan (not yet in effect)
	4	Community improvement plans may be prepared and adopted to facilitate: the improvement of energy and reduction of greenhouse gas emissions measures; and climate impact resiliency by reducing the urban heat island effect, improving access to shade and other cooling amenities, and reducing flood risks and managing increased stormwater runoff.	
11.8 – Provide direction for pre-application consultations and required prescribed information (Implementation)	3	The Official Plan sets out the plans and studies that are required in support of new development. Studies related to climate change include the new Energy Modeling Report for Site Plans and the Community Energy Plan for new communities.	<ul style="list-style-type: none"> • Development Application Study Policy (requirement for these plans not in effect)
12.2 – Establish direction for the creation of Secondary Plans in Future Neighbourhoods (Local Plans)	1	A Community Energy Plan is required to evaluate the energy performance of proposed development within the Future Neighbourhoods Overlay, unless it can be demonstrated that the design of the proposed development complies or is consistent with the High-performance Standard.	<ul style="list-style-type: none"> • Local Plans • High Performance Development Standard (not yet in effect)