

Area of Focus 3 - Transforming Buildings and Development

Area of Focus 3	Transforming Buildings and Development Workplan
Purpose of this Workplan	The Transforming Buildings and Development Workplan has been developed based on details: • provided during the community engagement; • compiled or recommended from other municipalities, organizations, committees and others specializing in climate change actions; • approved by Council; and/or • recommended by City staff. The purpose of this workplan is to set an initial direction for collaborative discussion, action and measuring progress. How the workplan is operationalized will be determined in early 2022 through additional consultation with Key Community Stakeholders and Partners.
Climate Change Expected Results	This workplan has been designed to make progress toward the following expected results: Walkable, Complete Neighbourhoods Increased Active Transportation and Transit More Zero Emission Vehicles More Net-zero Buildings Lower Carbon Construction More Carbon Capture More Resilient Buildings and Infrastructure
Why Does this Matter?	London's community GHG emissions inventory shows that buildings are a significant contributor to community emissions. Emissions from heating and powering buildings and building systems (including hot water) have represented around 1,160,000 tonnes of GHG emissions per year or about 43% of local GHG generated in recent years. Given the fact that most buildings have decades-long lifespans, addressing their emissions and the emissions from new buildings will be critical to achieving net-zero GHG emissions. The way in which London grows (locations, density and types of development) also has significant impacts on the availability and feasibility of different modes of transportation to satisfy the needs of all residents, how much infrastructure is needed, how energy is generated and used, whether zero emission vehicles are

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	accommodated, the space available for capturing carbon in forests, natural and urban areas, and whether communities are resilient in the face of the impacts of climate change on weather. Many of the construction materials used in new development and infrastructure, such as asphalt, concrete, and steel, also have large GHG upstream emissions. Therefore, changes in the types and methods of construction, building reuse and refurbishment and the use and management of recyclable building materials is important. In addition to emissions data and leading knowledge pointing to buildings and development being an important area to address, engagement work completed to inform the CEAP revealed that buildings and development was one of the most mentioned areas of concern where residents would like to see more action taken. Outside of London, other communities wrestle with the same issues around building energy use and emissions and the impacts and opportunities in development. This emphasizes the importance of coordinating with neighbouring communities to address shared priorities in this area.
Background – How did we get here?	Growth management in Ontario is governed by the Provincial Policy Statements (PPS) that are periodically updated. Until the recent (2020) PPS update, limited climate change considerations were explicitly included within growth management direction, however the PPSs have had regard for promoting sustainable growth, active transportation and intensification (among other things). London had pursued development in a manner consistent with most municipalities in Ontario prior to the acceptance of the London Plan (2016), which emphasizes a city structure and growth framework focusing on infill and intensification as a means to support the creation of complete communities, preserve more natural and agricultural lands and increase the efficiency of and reduce the tax burden from public infrastructure. Work completed in several other municipalities on pathways to net-zero carbon all include significant workplans to address existing and new buildings' emissions. Many of these scenarios have been analyzed to determine that significant up-front costs are required in the next decade to realize far more in savings over the following decades due mostly to the expected impacts of climate change on local weather and the escalating cost of carbon.

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What are some recent actions?	• The London Plan sets out clear direction for building inwards and upwards around a public transit system based on nodes (i.e., clusters of major mobility and urban activity), creating mixed-use complete communities, supporting active and public transportation, and the protection and enhancement of the natural heritage system. • Community Improvement Plans make funds available for energy efficiency retrofits in certain areas of London where they apply. • Work on the Masonville Secondary Plan embeds the principles of climate friendly development at the secondary plan level. • West 5, a Sifton Properties development, is one of Canada's first and largest net-zero communities and has blazed a trail for more similar developments.
Responsible City Service Area(s)	• Led by Planning and Economic Development • Supported by Environment and Infrastructure, Finance Supports
Key Community Partners and Stakeholders	• Provincial and Federal Governments • London Development Institute (LDI) and developers not represented by LDI • London Home Builders Association (LHBA) and builders and contractors not represented by LHBA • London District Construction Association • Local consultants and engineers supporting development and construction • London Chamber of Commerce • London Economic Development Corporation • Energy Utilities (London Hydro, Enbridge Gas, Enwave, Hydro One) • Community Groups (e.g., London Environmental Network, Urban League of London) • Conservation Authorities
Key Actions (and Milestones)	1. Advancing Partnerships for Action with London's Development Industry (Timeline: 2022 – 2025) a. Establish a shared understanding of the challenge and shared commitment from the City of London and the development and

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	building industries to address climate change b. Collectively compile a list of hurdles and/or roadblocks preventing (or perceived to be preventing) more energy efficient and resilient development c. Identify shared actions that will assist the development industry in overcoming existing and perceived hurdles and/or roadblocks preventing more energy efficient and resilient development d. Establish objectives, metrics and timelines that will result in reduced GHG emissions, reduced carbon intensity of materials, and improved resilience to local climate change impacts from new development and buildings 2. Addressing New Developments (Timeline: 2022 – 2025) a. Reduce or eliminate parking minimums within the Zoning by-law b. Review and provide options to reduce, restrict, or phase out fossil fuel as the primary source of heat in all new buildings in London as of 2030 including a review of other municipalities, applicable legislation and jurisdiction, implementation benefit, and other factors c. Incorporate the detailed review of intensification targets, permitted heights, and other measures of intensity in relation to growth trends and climate change mitigation and adaptation as part of the 5-year comprehensive Official Plan review d. Review and incorporate climate change considerations into development application reviews, such as development-specific transportation demand management and energy management, including presentation of proposed development alignment with London’s climate action goals and outcomes in staff reports e. Revise the Design Specifications and Requirements Manual to ensure climate change considerations are included f. Integrate climate change considerations into the Development Charges Background Study and associated growth infrastructure master plans

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	g. Review options to encourage or mandate EV charging in new development h. Review and strengthen secure bike parking and storage in new development within the Zoning By-law i. Review and strengthen requirements for pedestrian, transit, and bike network access within the Zoning By-law j. Assist London Hydro as they continue to actively support GHG reduction projects such as new Net Zero communities 3. Addressing Existing Buildings (Timeline: 2022 – 2025) a. Review opportunities for a targeted use of local improvement charges (LICs), Community Improvement Plans (CIPs) or other methods for funding major energy retrofits and climate adaptation measures for multi-family residential buildings b. Review and provide options for purpose-developed CIPs for energy upgrades for buildings c. Advocate for Federal and Provincial incentives for building retrofits d. Encourage uptake of energy utility conservation programs and incentives for building energy retrofits e. Review and provide options to establish energy efficiency standards for residential rental properties including a municipal scan of applicable property related by-laws, applicable legislation and jurisdiction, implementation benefit, and other factors f. Review and provide options to establish temperature control requirements in property related by-laws to address extreme weather conditions including a review of other municipalities, municipal scan of applicable property related by-laws, applicable legislation and jurisdiction, implementation benefit, and other factors g. Review and provide options to establish requirements for “shelter-in-place” emergency power for high-rise, multi-unit

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	residential buildings including a municipal scan of applicable legislation and jurisdiction, implementation benefit, and other factors h. Assist London Hydro as they continue to invest in local electricity distribution infrastructure to reduce power system losses including rebuilding 4kV infrastructure using modern 27.6kV technology
Examples of Measuring Progress	Walkable, Complete Neighbourhoods • % of development applications reviewed with climate lens • % of Londoners living within a 15 minute walk/roll of their daily needs Increased Active Transportation and Transit • % of new developments incorporating secure bike parking and storage • Number of parking spaces per unit for new development More Zero Emission Vehicles • % of applicable building permits including EV charging stations • Number of EV charging stations installed on private property city-wide More Net-zero Buildings • Number of multi-family buildings utilizing LIC/Property Assessed Clean Energy (PACE) or other retrofit program(s) • Average GHG emissions per person from all single-family residential buildings • Average GHG emissions per unit floor area from all commercial and institutional buildings • Average GHG emissions per unit floor area from all <u>new</u> residential, commercial, and institutional buildings • % of new construction built to net-zero (or equivalent) standards • % of new construction built to net-zero ready standards • % of new construction built with one or more low-or-zero carbon solutions (e.g., heat pumps, solar panels, etc). Lower Carbon Construction • % of new multi-family residential and commercial buildings constructed with mass timber • % of new multi-family residential and commercial buildings constructed with low-carbon concrete

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	More Carbon Capture • Density of development (units/Ha.) for greenfield development • % of new units built within the built area boundary More Resilient Buildings and Infrastructure • % of high-rise, multi-unit residential buildings with “shelter in place” emergency power • % of high-rise, multi-unit residential buildings with minimum cooling standard adopted These measures are intended to evolve through the consultation and implementation process to ensure they are adding value to the progress of the CEAP.
Resources	CEAP Supporting Documents The London Plan Towards Low Carbon Communities: Creating Municipal Green Development Standards (Clean Air Partnership and Federation of Canadian Municipalities) Briefing Note - Municipal Green Development Standards (Clean Air Partnership)