

# Blatchford Sustainability Metrics

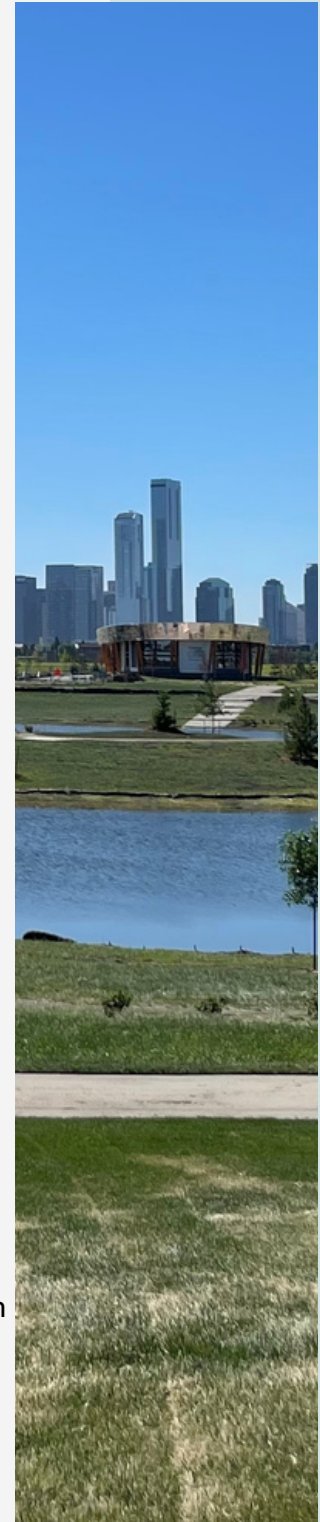
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Sustainable elements are slowly becoming normalized features and/or requirements for urban developments. With special consideration to the existing environmental and desired built forms, sustainability metrics can be employed to highlight the benefits of strategically-designed urban strategies. The purpose of this report is to showcase metrics selected to measure the sustainability and resilience of the developing Blatchford neighbourhood ("Blatchford") in the City of Edmonton ("Edmonton"). This Report and toolkit emphasized a set of specially-designed sustainability metrics and indicators for the Blatchford Redevelopment Office ("BRO") to measure and monitor sustainability performance of the developing neighbourhood.

The project team reviewed relevant plans and policies, including Edmonton's City Plan to ensure that the created metrics, indicators and measurements align with strategic goals for Blatchford. The literature review was supplemented with research into organizations striving for sustainable development, including Leadership in Environmental Energy and Design (LEED), Building Research Establishment's Environmental Assessment Method (BREEAM) and the German Sustainable Building Council (DGNB), among others.

The sustainability toolkit comprises four (4) major categories: Natural Environment and Open Spaces, Energy and Materials, Accessibility and Built Form. Natural Environment and Open Spaces speaks to ecological sustainability in which pollutants and greenhouse gas (GHG) emissions negatively impact human health. Energy and Materials measures production and usage of carbon neutral energy within Blatchford. Accessibility informs social sustainability in which access to opportunities is representative of the viability of a community. Lastly, Built Form encompasses the housing unit and land use mixes to consider densities across the neighbourhood.

The set of Blatchford-specific sustainability metrics and indicators emphasized the cost- and energy-saving features of the new and growing community. While many prospective buyers may be skeptical to invest in the proposed net zero development in the heart of Edmonton, the provision of these metrics will be used to emphasize the benefits of sustainable development. The sustainability metric toolkit can be used by the BRO to emphasize the benefits of this truly unique development. It was recommended that the initial measurements include metrics and indicators for GHG Emissions, Water, Pollution, Proximity and Materials. The remainder of the 35 metrics will be considered as Blatchford is developed into the future.



Edmonton Downtown looking south  
Photo by Project Team

# Priority Indicators

Metric	Indicator	Measurement (Unit)	Benchmark	Target	Long-term Study Needed?	Time Sensitive?	Easily Measurable?	Measurement Start Date
Proximity	Public Transit	Distance (km)	NA	NA	Yes	Yes	Y-I	Stage 1
Proximity	Parks	Distance (km)	NA	NA	Yes	Yes	Y-I	Stage 1
Pollution	PM2.5	ug/m3	20-25 ug/m3 (Over 24-Hours)	As Low as Possible	Yes	Yes	N-E	Stage 1
GHG Emissions	CO2	ppb	First Reading	0	Yes	Yes	N-E	Stage 1
GHG Emissions	O3	ppb	70ppb	60ppb	Yes	Yes	N-E	Stage 1
GHG Emissions	NO2	ppb	55-60ppb	42ppb	Yes	Yes	N-E	Stage 1
GHG Emissions	SO2	ppb	70ppb	65ppb	Yes	Yes	N-E	Stage 1
Water	Stormwater Retention	Litres/Hour	NA	NA	Yes	Yes	N-E N-N	Stage 1
Water	Pollutant Levels in Stormwater Outflows	mg/L	180mg/L	99.73mg/L	Yes	Yes	N-E N-N	Stage 1
Materials	Construction Material Recycled	Percentage (Weight Recycled Materials/ Weight of Total Material)	70%	90%	Yes	No	N-S	Stage 1
Materials	Sustainable Sourcing	Percentage (Sustainably Sourced/ Total Materials)	50%	80%	Yes	Yes	N-S	Stage 1