Reducing Emissions Through Interventions in Development Applications: A Community Guide



ECOLOGY OTTAWA ECOLOGIE OTTAWA

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Overview

Our Climate Equity program, a partnership of City for All Women Initiative and Ecology Ottawa, seeks to help Ottawa residents and community organizations, especially equity deserving communities, ask questions when engaging with a development application, in support of emissions reduction, equity, and community wellbeing. Our goal is to empower these residents to make informed interventions that support emissions reduction in new development applications in their neighbourhoods. The checklist has two components. The first component is designed as a checklist for civic engagement. It is an easy tool to bring to a public consultation, committee meeting, or site visit to check out a new development. The second component (the one currently in hand) is a resource guide that acts as a companion to the checklist and provides additional context and research. You can find the checklist here. Both are divided into four sections: Structure and Design, Neighbourhood Integration, Parking and Mobility, and Procedural Considerations.

If you have any feedback on either document, please email us at info@ecologyottawa.ca.

Goals

This document serves two main purposes. First, it is a reference for advocacy and intervention in development applications. Second, it can be used as an advanced learning tool for advocacy groups, city staff, and seasoned advocates across Ottawa and beyond. They can use it to advocate for their interests, equity and climate considerations in urban planning, to inform public consultation processes, and to support policy recommendations that integrate these values into development application and planning processes.

Core Thesis

Ottawa has committed to building 151,000 new housing units by 2031 and Ottawa's population is projected to grow by 530,000 people by 2051. With 41% of the city's greenhouse gas emissions coming from buildings, every new development is an opportunity. To meet these growing needs, we need to plan our housing accordingly so that it not only reduces its greenhouse gas emissions, but it is also sustainable and equitable. This community guide is designed to help residents and advocates ask the right questions of any new development.

How to Use This Guide

Items are organized by theme. Each item includes a question to ask of the application and a rationale explaining why it matters for emissions reductions and community equity. The rationale provides supporting context that can be used to strengthen written submissions or verbal delegations. In addition, a Resources & Relevant Reads section at the end of the document provides links to key planning documents, City of Ottawa policies, and research references organized by section, for those who wish to explore further. For guidance on how to find and read a development application, submit comments, or speak at committee, see our Climate Equity Toolkit.

Structure and Design

Good building design needs to take into consideration the social implications of the design. Every decision about housing supply, infrastructure capacity, neighbourhood character, unit mix, energy efficiency, cost, equity, accessibility, and adaptability for future developments, shapes what burden the building places on the climate and the community around it. These decisions need to be weighed carefully, as retrofitting is typically much more expensive.

1. Density & Building Form

1.1 Total unit number

- Does the proposed unit count meet or exceed the density targets set out in the applicable area's Secondary Plan?
- Does the proposal meet demands of density, housing supply, infrastructure capacity, and neighbourhood character listed in the plan?
    - *Under-building relative to plan targets wastes the emissions already embedded in site servicing and infrastructure.*
    - *Ottawa's new Official Plan (2022) establishes density targets for intensification areas precisely to concentrate growth where it can be served efficiently.*

1.2 Form efficiency

- For mid-rise proposals (5–11 storeys): does the design use shared-wall configurations to reduce heating and cooling loads?
- Is the floor layout efficient, or does the layout waste habitable space with oversized corridors and service areas? What is the ratio of net habitable area to gross floor area?
    - *Shared walls between units are one of the most effective passive strategies for reducing heating and cooling loads; an inefficient floor layout wastes habitable space and inflates per-unit costs for residents.*
    - *Ottawa's heating-dominated climate in winter and cooling-dependent climate in summer make envelope efficiency especially consequential.*

2. Unit Mix & Affordability

2.1 Unit mix:

- Does the unit mix include a meaningful proportion of family-sized units (3–4 bedrooms)?
- What percentage of units are studios or one-bedrooms?
    - *What household type or what demographic can live in a building is determined at the design stage. Buildings composed almost entirely of*

studios and one-bedrooms structurally exclude families, including many racialized and newcomer households.

- *Buildings without family units also tend to generate higher per-capita car dependence, as families displaced to lower-density areas often are forced to rely on vehicles.*
- *Moreover, diversity of household types contributes to overall resiliency.*

2.2 Community Benefits Charge:

- Is a Community Benefits Charge (Section 37) being used to secure long-term affordability commitments, and ensure formation of complete communities?
  - *Section 37 of Ontario's Planning Act, now evolved into the Community Benefits Charge (CBC) regime, allows municipalities to secure funding from developers for community improvements (parks, libraries, daycare) when intensifying, high-density residential projects (typically 5+ storeys, 10+ units) are approved.*
  - *This tool helps mitigate the impact of new growth on communities.*
  - *Advocates should ask specifically whether affordable unit targets have been negotiated, at what income level, and for how long they are secured.*

3. Material Efficiency

3.1 Design efficiency:

- Does the building meet any recognized green building or energy performance standard, such as LEED, Passive House, or the Toronto Green Standard, beyond the minimum required by the Ontario Building Code?
- Has the applicant committed to building envelope performance (insulation, windows, air sealing) that goes beyond the Ontario Building Code (OBC) minimum to significantly reduce heating and cooling demand?
  - *The building envelope is the single greatest determinant of a building's long-term operating emissions.*

- *In Ottawa's climate, where space heating is one of the main types of residential energy use, a poorly insulated or leaky envelope locks in high energy costs for the building's lifespan.*
- *The Building Code sets a minimum floor for energy performance, not a target. Asking whether the developer has committed to a recognized standard puts their intentions on the record and signals that the community expects more than the minimum.*
- *Raising this on the record signals that the community expects more than the minimum.*

3.2 Orientation of Build: Is daylighting adequate in all habitable rooms, or do some units face only interior courtyards or other units?

- *Units without adequate natural light rely more heavily on artificial lighting, which increases energy consumption and utility costs for residents.*
- *Poor daylighting also leads to poor indoor air quality and affects occupant mental health and wellbeing negatively.*
- *Units with no access to natural light or ventilation tend to be rented at lower cost, in this case concentrating lower-income residents in the least healthy parts of a building, while also increasing energy consumption and emissions.*

4. Whole-building design integration

4.1 Flexible structures: Is the structure designed for future adaptations (demountable walls, extra structural capacity, upgraded electrical)?

- *Flexible structures extend building lifespan by enabling reconfiguration as household types, unit sizes, and uses change over time.*
- *They eliminate waste for change in practices and products, diversity and adaptability for future clients—e.g., remodeling units to fit new demographics more efficiently.*

- *This reduces the need for costly teardowns and makes the building more adaptable to future residents and uses.*

4.2 Intentional design: Has accessibility been designed in from the start (not retrofitted), including wider corridors, step-free access, and adaptable units?

- *People's needs and the clientele serviced changes over time, and so do the home modifications they require Building in accessibility preempts these needs and prevents the additional environmental strain of retrofitting.*
- *Design should prioritize future-proof solutions that adapt as people's needs change, saving money over the building's lifespan while providing equitable housing options.*
- *In Canada, 32.2% of people with disabilities are renters, compared with 27.9% of people without disabilities, which makes accessible rental housing especially important.*

Neighbourhood Integration

A building does not exist in isolation; it either strengthens or weakens the fabric of the neighbourhood around it. These questions assess whether a development meets its legal obligations under the city's design objectives and existing planning frameworks and whether it makes a genuine positive contribution to the street, the block, and the community it joins.

1. Statutory Compliance

1.1 General Legal guidelines: Does the proposal conform to the Official Plan's land use designation for this site?

- *Conforming with the Official Plan is an outlined legal requirement under Ontario's Planning Act. If a proposal doesn't conform, the developer must explain why, and you can formally object during the public review process if they don't.*

- *Some of this info will be mentioned in the developer's presentation in public meetings, or should be mentioned in one of the documents (Site Plan Review or Application Summary).*

1.2 Area specific considerations: Does the proposal comply with the applicable Area Structure Plan or Secondary Plan for this neighbourhood?

- *These are often created for specific areas undergoing significant change, including new neighborhoods, redevelopment zones, major transit station areas, and rural settlements*

1.3 Required studies: Have all required studies been submitted (traffic, shadow, wind, noise, environmental)? Are there any recommendations that came out of these studies? How will they be addressed? Were any waived or scoped down? If so, why?

- *Each study serves as evidence for making the right decisions. The Agency may decide that an impact assessment is required only if it is satisfied with the construction? of the designated project may cause adverse effects within federal jurisdiction or direct or incidental adverse effects.*
- *Waiving studies without explanation removes the evidence basis on which informed public comment can be made, and based on which the public and Council are supposed to make decisions.*
- *These questions establish whether the process was complete.*

2. Built Form & Public Realm Impact

2.1 Built form design choice and impact:

- Is the height, overall shape and size (massing), and setback compatible with adjacent buildings and the streetscape, including impacts on sun access and wind conditions for neighbouring properties and public spaces?
- Does the architectural design respect the scale and character of the neighbourhood?

- *Height, massing, and setback compatibility are not merely aesthetic concerns; they affect wind conditions, shadowing on adjacent properties and public spaces, and the perception of safety and welcome in a street environment.*
- *They also affect the livability and year-round usability of adjacent outdoor spaces, including for vulnerable residents in neighbouring buildings who may depend on those spaces.*

3. Ground floor & retail

3.1 Active ground-floor uses:

- Are there ground-floor retail or active uses, such as shops, cafes, services, or community spaces?
- Are these spaces the right fit to attract a diversity of tenants and move toward complete communities, 15-minute neighborhoods?
    - *The 15-minute neighbourhood is an urban planning concept where residents can access essential daily needs within a 15-minute walk from their home, reducing car dependency and supporting sustainable, vibrant, and healthy communities.*
    - *Active ground-floor uses are what make this possible in practice: they reduce car trips for daily needs, support local businesses, and animate streets, which increases perceived and actual safety for pedestrians, especially women, children, and elderly residents.*

3.2 Adaptable Uses:

- Do the shops and services proposed (or permitted by zoning) match the daily needs of future residents?
- Can ground-floor spaces adapt to different uses over time?
    - *Adaptable ground-floor design allows for long-term sustainability and responsiveness to community needs.*

3.3 Walkability maximization and pedestrian protection and access: Are there covered walkways, good lighting, or other protections for people walking nearby?

- *Infrastructure that makes walking and rolling viable as a daily mode of travel, including covered pathways, good lighting, and weather protection, directly supports year-round walkability and reduces car dependence, which is especially important in Ottawa's cold climate.*

4. Complete Neighbourhood & Walkability

4.1 Walking routes & connectivity:

- Are pedestrian connections through or around the site well-designed and lit?
- Is the development helping to complete a missing piece of the neighbourhood's street network?
    - A *fragmented street network forces residents onto arterials or into cars.*
    - *Well-designed, lit pedestrian connections through and around a site improve safety, particularly for women, children, elderly residents, and people with disabilities.*

5. Community & green space

5.1 Community amenities: Are there enough community amenities, and shared indoor and outdoor spaces for residents—genuinely useful ones, not just the minimum the City requires?

- *Meaningful communal space, not just the minimum required by zoning, supports community building and reduces pressure on residents to have large private units to meet all their needs.*
- *Advocates can check whether proposed ratios meet or exceed the minimum, and whether spaces are genuinely usable or designed only to satisfy the letter of the requirement.*

5.2 Year round use: Are outdoor spaces designed for year-round use (shelter, seating, planting, sun access)?

- *Outdoor spaces designed for year-round use are especially important in Ottawa's continental climate, where the absence of shelter and seating effectively renders green space seasonal.*

- *Outdoor spaces without shelter and winter design features become effectively less accessible in winter and also in summer's heat.*

5.3 Accessibility: Can people using wheelchairs, walkers, or strollers fully access all shared spaces?

- *This supports inclusive use of space to all those that may reside in the area and is another aspect of walkability.*
- *Accessibility is a legal requirement under the Accessibility for Ontarians with Disabilities Act (AODA), but compliance in common areas and amenity spaces is frequently incomplete — making it worth scrutinizing carefully at the application stage.*

5.4 Keeping public spaces public: Is publicly accessible open space provided on-site, or is the entire site privatized?

- *This could discourage community connections, show poor space utilization, and be of little value to residents who cannot afford private alternatives.*
- *This matters especially in higher-density areas where on-street and park space is already limited.*

5.5 Greenery:

- Are existing mature trees being retained?
- If removed, is the replacement ratio sufficient, and is replacement planting located on-site?
    - *Mature trees provide meaningful heat island mitigation, stormwater absorption, shade, cooling, and carbon sequestration that new plantings cannot replicate for decades.*
    - *The City's Tree Protection By-law applies here; however, advocates should scrutinize whether the replacement ratio and planting locations are realistically adequate or merely meet the minimum requirement on paper.*

Parking and Mobility

Parking and mobility infrastructure shapes residents' choices about how they get around, directly influencing transportation costs, car dependence and emissions. These questions examine whether a development's mobility provisions align with the city's climate commitments and serve the full range of residents, not only those who own cars.

1. Car parking

1.1 Car spaces:

- How many car spaces are proposed?
- Does this exceed the minimum required, thereby encouraging car ownership?
    - *Excess car-parking supply is one of the most reliable predictors of increased car ownership and vehicle kilometres travelled.*
    - *Ottawa's new Comprehensive Zoning By-law reduces or eliminates parking minimums near rapid transit; advocates can check whether the proposal aligns with or exceeds what is required.*

1.2 Convertible spaces: Is the parking structure designed to be convertible to another use (e.g., retail, storage, residential) when demand falls?

- *Parking structures that cannot be converted lock valuable land for decades.*
- *Designing for flexibility keeps options open for green space or housing later.*

1.3 EV considerations: Are EV charging outlets or conduit for future installation provided in a meaningful percentage of spaces?

- *EV charging infrastructure is far cheaper to install during construction than as a retrofit and attracts and encourages residents to choose electric vehicles.*
- *The City of Ottawa's Climate Change Master Plan identifies electrification of transportation as a key emissions reduction strategy.*

1.4 Parking and city: How does the amount of car parking proposed compare with what the City actually requires? Does it over-provide or under-provide relative to the minimum?

- *Sustainable site design requires careful consideration of the location and provision of parking, access roads, and transportation infrastructure in relation to the development's broader environmental footprint.*
- *A building with far more parking than needed works against the City's own climate targets.*
- *Less parking generally means fewer cars, less emissions, and more space for other uses.*
- *Ottawa's new Official Plan reduces or eliminates parking minimums near rapid transit precisely because excess parking drives car ownership.*
- *Advocates can ask the developer to explain their parking ratio relative to the City's requirements and whether they have considered providing less.*

2. Cycling & Micromobility

2.1 Enclosed bike parking: Is there secure, covered, and easy-to-reach bike storage—at least one spot per bedroom?

- *In addition to safe and connected infrastructure, secure, enclosed, and accessible bike storage is the single most important determinant of whether cycling becomes a genuine daily option for residents.*
- *Bikes and trailers are disproportionately used by lower-income households, families, and people with disabilities, the groups who stand to benefit most from cycling but are most often excluded by inadequate infrastructure.*

2.2 Adaptive consideration: Is there space for cargo bikes, adaptive bikes, and bike trailers?

- *Cargo bikes, adaptive bikes, and trailers are disproportionately used by lower-income households, families, and people with disabilities, the groups who stand to benefit most from cycling but are most often excluded by inadequate infrastructure.*

2.3 E-bike consideration: Are e-bike charging outlets included in the bike storage area?

- *E-bikes extend cycling range and reduce trip difficulty, which makes cycling viable for a broader population.*
- *E-bike charging supports lower-income residents for whom e-bikes may substitute for car ownership. Charging infrastructure is low-cost at construction and high-cost to retrofit.*

3. Car share & transit

3.1 Bus stop:

- Is there a bus stop within 400m (within a 5-minute walk)?
- What is the frequency of service during peak and off-peak hours?
- Is the site within reasonable walking distance of a rapid transit station (LRT, BRT, metro)?
    - *Proximity to transit is one of the strongest determinants of whether a household can function without a car.*
    - *Lower-income households are disproportionately transit-dependent, meaning transit access near a new development directly affects whether the building is genuinely accessible to equity-deserving communities.*
    - *Advocates can consult OC Transpo service maps and raise concerns as part of the application record, even if service levels are ultimately an operation rather than land use matter.*

3.2 Car share:

- How much of the provided car parking is devoted to car share spaces?
    - *Car share programs give residents access to a vehicle when needed without the cost of ownership, making them significantly more accessible to lower-income households.*
    - *Dedicating a portion of parking to car share rather than private vehicles reduces the total number of cars associated with the*

building while expanding mobility options for residents who cannot afford to own a car.

Procedural Considerations

In this section, advocates need to consider if the proposal that has been put forth aligns with needs and recommendations for the area and ensure governance accountability. These questions create grounds for substantive challenge if corners have been cut.

1. Consistency with plans and precedents: Does the proposal follow the City's Official Plan, and the Secondary Plan, and match how similar applications have been decided nearby? If not, is there a clear and documented justification?

- *If a proposal departs from the Official Plan or established precedents without clear justification, this is a legitimate basis for challenge.*
- *Advocates can raise this in written submissions or at committee of Council.*

2. Consideration of community impacts: Were impacts on neighbouring properties or bylaw intent overlooked?

- *Checking whether relevant factors like bylaw intent, reasonings behind rulings, and neighbouring impacts were properly weighed, to ensure process has been followed in good faith.*

Want to Learn More?

To learn more about the project, other relevant documents and project resources, or to get in touch with us, visit the project webpage.

RESOURCES & RELEVANT READS

1. General Guidelines and Scope

- City of Ottawa New Official Plan — City of Ottawa, 2022. Ottawa's guiding document on land use and growth.
- Citizens' Guide to the Planning Act — Ministry of Municipal Affairs and Housing, Ontario. Condensed explanation of Ontario's planning legislation.
- Ottawa Planning Hierarchy Primer — City of Ottawa. Explains how provincial legislation and local planning tools work together to guide development review. (Updated version available as Planning Primer, June 2023.)
- Ottawa Urban Secondary Plans — City of Ottawa. Area-specific land use guides for neighbourhoods across Ottawa.
- Why Equity Matters in Municipal Climate Adaptation — Green Municipal Fund / Federation of Canadian Municipalities. Factsheet on equitable climate adaptation terminology and principles. (No specific publication date available.)

2. Structure and Design

- Community Benefits Charge Strategy — City of Ottawa. Explanation of Section 37 and the Community Benefits Charge regime.
- Sustainability Considerations of Green Buildings: A Detailed Overview on Current Advancements and Future Considerations — Liu, T., Chen, L., Yang, M., Sandanayake, M., Miao, P., Shi, Y., & Yap, P.-S. Sustainability, MDPI, 2022. Peer-reviewed overview of benefits and challenges of sustainable building design.
- Six Sustainability Considerations for a Building Envelope — RJC Engineers, published in Canadian Apartment Magazine. Envelope-first design approaches for sustainable buildings.
- Whole Building Design Guide: Green Principles for Residential Design — Whole Building Design Guide (WBDG), National Institute of Building Sciences. Integration of accessibility, sustainability, cost-effectiveness, and health in building design.
- Putting Accessibility at the Centre of Climate Action — UBC Pathways to Health Equity. On accessibility and sustainable development.
- Required Studies and Plans — City of Ottawa. Full list of required planning studies and responsible parties.

- Impact Assessment Act — Government of Canada / Justice Canada. Federal legislation governing when impact assessments are required.

3. Neighbourhood Integration

- Sustainability Considerations of Green Buildings — Liu et al., Sustainability, MDPI, 2022. Includes neighbourhood-scale considerations of sustainable building design.
- Why Equity Matters in Municipal Climate Adaptation — Green Municipal Fund / Federation of Canadian Municipalities. Equitable climate adaptation principles and terminology.
- Six Sustainability Considerations for a Building Envelope — RJC Engineers. How envelope design affects a building's relationship to its surroundings.
- Whole Building Design Guide: Green Principles for Residential Design — Whole Building Design Guide (WBDG), National Institute of Building Sciences.
- Green Building Metrics — Sustainability Directory. Reference guide to metrics used to assess sustainable building and site performance.
- 15-Minute Neighbourhoods — City of Ottawa. Ottawa's Official Plan framing on complete, walkable communities.

4. Parking and Mobility

- Transportation Master Plan — City of Ottawa, 2013. Blueprint for planning, developing, and operating Ottawa's walking, cycling, transit, and road networks. (*Note: Part 1 updated and approved April 2023; full update in progress.*)
- City of Ottawa Parking Code Review — City of Ottawa. Review of parking minimums and maximums under the new Official Plan, including reductions near transit.
- OC Transpo Service and Ridership Key Performance Indicators — City of Ottawa / OC Transpo. Data on transit service levels and ridership.
- See the City's commitments on transportation emissions, electrification, and active transportation in the the Official Plan linked in General Guidelines & Scope.

5. Procedural Consideration

- Saying Yes to Affordable Housing: Citizens' Assemblies, Local Democracy, and the Right to Housing — Jordan Moffatt and Carolyn Whitzman, University of Toronto, July 2026. On the role of citizens' assemblies and democratic participation in advancing the right to affordable housing.

- See General Guidelines & Scope above — the Official Plan, Planning Act guide, Planning Hierarchy Primer, and Secondary Plans are the primary references for procedural questions.