

BACKGROUND AND CONTEXT REPORT:
**SUSTAINABILITY AT
112 NELSON STREET**

Submitted: June 2, 2021

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INTRODUCTION |

The Defining Decade for Climate Change

The Intergovernmental Panel on Climate Change's (IPCC) Special Report on Global Warming of 1.5°C, released in October 2018, advanced two primary conclusions: the effects of climate change are already being felt, and without rapid and far-reaching transitions in land use, industry, transport, and city planning, those effects will continue to worsen.

The report found that limiting global warming to 1.5°C, the upper limit beyond which management and adaptation will rely on unproven technologies, will require reaching net zero carbon by 2050.

As of 2019, the rise in global temperature already reached 1°C; in order to prevent eclipsing a 1.5°C increase, global net human-caused emissions of carbon dioxide need to be reduced by 45 percent from 2010 levels by 2030. In other words, we **now have nine** years to act, and that action must be intentional, swift, and cooperative. The health and well-being of humans, communities, and the ecosystems on which we rely is dependent on reaching this end.

PURPOSE

This report summarizes our Phase 1 background and context review, completed under our Sustainability stream of work. We undertook this work as a precursor to future analysis in order to determine the project's unique opportunities to deliver impact and innovation. The report begins with the identification of three sustainability themes, which will help inform goal-setting and our review of third-party certification systems.

To define the themes, we asked four key questions (Appendix A provides analysis related to each question):

1. What makes a Smart Living Properties project unique?
2. What are the City's sustainability expectations?
3. What are the site's physical opportunities?
4. What is this project already delivering?

The results of this analysis will form the foundation of your Owner's Project Requirements (OPRs). The OPRs will be the core document used to communicate your sustainability commitments to the broader design and consultant team and inform design decision-making along the way. In addition to providing a path to certification, the OPRs will include best practices in sustainability.

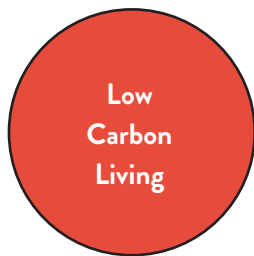
Once finalized, the OPRs will reflect not only the themes identified in this report, but also goals and performance requirements drawn from one or more certification systems.

Having completed the background work, we believe that this project has the opportunity to deliver a new kind of sustainable building - we are excited to help shape that story in the next phases of work.

SUSTAINABILITY THEMES |

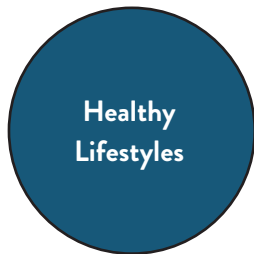
Connecting the dots

The following themes are informed by our understanding of the collective context: who Smart Living Properties is, what the City is expecting, the site's unique physical context and the strategies already included in the architectural drawing set. While preliminary, the themes should be considered indicative of where we think the project's focus should be, which in turn will inform what third-party certification systems we review in Phase 2.



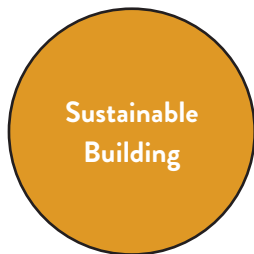
Preliminary Theme Statement

112 Nelson Street is designed and built to reduce carbon emissions. In doing so, it will support the global call to action to combat the negative effects of climate change. Achieving low carbon and energy also offers a number of benefits, including supporting municipal targets; reducing lifecycle and operating costs; reducing carbon emissions; and demonstrating leadership.



Preliminary Theme Statement

112 Nelson Street provides an array of strategies to support the mental and physical health of its tenants. The combination of interior and exterior amenities encourages active, sociable, meaningful lives to promote good health and wellbeing.



Preliminary Theme Statement

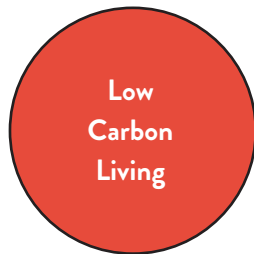
112 Nelson Street demonstrates excellence in sustainable building design. It operates efficiently and sustainably through attention to indoor and outdoor water use, waste stream management, indoor air quality, and environmentally-friendly material selection.

During our next phase of work, we will dig deeper into the building-related opportunities, using the design strategies noted below as a starting point. We have also provided insight into the types of design strategies that will be explored in our separate carbon and energy stream of work. Note that this list is not exhaustive and will most likely change through our review of applicable third-party certification standards and conversations with the architect.



Sustainable Building

- Low-flow fittings and fixtures
- Tri-sort waste chutes
- Water metering
- Low-emitting materials
- Enhanced ventilation
- Recycled materials
- Rainwater capture and reuse



Low Carbon Living

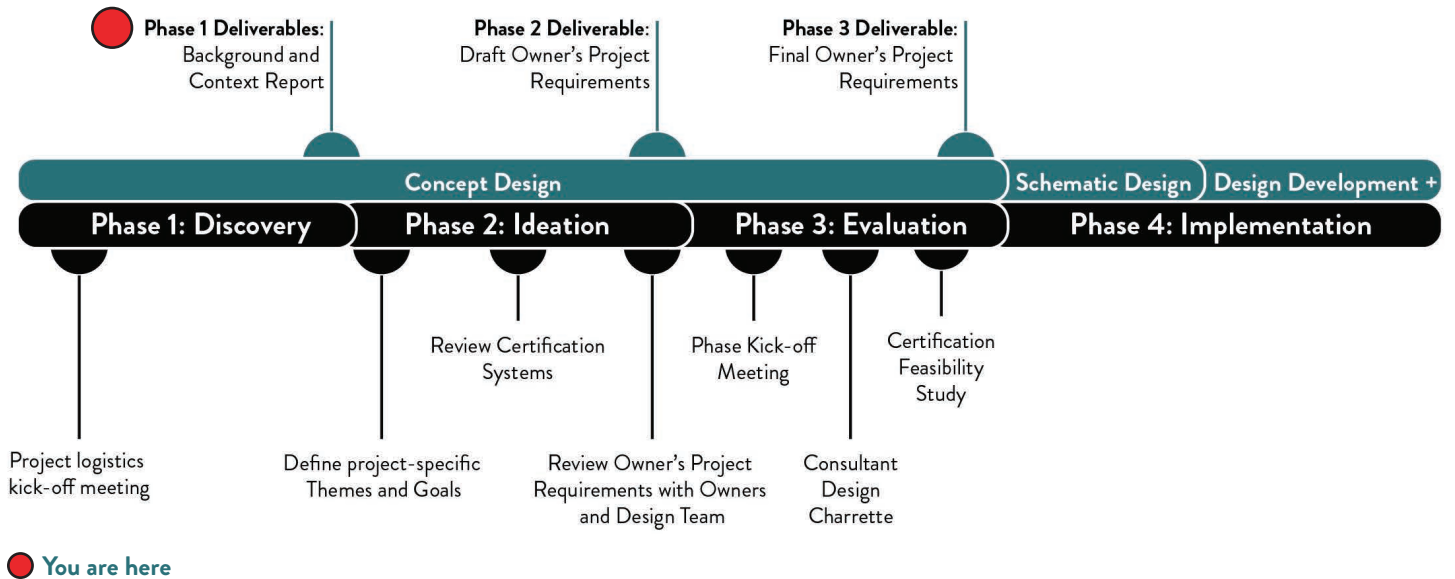
- Optimized window-to-wall ratio
- Improved glazing system performance
- Increased air tightness
- Minimized thermal bridging
- Battery storage
- Electric domestic hot water heating
- Low carbon insulation materials

WHAT IT MEANS |

Once confirmed, we will use the themes to right-focus the development of project-specific goals. We will also use the themes to shortlist the third-party certification systems that will be evaluated in Phase 3.

NEXT STEPS |

Where we're going (Phase 2)



In Phase 2, we will develop your draft Owner's Project Requirements (OPRs) in collaboration with your design team. The draft OPRs will include sustainability themes, goals, and draft performance requirements based on the third-party certification system review.

As the project progresses into Phase 3, additional detail, including specific performance requirements, will be added to the OPRs.

The next page outlines the sequence of steps that will be taken to reach this end.

- STEP 1 | Finalize sustainability themes:** Smart Living Properties to confirm sustainability themes are acceptable.
- STEP 2 | Defining sustainability goals.** The sustainability goals will indicate the broad desired outcomes for the project. The goals will provide clear direction on the types of strategies that should be considered by your team during concept and schematic design, construction and operations. They will be written such that they can be included in branding and communications activities. Moreover, they will inform your approach to demonstrating environmental and social governance and guide our review of third-party certification systems.
- STEP 3 | Third-party certification review.** Based on the themes and goals, we will conduct a gap analysis between the project’s current plan and relevant third-party systems. We will also consider how close the project is to achieving the City’s draft High Performance Development Standard. As part of our gap analysis, we will identify those strategies that aren’t yet reflected in the project’s plan but are considered “low hanging fruit.” In other words, those strategies that are cost-effective and represent good, sustainable design. We will include these in the OPRs, whether or not certification is pursued. At the conclusion of this task, we will identify a shortlist of certification systems to further evaluate in Phase 3.
- STEP 4 | Develop the draft OPRs.** We will compile all work completed in Phase 2 into your draft OPRs. After vetting the OPRs with Smart Living Properties, we will circulate them and ensure alignment with the broader consultant team.

APPENDIX QUESTION 1 |

What makes a Smart Living Properties project unique?

ALL INCLUSIVE, ALL FURNISHED, ALL RENTAL |

The implications of the project's residential product are twofold. First, all inclusive means the costs of utilities are born by you. Accordingly, the project should consider solutions that reduce utility costs, primarily through smart design technologies and practices. Second, retaining the rental asset means you will see cost savings over time, further validating a commitment to building an efficient building.

DESIGNED FOR URBAN PROFESSIONALS AND STUDENTS |

The desire for living in environmentally, socially and culturally responsible developments has been amplified through the Covid-19 pandemic. Indeed, the importance of nature, equity, mental and physical health, healthy food and active transportation is greater than ever. To maintain a leadership position in the marketplace, this project will need to deliver on all fronts.

LOCATED IN URBAN HUBS AND CENTRES |

The benefits of locating your projects in urban centres are obvious: access to transit infrastructure, parks and open spaces, retail offerings, cultural landmarks and activities, and active transportation routes and corridors. The location of a site becomes extremely important for certification systems like LEED and Fitwel, which reward credits for location and transportation related considerations.

MORE AMENITIES THAN YOUR TYPICAL BUILDING DEVELOPMENT |

In order to compensate for smaller unit sizes, Smart Living Properties buildings provide a broad range of community-centric interior and exterior amenity spaces. The provision of amenity space pays dividends by creating opportunities for healthy, sustainable and social lifestyles. Moreover, it positions projects to achieve certification under health and lifestyle focused third-party systems like Fitwel.

WHAT IT MEANS |

Your projects have the opportunity to deliver a new kind of sustainability - smart green buildings that reduce environmental impact, reduce utility costs and create a culture of sustainability.

QUESTION 2 |

What are the City's sustainability expectations?

OTTAWA OFFICIAL PLAN |

Ottawa's Official Plan (the OP) advances a vision for the future growth of the city supported by a policy framework to guide physical development until 2031. The OP codifies the importance of sustainability in Section 2 – Strategic Directions, through a focus on managing growth, providing infrastructure, maintaining environmental integrity and building livable communities.

- **Managing Growth:** Growth will be distributed throughout the urban area to strengthen the city's liveable communities through intensification and infill.
- **Providing Infrastructure:** Development should occur in higher-density mixed use nodes and corridors that provide concentrated destinations that are more easily served by good-quality transit.
- **Maintaining Environmental Integrity:** Improve air quality, reduce greenhouse gas emissions, protect natural features, manage groundwater resources and plan for forests and greenspaces.
- **Building Liveable Communities:** Project should embrace the basics, including good housing, employment, ample greenspace, a sense of history and culture.

OTTAWA HIGH PERFORMANCE DEVELOPMENT STANDARD (DRAFT) |

The new Official Plan provides policy direction to develop a high-performance development standard (HPDS) for projects submitting Plan of Subdivision, Zoning By-law Amendment and/or Site Plan Control applications. Changes to the City's Green Building Policy will be consistent with this approach. The HPDS will cover a wide array of sustainability metrics, including building energy efficiency and thermal performance based on criteria set out in the Ontario Building Code with progression towards net zero energy ready buildings. Higher performance be encouraged through incentives. While still in development, draft requirements and metrics can inform the approach to sustainability.

WHAT IT MEANS |

We will ensure your OPRs support the City's Official Plan direction. We will also consider the draft HPDS' metrics when we put together the project's themes, goals and potential strategies. Although this project will not be subject to the HPDS, your future projects in Ottawa will. We will help decode its requirements and layer in those that are appropriate into the project's Owner Project Requirements.

QUESTION 3 |

What are this site's physical opportunities?

PROXIMITY TO CULTURAL AMENITIES |

112 Nelson is an urban infill project within walking distance of an array of cultural amenities: MacDonald Gardens Park, Jules Morin Park, Ottawa Public Library and Byward Market. It also enjoys close proximity to an array of retail offerings and public and private schools. While schools are not necessarily enticing to your targeted demographic, they are relevant to LEED, which awards points for the number of types of amenities within walking distance of a project.

10 MINUTE WALK TO THE UNIVERSITY OF OTTAWA |

While your chosen demographic extends beyond students, this will be an enticing place of residence for university-goers. That means fewer cars, a desire for opportunities to socialize, and, of course, a heightened awareness of ecological, environmental, cultural and social sustainability.

PROXIMITY TO A MULTI-MODAL TRANSPORTATION NETWORK |

The project is ideally situated to support cyclists ("very bikeable" per Walk Score). It is within a short cycle of the Rideau River Pathway system and is served by a cycling network consisting of trails, dedicated lanes and otherwise bicycle-friendly roads. Given the proximity of amenities, the site also supports walking (a 94 "walker's paradise" Walk Score). Finally, the site is serviced by the Rideau Street bus line, supporting its 91 "rider's paradise" Walk Score. Reducing the need for single occupancy vehicle trips not only represents good design, but it is also rewarded by third-party certification systems like LEED and Fitwel.

ACCESS TO NATURE |

In addition to nearby parks and open spaces, future residents will benefit from unobstructed views of the Rideau and Ottawa Rivers, including their unique ecological systems. Studies have shown that visual access to nature can improve mental health and productivity. In addition, third-party certifications systems like Fitwel award points for views of nature from common spaces.

WHAT IT MEANS |

The location of 112 Nelson Street will create an inherently positive quality of life for future residents. It also supports the Official Plan's desire for building liveable communities and managing sustainable patterns of growth. These features are viewed favourably by third-party certification systems like LEED and Fitwel.

QUESTION 4 |

What is 112 Nelson Street already delivering?

A DEMONSTRATED COMMITMENT TO SUSTAINABILITY |

Having reviewed the architectural package dated May 4, 2021, it appears that a myriad of sustainability strategies are already contemplated for inclusion in the project. Below, we have organized our findings into six buckets.

CARBON AND ENERGY <ul style="list-style-type: none">• Rooftop PV• Geothermal	ACCESS TO NATURE <ul style="list-style-type: none">• Courtyard with Natural Features• Terraces	CULTURE AND COMMUNITY <ul style="list-style-type: none">• Coffee Shop• Games Area• Lounge/Relax Space• Urban Art• Workshop
FOOD <ul style="list-style-type: none">• Rooftop Greenhouse• Rooftop Garden• Communal Kitchen• Barbecue Area	HEALTHY LIFESTYLES <ul style="list-style-type: none">• Indoor Gym• Training Facilities• Playground• Sports and Activities	TRAVEL AND TRANSPORT <ul style="list-style-type: none">• 200 Bike Parking Spaces• Bike Repair Station• Reduced Parking Supply

WHAT IT MEANS |

Based on the strategies listed above, two preliminary sustainability theme areas are emerging: **low carbon living** and **healthy lifestyles**. However, we believe that there is a third theme that requires additional consideration in the next phase of our work: **sustainable building** (see page 2 of main report for more information).

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