GUELPH INNOVATION DISTRICT

SUSTAINABILITY REPORT

BLOCK PLANS 1, 2 & 3

MARCH 2025
1405G

MHBC
PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

MHBC Planning
540 Bingemans Centre Drive, Suite 202
Kitchener, ON | N2B 3X9
Phone: 519 576 3650

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1.0 Introduction & Background

1.1 Site Context

1.1.1 *Policy Context*

The GID lands, including Blocks 1, 2, and 3, are located on the edge of the City of Guelph Settlement Area Boundary, within the Greenfield Area. The GID lands are surrounded by the Built-Up Are to the north, east, and west, and the Township of Puslinch to the south. In 2005, the City initiated the Secondary Plan process for the GID. Prior to the Secondary Plan, the majority of the GID lands were designated "Special Study Area" by the City's Official Plan, which required the completion of a planning study prior to redesignating the lands for development. The GID Secondary Plan was adopted by the City of Guelph Council in 2014 and came into full force and effect with all appeals withdrawn in 2017. The GID Secondary Plan requires that Block Plans are approved by the City for each identified Block Plan Area, prior to approval of development applications. The preparation of Block Plans for the GID signals an important new phase of development in the City, with the opportunity to begin bringing the GID Secondary Plan's Vision to fruition and to bring the subject lands into the City's urban realm.

1.1.2 *Physical Context*

The Guelph Innovation District (GID) Blocks 1, 2, and 3 lands are located on the east side of the City, adjacent to the Built-Up Area. The lands are surrounded by open space uses, including the Guelph Arboretum, golf courses, and forested natural heritage lands. A mix of residential developments exist along Victoria Road South, including single detached dwellings and townhouses. An industrial use and commercial plaza are located to the north of the subject lands and industrial uses are located to the east of the subject lands.

1.2 Report Organization

This report is structured as follows:

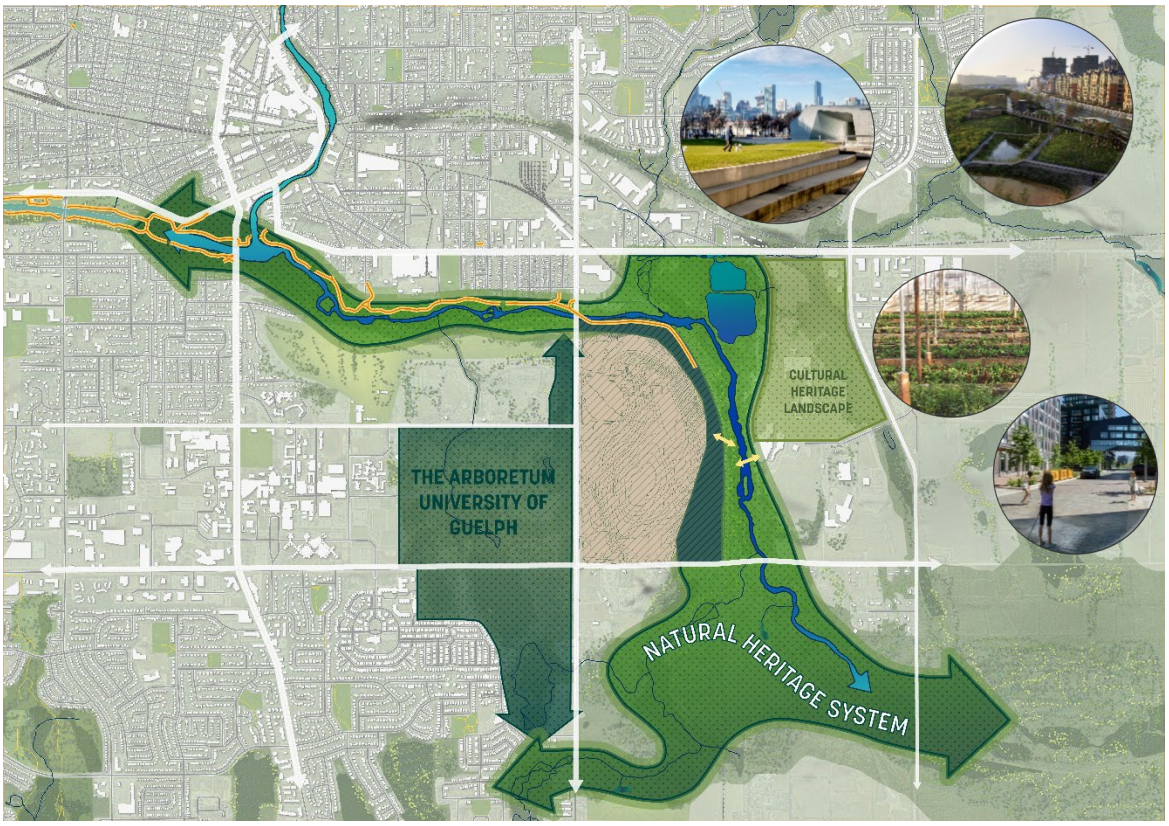
- Section 2.0 provides a Sustainable Vision for the GID lands.
- Section 3.0 established the development standards for the GID Blocks.
- Section 4.0 outlines the policy context for sustainable development in the City of Guelph in consideration of sustainable development.
- Section 5.0 provides the implementation framework for GID Blocks 1, 2, and 3 green development standards. The metrics used to assess sustainability are outlined in the development application process.

2.0 Sustainability Vision

The GID Blocks are envisioned to be a sustainable community that prioritizes green building and infrastructure design, human health and safety, and natural resource protection and restoration.

Green building and infrastructure recommendations play an important role in the sustainability of the GID, but equal consideration is given to other sustainability measures such as protection and access to the Natural Heritage System, restoration of natural areas, compact and mixed-use built form, active and public transportation networks, and community wellbeing.

The sustainability vision is implemented through the proposed development standards.



3.0 Development Standards

The Development Standards outlined below provide a framework for sustainable development within the Guelph Innovation District. The main themes guiding the development standards are:

- Subdivision and Site Design
- Transportation
- Natural Environment
- Water Conservation and Quality
- Energy and Emissions
- Waste and Building Materials
- Maintenance, Monitoring, and Communication
- Innovation

FINE GRAIN
A pattern of street blocks and building footprints that characterize an urban environment

PEDESTRIAN-ORIENTED
An environment designed to ensure pedestrian safety and comfort for all ages and abilities

SUSTAINABILITY
Developing with the goal of maintaining natural resources and reducing human impact on ecosystems

The following summarizes the objectives of the development standards:

- Identifies the key environmental and climate change recommendations for the proposed community.
- Provides energy, carbon, and occupant health & wellness performance metrics for the design development of residences and buildings within the proposed community.
- Proposes adoption of key technologies that support the physical well-being of residents, increase the affordability of home ownership, and significantly reduce the carbon & energy impact of the community.
- Proposes a collaborative approach to assessing community-scale energy systems for the proposed community.
- Provides product design solutions and technologies, which readily fulfill proposed local community energy plan goals for new community developments.

Specific development recommendations along with a rationale for the recommendation and stages of exploration are identified in the table.

3.1.1 *Metrics*

Section 1: Subdivision and Site Design Considerations			
#	Recommendation	Rationale	Implementation
1.1	Amend Topsoil: Maintain a minimum 30 cm/12" quality topsoil, protect areas from disturbance and/or de-compact subsoil in landscaped areas/non hardscape areas.	Enhanced topsoil levels absorb runoff and helps to ensure plants survive and thrive. Protecting areas from disturbance and de-compacting soil in disturbed areas further ensures the health of planted material. Resource: Preserving and Restoring Healthy Soil: Best Practices for Urban Construction. TRCA June 2012	Subdivision
1.2	Snow Management, Enhanced: Achieve the Smart About Salt Site Certification. Prepare and implement a salt management plan for all multiple residential, commercial and mixed-use developments with the objective of reducing the application of salts/chlorides.	The Smart About Salt Site Certification ensures that design and management best practices are in place to mitigate the impacts of road salt. Resource: www.smartaboutsalt.com	Site Plan
1.3	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.	Reusing soil promotes responsible use of a natural resource and minimizes the need to truck soil to and from the site. Resource: Preserving and Restoring Healthy Soil: Best Practices for Urban Construction. TRCA June 2012	Site Plan
1.4	Site Disturbance: To the extent practical, limit site disturbance including earthwork and clearing of vegetation to reduce erosion and dust. Require revegetation of disturbed portions of the site if construction, site servicing does not commence within six months of area grading/grading.	Maintains the local landscape and helps to ensure soils and vegetation remain undisturbed. Resource: LEED ND	Subdivision and Site Plan

Section 2: Transportation			
#	Recommendation	Rationale	Implementation
2.1	Community Connections: 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. Provide internal connections to the proposed parks. Connect the proposed neighbourhoods with the existing active transportation network, and the Guelph Transit system.	Encourages active transportation and transit to reduce the dependence on the automobile.	Subdivision and Site Plan
2.2	Accessibility: Design on-site sidewalks, crosswalks and walkways to be continuous, universally accessible, barrier-free and clearly delineated in accordance with the Community Design Guidelines and the Accessibility for Ontarians with Disabilities Act	Promotes walking by all age groups and abilities and provides access for those with limited mobility. Resources: The Illustrated Technical Guide to the Accessibility Standard for the Design of Public Spaces: www.gaates.org/documents/DOPS_Illustrated_Guide_140527_FINAL.pdf	Subdivision and Site Plan
2.3	Bicycle Storage: Provide bicycle parking spaces within multiple blocks, commercial blocks, employment blocks and parks.	Cycling reduces greenhouse gas emissions, reduces traffic congestion and improves health. Convenient bicycle parking encourages the use of active transportation. Resource: Zoning By-law	Site Plan
2.4	Bicycle Storage (Visitor): Provision of bicycle parking spaces at grade near the main entrances or easy to identify areas.	Applicants are encouraged to improve upon the required bicycle parking requirements in the Zoning By-law to further encourage cycling as a viable transportation option.	OPA/ZBA and Site Plan
2.5	Transportation Demand Management: Provision and implementation of a Transportation Demand Management Plan. Required for parking reductions associated with multiple residential, commercial and mixed-use development.	Transportation Demand Management Plans are plans that encourage sustainable modes of transportation. TDM plans evaluate building transportation needs comprehensively and may consider measures such as the provision of transit passes, flexible work hours, unbundled parking, on site transit facilities, priority parking for carpooling and autoshare programs, etc.	ZBA, Minor Variance Applications and Site Plan
2.6	Electric Vehicles: Implement Building Code requirements for EV charging stations and provide "rough-ins" in new residential	The demand for electric vehicles and related infrastructure is growing in Canada, and encouraging electric vehicles reduces greenhouse gas emissions and air pollution.	Site Plan

	buildings where parking is provided within the building.		
2.7	Transit Pass: For multiple residential, commercial and mixed-use development, encourage tenants and employees to use transit with possible incentives being provision of transit passes.	Transit is intended to provide support for the Minor Corridor and higher densities is associated with and in proximity to the Minor Node. Growth is directed towards intensification areas, all serviced by local transit. Transit-supportive development and measures to encourage transit ridership is encouraged.	Site Plan.

Section 3: Natural Environment			
#	Recommendation	Rationale	Implementation
3.1	Native Species (NHS): Use native, non-invasive species within the Natural Heritage System and related buffers and use non-invasive species in all other areas.	Planting native and non-invasive species protects and enhances the Natural Heritage System and biodiversity and are resilient to the local climate.	Subdivision and Site Plan
3.2	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.	Additional native plantings outside of natural areas are encouraged to promote biodiversity and resiliency.	Site Plan
3.3	Bird Friendly Design: Incorporate bird friendly design measures. Required for development adjacent to the Natural Heritage System.	Bird Collisions with windows is a leading cause of bird death across North America. Resources: For assistance identifying bird friendly design measures please consult with FLAP Canada (www.flap.org)	Site Plan
3.4	Low Maintenance Landscaping: All landscaping is low maintenance and drought resistant (i.e. Xeriscaping) that does not require a permanent potable water-based irrigation system (except for initial watering to establish plants).	The use of low maintenance and drought-resistant planting reduces the amount of watering needed and produces a resilient landscape.	Site Plan
3.5	Topsoil for Sodded Areas: When landscaping development sites, maintain a minimum of 15 cm/6" of quality topsoil for areas to be sodded.	Appropriate topsoil levels absorb runoff and help to ensure sodded areas survive and thrive.	Site Plan
3.6	Tree Planting (soil): Provide a soil volume of 30 m^3 per tree and a minimum depth of 1 metre of high-quality soil OR in hard surface situations install a soil cell product	The use of high-quality soil at an appropriate quantity helps ensure trees survive and thrive. A soil cell type product helps ensure trees survive in urban hardscape environments. High quality soil is	Subdivision and Site Plan

	with high quality soil and provide the required soil volume.	well drained, un-compacted soil comprised of 5 to 15% organic material with a pH level of 6.0 to 8.0.	
3.7	Tree Canopy: Meet the City of Guelph Sustainable Development Guidelines for Trees, including soil volumes, spacing and density.	Enhanced tree canopy cover can increase biodiversity and minimize the urban heat island effect. Resource Guelph Sustainable Development Guidelines (EB1 to 5).	Subdivision and Site Plan
3.8	Restoration and Enhancement: Complete and implement a restoration and/or enhancement plan for adjacent Natural Heritage System areas, including a management and monitoring plan as may be required as a result of Environmental Impact Study recommendations.	The restoration and enhancement of Natural Heritage System areas can aid in the improvement of degraded areas and can enhance ecosystem function. Long term management and monitoring ensures the success of the restoration project over the long term.	Subdivision and Site Plan
3.9	Community Gardens: Consider incorporating a community garden(s) for multiple and townhouse development and/or within adjacent open space lands. Include a rain barrel collection system.	Community gardens encourage sustainable local food production, increase access to healthy food, provide opportunities for community building and create local green space.	Subdivision and Site Plan
3.10	Light Pollution: Meet the City of Guelph Lighting Guidelines.	Appropriate lighting levels and fixtures which are dark sky compliant minimize light pollution and protect natural heritage systems.	Subdivision and Site Plan

Section 4: Water Conservation and Quality			
#	Recommendation	Rationale	Implementation
4.1	Stormwater Quality: Implement the SWM Strategy recommended by MTE in the stormwater management report.	Stormwater quality treatment reduces the total suspended solids and chlorides in receiving's streams.	Subdivision and Site Plan
4.2	Water Conservation Systems: Encourage systems to reuse water, such as grey water recycling, rainwater harvesting systems, cisterns and rain barrels where appropriate.	Cisterns, rain barrels and rainwater harvesting systems allow rainwater to be captured and reused on site. Grey water systems allow the reuse of water internal to the building, for example allowing the reuse of water from bathing and/or laundry to be used for flushing toilets or irrigation.	Subdivision and Site Plan
4.3	Pervious Surfaces: Minimize stormwater runoff through the use of Low Impact Development (LID) measures as appropriate and implementation of groundwater infiltration on a distributed area basis.	Low Impact Development strategies mitigate the impacts of increased urban runoff and stormwater pollution by managing it as close to its source as possible. It comprises a set of site design approaches and small-scale stormwater management	Subdivision and Site Plan

		practices that promote infiltration, evapotranspiration (where feasible) and rainwater harvesting.	
4.4	Water Efficient Fixtures: All newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled.	Efficient water fixtures reduce the use of potable water. Resources: EPA Watersense - www.epa.gov/watersense/watersense-label	Site Plan / Building Permit

Section 5: Energy and Emissions			
#	Recommendation	Rationale	Implementation
5.1	Urban Heat Island: Provide vegetated landscape areas in hard surface areas associated with multiple residential, commercial and employment blocks that are subject to site plan approval.	Vegetation can reduce the urban heat island effect to improve human comfort and energy efficiency in the surrounding areas.	Site Plan
5.2	Use energy efficient lighting and promote the use of energy efficient appliances	The use of energy efficient lighting and appliances will reduce the use of energy.	Subdivision and Site Plan
5.3	Design, Construct and label buildings to achieve ENERGY STAR for New Homes and meet OBC energy performance standards.	The provision of more energy efficient buildings will reduce the overall energy demand of new development over the building's lifespan and improves the developments long term sustainability.	Subdivision and Site Plan
5.4	Air Tightness: Conduct air leakage tests for all buildings and meet future mandatory air tightness standards	Construction of air tight buildings lowers energy consumption associated with heating and cooling on an ongoing basis.	Subdivision and Site Plan
5.5	Renewable Energy: Explore the installation of electric air-source heat pumps for space heating and consider the installation of solar PV where and when viable	Provision of electric air-source heat pumps for space heating and solar PV will reduce the developments overall reliance on natural gas and reduce the long-term carbon footprint of the development.	Subdivision and Site Plan

Section 6: Waste and Building Materials			
#	Recommendation	Rationale	Implementation
6.1	Waste Management Plan: Prepare and implement a waste management plan.	Recycling and composting treats waste as a resource and reduces the need for landfill expansion.	Site Plan
6.2	Waste Management Facilities: Provision of recycling, garbage and composting facilities which are	Recycling and composting treats waste as a resource and reduces the need for landfill expansion.	Site Plan

	easily accessible for all occupants (in an attached building).		
6.3	On-Site Aggregate: To the extent possible, utilize suitable on-site aggregate material for construction purposes.	Reduces the demand for new aggregate, reduces off-site transportation and related emissions and utilizes a non-renewable resource.	Subdivision and Site Plan
6.4	Construction Waste Management: Develop and implement a waste management plan to reduce, recycle and/or salvage construction, and land clearing waste.	Reduces construction and waste disposed of in landfills, and to treat recycled and salvaged materials as a resource.	Subdivision and Site Plan

Section 7: Maintenance, Monitoring and Communication			
#	Recommendation	Rationale	Implementation
7.1	Maintenance Plan: provision of a maintenance plan for multiple residential development subject to site plan approval. The maintenance plan is to provide instructions, training requirements and schedules for maintaining sustainability features of the site/ building/landscaping.	A maintenance plan will ensure sustainability features remain implemented on the site and continue to function at optimal levels.	Site Plan
7.2	Education: Prepare a homeowners/tenant brochure that explains the intent, benefits, use, and maintenance of sustainable development design and building features as part of the lease/sale agreement and/or condo declaration.	Communicating sustainable design features and educating occupants and visitors regarding the rationale for these features will help to ensure their proper use and maintenance.	Subdivision and Site Plan

3.1.2 *Additional Considerations*

There are other considerations and approaches that can be explored through future development applications to support the development standards prepared for the GID lands.

3.1.2.1 Net Zero Ready Homes™ and Buildings – A Passive Design Focus

The approach for buildings to be designed to meet Energy Star for New Homes™ or Net Zero Ready Homes™ will target technologies applied to the design and construction of residences and buildings on the efficient passive design (insulation, air tightness, fenestration, and more). The residences and buildings may include the following elements and practices:

- Net Zero Ready - Passive Envelope Performance
    - Aggressive air tightness targets and on-site testing & verification.
    - Continuous exterior insulation with limited thermal bridging.
    - High performance windows and glazing products that reduce both space cooling and space heating loads.
    - Application of efficient hot water systems through the use of re-circulation systems, air source hybrid electric hot water equipment, or .96UEF condensing systems.
    - Smart home thermostat controls that optimize energy use around occupant behavior, predictive weather capabilities, and more.
- Net Zero Ready – Mechanical Performance
    - Integration of cold-climate heat pump technology for space heating and cooling.
    - ERV - Energy Recovery Ventilation - systems enable healthy IAQ while reducing both heating and cooling loads.
    - Enhanced drain water heat recovery application for domestic hot water systems.
- Net Zero – Operation (The occupants)
    - Energy monitoring platform that facilitates occupant interaction and reinforces awareness and energy literacy.
    - Enables all occupants to affect/reduce the largest energy load in a building or residence (40% to 70% Occupant loads or Baseloads).

3.1.2.2 Design Considerations for the Interior Building Environment

The design and development of the interior built environment to enhance the health and well-being of residents, visitors, and community members will also assist in achieving the objectives. The following provides some considerations:

- Focus on passive enclosure technologies that are designed and constructed to provide comfort through surface temperature control, limited thermal bridging, and tight connections – reducing sound, odor, and uncontrolled air leakage.
- Attached, multi-family dwellings will be designed and tested to ensure "compartmentalization", limiting cross-suite contamination of odor, sound, and air.
- Integrate ERV (Energy Recovery Ventilation) systems, enabling efficient delivery of fresh air throughout homes and buildings. This facilitates better relative humidity control in both summer and winter, thus supporting healthy interior environments.
- Glazing / Window selection and design that:
    - Increases access to natural daylight.
    - Increases interior surface temperature during the winter.
    - Limits overheating / air conditioning loads in the summer.
    - Enables occupants to maintain healthier ranges of relative humidity through the winter without the issue of window condensation.
    - HVAC systems designed around the efficient, healthy, continuous delivery of fresh, conditioned air to every corner of the residence.

3.1.2.3 Energy and Sustainability Brochure to Homeowners

There is an opportunity to share "Smart & Sustainable" community objectives and design recommendations with homeowners through a homeowner brochure with information on the sustainability objectives identified and shared. The brochure could include information on the building design as well as general information on the development standards and general objectives of the city.

4.0 Policy Context

4.1 City of Guelph Official Plan

The City of Guelph Official Plan (the "Official Plan") was adopted by Council on November 1, 1994, and approved by the Minister of Municipal Affairs on December 20, 1995. It has since been comprehensively amended. The plan establishes the land use planning framework for the City and among other matters includes goals and objectives; sustainability guidelines; general land use policies; and land use designations/associated policies.

4.1.1 *Strategic Goals*

The strategic goals of the Official Plan focus on sustainable development and support of ecological, cultural, social, and economic decision-making. These goals provide a broad framework for policies in the Official Plan that will inform planning and development within the City. The City's strategic goals were incorporated throughout the development standards for the GID Block 1, 2 and 3 lands.

4.1.2 *Energy Sustainability*

In conjunction with the City of Guelph's Community Energy Initiative, the Guelph Official Plan uses an integrated system to establish a vision and structure for energy sustainability and to achieve the City's climate change mitigation goals. The Official Plan identified that the integrated system includes low-carbon energy opportunities, viable sustainable transportation routes and nodes, potential for expanding open space and employment areas, and appropriate housing densities.

The GID Blocks 1, 2, and 3 have been designed with a range of uses and housing densities, and a well-connected open space and active transportation system. Energy sustainability will be reviewed on a site-by-site basis against the development standards and implemented through future development applications. The GID Block Plan lands will contribute to the City meeting its climate change mitigation goals.

4.1.3 *Protecting What Is Valuable*

An overarching goal of the Guelph Official Plan is to protect the natural and cultural heritage resources, health, and safety, and enhance energy sustainability and the quality of life within the city. The subject lands are contributing to the achievement of this goal by designating significant natural areas to preserve natural heritage resources and proposing park space throughout the Block Plan area to enhance the health and quality

of life of future residents. Innovative building design and construction practices will also enhance energy sustainability in the Block Plan area.

4.1.4 *Transportation*

The Official Plan encourages the creation of a multi-modal transportation system that creates vibrant streets that ensure the safe integration of various forms of transportation including cycling, walking, and motor vehicles. Development of the GID Block Plans will ensure that there is support for a multi-modal transportation system facilitating transit and everyday active transportation options. The Block Plans will also be designed with electric vehicle infrastructure in mind, at minimum meeting the zoning by-law requirements for electric vehicle charging facilities.

4.1.5 *Sustainable Urban Design*

The Guelph Official Plan includes policies on achieving sustainable urban design through site and building development. These policies will be reflected in the final site design to support energy efficiency and water conservation. Strategies for energy-efficient site design may include alternative or renewable energy systems, building orientation, sustainable building design, low-impact stormwater infiltration systems, drought-resistant landscaping, and similar measures. Development in the Block Plans will accommodate existing topography where feasible to minimize grading and the import of fill. Additionally, sustainable urban design practices will be used to build neighbourhoods in the Block Plan area that efficiently utilize existing infrastructure and encourage active transportation.

4.2 Guelph Innovation District Secondary Plan

The Guelph Innovation District Secondary Plan (Official Plan Amendment 54) was approved by City Council on May 12, 2014. The bylaw (2014)-19756 to adopt Official Plan Amendment 54 was passed on May 26, 2014. This Secondary Plan has been developed to plan more than 1,000 acres known as the Innovation District; a sector focused on green economy and meeting housing targets.

4.2.1 *Vision, Principles and Objectives*

The vision for Guelph's Innovation District (GID) revolves around creating a home for innovative, sustainable employment uses with an adjacent urban village connecting residential and compatible employment uses. The district integrates itself with the University of Guelph and Downtown, forming a trinity of innovation spaces. The GID prioritizes pedestrian accessibility, offering diverse land uses at transit-friendly densities, and emphasizes sustainability through green buildings and infrastructure promoting a low-carbon future. It fosters connectivity between transportation modes, prioritizing pedestrians, cyclists, and transit users while seamlessly blending into the city's fabric, presenting an exciting yet familiar urban landscape.

The Guelph Innovation District Secondary Plan is guided by the principles of:

- Protect what is valuable
- Create sustainable and energy-efficient infrastructure
- Establish a multi-modal pedestrian-focused mobility system
- Create an attractive and memorable place
- Promote a diversity of land uses and densities
- Grow innovative employment opportunities

The Vision, principles and objectives have informed the Block Plan and supports development. The Secondary Plan has also been referenced as direction for this report.

4.2.2 *Natural & Cultural Heritage*

One of the main objectives of the GID is to balance development with the preservation of natural and cultural heritage. To align with the goals and objectives of the Secondary Plan and Official Plan, the Natural Heritage Lands in Blocks 1, 2, and 3 will remain undeveloped. Parks and stormwater management infrastructure will be strategically located to maximize public views of the Natural Heritage System and provide greater protection opportunities. Trails in these areas will be subject to specific study.

4.2.3 *Energy, Servicing & Stormwater*

The GID Secondary Plan encourages the GID Blocks to be designed as low-impact urban development. The GID Blocks will prioritize energy efficiency and emission reduction through a multi-modal transportation system including transit, cycling, and pedestrian infrastructure. The Block Plans will adhere to efficient energy and wastewater system policies as outlined in the Official Plan, further emphasizing sustainability measures through best practices in stormwater management and Low Impact Development (LID). Industrial, Commercial and Institutional (ICI) development is encouraged to decrease water usage through reuse and/or substitution of water demands. These matters would be addressed through detailed designs.

4.2.4 *The Public Realm*

The GID public realm is composed of publicly owned spaces and the relationship of the built environment to public spaces. The GID Block Plans showcase the importance of pedestrian-focused and human-scaled environments through accessible and attractive streetscapes and mixed-use corridors. The inclusion of a multi-modal transportation system within GID will balance safety and functionality, providing dedicated spaces for various road users. Parks and open spaces will be key components of the public realm with opportunities for active and passive activities and visual and physical connections to other components of the public realm. The public realm will be well-lit and landscaped to create an inviting space that facilitates social interaction and connections between various uses.

4.2.5 *Land Use & Built Form*

The GID Secondary Plan includes general land use and built-form policies for the GID. The development pattern of the GID shall be planned for people to live and work in close proximity with a variety of live and work opportunities. The GID lands will be developed in accordance with the Secondary Plan designations, which allow for a diverse mix of commercial, residential, and service uses. The development density will be sufficient to support active transportation and transit, with high-density development directed to transit stops and Nodes. Detailed building design elements will be utilized to maximize

opportunities for passive energy efficiency such as massing, siting, materials, and elevation articulation.

4.3 City of Guelph Community Energy Plan/ Community Energy Initiative

The City of Guelph Community Energy Plan (the "CEP") and the Community Energy Initiative (the "CEI") reflect the City's commitment to become more effective at managing energy and water resources. The CEP and CEI were created to support the City's future growth and ensure the long-term competitiveness and environmental performance of the City.

The proposed development standards provide direction and recommendations for the GID lands to align with the CEP and CEI. GID Block Plans will provide additional housing solutions for the City's growing population while also establishing a community that will be recognized as diverse, innovative, and a leading neighbourhood in environmental stewardship.

The vision of the CEP is to create a healthy, reliable, and sustainable energy future by continually improving how energy and water resources are managed. The GID Blocks will achieve the vision of the CEP, by integrating innovative energy and water resource management technologies into the development standards. Energy-efficient systems and development will be implemented through the development standards theme areas and innovative design and performance measures. Water conservation and management will be implemented through best practices in stormwater management and the exploration of Low Impact Development (LID).

The sustainable goals and measurements set in the CEP are intended to be visionary and actionable, with goals that are clearly and easily measurable. The four goals used to support Guelph's energy vision are:

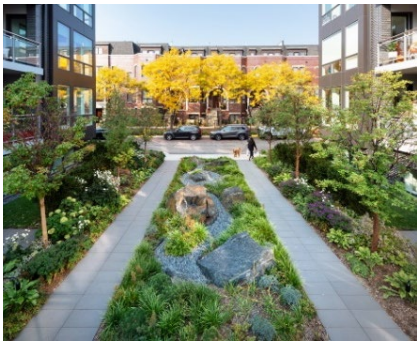
- Guelph will be the place to live and invest supported by its commitment to a sustainable energy future
- Guelph will have a variety of reliable, competitive energy, water, and transport services available to all
- Guelph energy use per capita and resulting greenhouse gas emissions will be less than the current global average
- Guelph will use less energy and water per capita than comparable Canadian cities

- All publicly funded investments will visibly contribute to meeting the four CEP goals

The goals of the CEP have been considered in the creation of the GID Block 1, 2 and 3 development standards. The development standards emphasize energy and water efficiency, a diverse transportation system, and reducing greenhouse gas emissions. The development standards create an actionable framework for development to be evaluated against to ensure that the City's sustainability goals are being achieved on the GID lands.

The GID Blocks will assist the city in meeting its CEI targets of reducing per-capita energy consumption and reducing per-capita greenhouse gas emissions by requiring and encouraging various tools to reduce energy consumption and reduce greenhouse gas emissions during construction and post-development.

The GID Blocks are suggested to consider Energy Star and Net Zero Ready development. The sustainability of development in the GID Blocks will balance affordability, energy efficiency, and innovation to achieve the City's sustainability objectives.



Although district energy is identified as a potential sustainability measure in the GID Secondary Plan, Alectra has not identified GID as a potential district energy area. District energy is also a low priority in the CEI update recommended actions and the City has not established District Energy Ready Guidelines. The City's District Energy Strategic Plan identified GID as a medium-priority area for district energy and was not included in the heat supply, economic, or strategic analysis of the Plan. As such, viable opportunities for district energy are being explored, but the development standards do not require district energy.

5.0 Implementation

The recommendations for the GID Blocks will occur through future development applications including zoning by-law amendments, conditions of draft plan of subdivision, site plan approval, and building permits. The development standards identify sustainability actions and at which stage in the development process these matters are recommended to be addressed. The recommendations identified in the development standards will be considered for future development applications, however, it should be recognized that the range of measures utilized on a site-by-site basis will vary throughout the Block Plan areas.

5.1.1 *Development Application Process*

Broad-scale sustainability measures such as electric vehicle parking rates will be addressed through official plan amendment or zoning by-law amendment applications to establish standards for the site. Site-specific measures such as building design, snow and salt management, site disturbance, and community connections will be addressed at the subdivision and site plan stage once development details are available.

6.0 Resources

A number of documents were referenced in developing the development standards:

- 2018 report "Community Energy Investment Strategy for Waterloo Region"
- 2020 National Building Code – Proposed Tiered Energy Code for Houses and Small Buildings Tier 3
- 2007 City of Guelph report "Community Energy Plan"
- 2018 City of Guelph Report "Community Energy Initiative Update"
- 2023 City of Guelph "Sustainable Development Checklist"
- Net Zero Ready Home^{tm} Performance Labelling Program Technical Guidelines vs 1.1. 2020 –CHBA (Canadian Home Builders Association)
- LEED^{tm} V4 2019 : Canadian Green Building Council
- 2019 report developed by S2E consultants for the Federation of Canadian Municipalities FCM entitled "Municipal Tools for Catalyzing Green Development © 2019, The Corporation of the City of London"