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Sustainable Building and Development Checklist Report

1511 Old Plains Road W., Burlington ON

Prepared for: New Horizon Development Group Inc.
Prepared by: Whitehouse Urban Design Inc

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Development Application:	1511 Old Plains Road, Burlington ON
Reference Numbers:	
Submitted to:	City of Burlington (COB)
Prepared for:	New Horizon Development Group Inc
Prepared By:	Whitehouse Urban Design Inc.

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1.0 Introduction

1.1 Purpose

The City encourages design innovation in site and building design to achieve improved environmental performance in a number of factors such as: water conservation; waste reduction; carbon neutrality; implement energy conservation and generation; increase and improve the urban forest tree canopy; and implement innovative stormwater management in keeping with the City's Sustainable Design policies outlined in the Official Plan, it's Strategic Plan 2015-2040 and Community Energy Plan.

The City's Sustainable Building and Development Guidelines (SBDG) aim to improve the environmental performance of new developments in the City of Burlington by promoting sustainable design practices in Planning Act applications. The SBDG cover site design, transportation, natural environment, water, energy, emissions, waste, building materials, maintenance, monitoring, and communication. The SBDG identify voluntary sustainability measures, as well as items that are required by the City.

This report reviews environmental and sustainability merits of the development proposal against the SBDG, and summarizes its performance. The proposed development is currently at the OPA/ZBA stage of overall implementation. It is proposed to be built in two phases and will focus on targets and criteria for medium-density residential uses. The design integrates various features to reduce infrastructure demands, negative environmental impacts, and long-term costs while contributing to a prosperous, livable, and healthy community.

1.2 Benefits and Costs of Sustainable Building

The City's SBDG recognize the benefits of sustainable design, as extending beyond environmental to include social and economic interests. In the creation of livable, sustainable communities these considerations and features work together and have influence over one another in the overall creation of high-quality places for people with a mitigated impact on the environment. Such features can include the creation of safe spaces using CPTED principles (Crime Prevention Through Environmental Design), providing easy and equitable access to amenity spaces, and design of streets that promote a sense of community.

2.0 Sustainable Building and Development Guidelines Checklist

Table 1 below, identifies Mandatory items from the SBDG, as well a voluntary items that are applicable to the development proposal. It provides information on how the noted items will be implemented and which documents can be referred to through the project's approvals process.

Table 1: Sustainable Building and Development Guidelines Checklist

2.1 Site Design

Item	Required / Voluntary	Guidelines	Implementation	
2.1.1	Required	**Augment Topsoil:** Maintain a minimum of 15cm/6" quality topsoil	All areas requiring topsoil will be noted to maintain a minimum of 15cm/6" at the site plan stage.	Site Plan, Landscape Plans
2.1.2	Required	**Snow Management:** For sites with surface parking, identify a designated snow storage area in an area that will reduce salt and contaminant impacts to vegetation, groundwater and surface water. Appropriate on-site snow storage is preferable to off-site snow removal.	The designated snow storage area will be provided, and will be determined and shown through Site Plan Approval.	Site Plan, Landscape Plan
2.1.3	Voluntary	**Augment Topsoil, Enhanced:** Maintain a minimum 30 cm/12" quality topsoil, protect areas from disturbance and/or de-compact subsoil in landscaped areas/non hardscape areas	Pursuant to improved absorption rates, which aid in stormwater management and plant health, vegetation preservation areas will include topsoil protection. This information is provided through the Site Plan Approval stage.	Landscape Plans

2.1.4	Voluntary	**Reuse Topsoil:** Retain and reuse uncontaminated on-site topsoil in areas not covered by the building and parking/hard surface areas. Proper storage of topsoil to retain soil health and quality	Efforts will be made to reuse existing topsoil on-site. Final determination will be made through detailed design	Landscape Plan
2.1.5	Voluntary	**Accessible Units:** In ground oriented residential developments such as townhomes, 15% of units are constructed as visitable housing. Features include: one zero-step entrance, wider doorways and clear passage on the main floor, a main floor bathroom or powder room.	Currently there are 25 1B (ground floor) units proposed, with 4 of them having flat entrance (with the door step) and no stairs inside the unit. This represents 15% of the ground floor units.	Building Permit

2.2 Transportation

Item	Required / Voluntary	Guidelines	Implementation	
2.2.1	Required	**Site Connection**: Provide pedestrian and cycling connections from on-site buildings to off-site public sidewalks, pedestrian paths, trails, open space, active transportation pathways, transit stops and adjacent buildings and sites in accordance with Official Plan policies.	Pedestrian and cycling connections from on-site buildings to off-site sidewalks, pedestrian paths, trails, open spaces, active transportation pathways, transit stops, and adjacent buildings and site will be planned for with connections to Old Plains Road. Should Old Plains Road be urbanized in the future, road-adjacent networks may be provided.	Site Plan

2.2.2	Required	**Accessibility**: Design on-site sidewalks, crosswalks and walkways to be continuous, universally accessible, barrier-free and clearly delineated in accordance with Official Plan Policies, Accessibility for Ontarians with Disabilities Act & City of Burlington Accessibility Design Standards.	Accessibility has been shown on site through continuous sidewalks, crosswalks, tactile indicators and depressed curbs in accordance with the Official Plan Policies, AODO, and City standards. These details will be refined through the Site Plan Approval process.	Site Plan
2.2.3	Required	**Bicycle Storage:** Provide bicycle parking spaces in accordance with the Zoning By-law and Official Plan Policies.	Bicycle spaces have been provided throughout the site with easy access to the entrance on Old Plains Rd. West. These details will be refined through the Site Plan Approval process.	Site Plan
2.2.4	Voluntary	Transportation Demand Management: Provision and implementation of a Transportation Demand Management Plan. Required for parking reductions and required in Primary, Secondary and Employment Growth areas as per Official Plan policy.	Through the Traffic Impact Study this item will be addressed.	TIS
2.2.5	Voluntary	**Electric Vehicles:** A minimum of 3% of parking spaces provide charging stations to accommodate electric vehicles and design additional areas to be EV conversion ready. NOTE: Effective January 2019, the Building Code requires EV charging in 20 per cent of parking spaces and "rough-ins" in the remaining spaces in new multi-unit residential buildings where parking is provided within the building.	When this development goes to market, purchasers will be offered charging stations associated with their unit. Typically, it is a minimum of 3% uptake on this offer, and is therefore anticipated as such for this development.	Purchase agreements

2.3 Natural Environment

Item	Required / Voluntary	Guidelines	Implementation	
2.3.1	Required	**Light Pollution:** Minimization of light pollution in accordance with the city's Guidelines for Outdoor Lighting and Official Plan Policies.	All exterior lights will include cut-off shields in accordance with the City's guidelines to be implemented through the site plan approval process.	Lighting Plan
2.3.2	Required	**Native Species:** As per Official Plan policy, use native, non-invasive species within the Natural Heritage System and related buffers, and use non-invasive species in all other areas.	As per Official Plan policy Native, non-invasive species will be proposed through the site plan approval process.	Landscape Plan
2.3.3	Voluntary	**Native Species (Enhanced, outside NHS and buffers):** Use native, non-invasive species that are suitable to site conditions for a minimum of 75% of all landscaped areas.	In preparation of the planting palette through the site plan process, reference will be made to Conservation Halton's Landscaping and Tree Preservation Guidelines: www.conservationhalton.ca/planning-permits pursuant to a minimum of 75% native, non-invasive material.	Landscape Plan
2.3.4	Voluntary	**Low Maintenance Landscaping:** All landscaping is low maintenance and drought resistant (i.e. Xeriscaping self-sustaining vegetation) that does not require a permanent potable water-based irrigation system (except for initial watering to establish plants).	Further, and in addition to the item above, selections will made to prevent the requirement for the use of potable water through an irrigation system,	Landscape Plan

2.3.5	Voluntary	**Tree Planting (soil):** Provide a soil volume of 30 m3 per tree and a minimum depth of 1 metre of high-quality soil OR in hard surface situations install a soil cell product with high quality soil and provide the required soil volume.	Through design development the requirement for 30m3 / tree will be noted. In order to also reach a desired quantity of trees and canopy cover, root zones will be shared as well as dedicated, depending on site layout.	Landscape Plan

2.4 Water Conservation and Quality

Item	Required / Voluntary	Guidelines	Implementation	
2.4.1	Required	**Stormwater Quality:** Achievement of a level one/enhanced stormwater treatment for all stormwater runoff.	Stormwater treatment for stormwater runoff will be managed on site with the use of a below grade SWM system.	Site Plan, Grading Plan
2.4.2	Voluntary	**Pervious Surfaces:** Minimization of impervious surfaces and stormwater runoff through the use of Low Impact Development (LID) measures, such as: • permeable pavements; • bioswales; • infiltration trenches/bioretention areas; • rain gardens; • draining roofs to pervious areas, and; • other innovative stormwater management strategies	Permeable pavers are proposed in all suitable areas to promote infiltration of stormwater.	Landscape Plan, Grading Plan

2.5 Energy and Emissions

Item	Required / Voluntary	Guidelines	Implementation	
2.5.1	Required	**Urban Heat Island:** Provide vegetated landscape areas in hard surface areas as per the Zoning By-law.	Vegetated landscape areas are provided throughout the site to mitigate heat island effect.	Site Plan, Landscape Plan

2.6 Waste and Building Materials

Item	Required / Voluntary	Guidelines	Implementation	
2.6.1	Required	**Waste Management Plan:** Provide and implement a waste management plan in accordance with regional requirements.	A waste management plan will be prepared as part of the site plan approval process.	Site Plan
	Voluntary	**Construction Waste Management**: Develop and implement a waste management plan to recycle and/or salvage construction, demolition and land clearing waste.	As construction management plans (CMP) are being prepared, this item will be developed, then implemented throughout construction.	CMP

2.7 Maintenance, Monitoring and Communication

Item	Required / Voluntary	Guidelines	Implementation	
2.7.1	Voluntary	**Maintenance Plan:** Provision of a building maintenance plan that provides instructions, training requirements and schedules for maintaining sustainability features of the site / building / landscaping.	A maintenance plan / information brochure will be provided to first-time buyers to educate them on the site's environmental features, such as 75% native plant materials.	Building Permit

3.0 Closing

The development proposal addresses all mandatory items in the SBDG, and contributes additionally through the provision of items considered to be voluntary. All items summarized in Table 1 will be shown in the application documents as the process progresses. Each item identifies where the SBDG feature can be found. Measures that impact site layout and overall design will be identified at the OPA/ZBA stage, with more technical / detailed design items being addressed through the site plan approval stage, and building permit stage.