

Sustainability Targets

Overview

The UBC Lower Mall Phase 1 project is pursuing LEED v4.1 Building Design + Construction (LEED BD+C) Gold certification, following the UBC LEED Implementation Guide (LEED v4 and v4.1) as a benchmark to set the minimum requirements and credits that the project is set to achieve. The UBC LEED Implementation Guide aims to align the LEED rating systems and UBC campus policy to facilitate a high-performance built environment on campus. It supports the provincial requirement for all publicly funded new construction and major renovation projects to achieve LEED Gold certification.

The project is registered to pursue a group certification with four new buildings on site (buildings 01, 02, and 03 being accounted for as one building as they are connected on their lower floors), with ongoing conversations with the CaGBC to assess the inclusion of the rehabilitation of the Firehall as a fifth building. The current project scorecard shows 64 targeted points with an additional 40 points still requiring further assessment, making the project well on track to achieve LEED Gold Certification.

Other sustainability targets defined by the Design Brief

The project Design Brief references additional sustainability objectives that will continue to inform the design of the project. On the building performance side, specific greenhouse gas emission and energy use reduction targets were refined from the Design Brief by the project team to provide a less carbon-intensive and more resilient project. These targets will be tracked throughout the design of the project, through to building occupancy. The specific targets are shown below:

- TEUI: 100 kWhm2/yr
- TEDI: 18 kWh/m2/yr (amended from 24kWh/m2/yr of the original Design Brief)
- GHG: 1.8 kgCO2e/m2 (amended from 2.2 kgCO2e/ m2 of the original Design Brief)
- Residences: Domestic Hot Water energy use intensity (included in EUI): 27 kWh/m2/ye

The design brief also emphasizes the following strategies:

- Rainwater Management Master Plan for the larger Lower Mall Precinct, that will first be implemented in the Lower Mall Phase 1 project.
- Reduce indoor and outdoor water consumption throughout the project and programs
- Achieve a minimum of 10% reduction in embodied carbon following the UBC Whole Building Life Cycle Assessment Guidelines and design a zero-waste ready project
- Address the Provincial Climate Resilience Framework and Standards for Public Sector Buildings and follow the Climate Ready Requirements for UBC Buildings
- Follow the UBC Bird Friendly Design Guidelines for Buildings to address bird strikes on campus

LEED v4 BD+C PROJECT SCORECARD				PROJECT NAME: UBC LOWER MALL PHASE 1 CERTIFICATION LEVEL: GOLD			
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Y	?	N				
1			Credit	Integrative Process	Group	1
10	6	16	Location and Transportation			16
		16	Credit	LEED for Neighborhood Development Location	Group	16
1			Credit	Sensitive Land Protection	Group	1
	2		Credit	High Priority Site	Group	2
5			Credit	Surrounding Density and Diverse Uses	Group	5
2	3		Credit	LEED v4.1 Access to Quality Transit	Individual	5
1			Credit	Bicycle Facilities	Group*	1
1			Credit	Reduced Parking Footprint	Group	1
	1		Credit	Green Vehicles	Group	1
5	4	7	Sustainable Sites			10
Y			Prereq	Construction Activity Pollution Prevention	Group	Required
1			Credit	Site Assessment	Group	1
	2		Credit	Site Development - Protect or Restore Habitat	Group	2
1			Credit	Open Space	Group	1
	2	1	Credit	LEED v4.1 Rainwater Management	Group	3
2			Credit	Heat Island Reduction	Group	2
1			Credit	Light Pollution Reduction	Group	1
5	6		Water Efficiency			11
Y			Prereq	Outdoor Water Use Reduction	Group	Required
Y			Prereq	Indoor Water Use Reduction	Individual	Required
Y			Prereq	Building-Level Water Metering	Individual	Required
1	1		Credit	Outdoor Water Use Reduction	Group	2
3	3		Credit	Indoor Water Use Reduction	Individual	6
	2		Credit	LEED v4.1 Cooling Tower Water Use	Group	2
1			Credit	Water Metering	Individual	1
21	7	6	Energy and Atmosphere			33
Y			Prereq	Fundamental Commissioning and Verification	Individual	Required
Y			Prereq	Minimum Energy Performance	Individual	Required
Y			Prereq	Building-Level Energy Metering	Individual	Required
Y			Prereq	Fundamental Refrigerant Management	Individual	Required
4	2		Credit	Enhanced Commissioning	Group	6
14	4		Credit	Optimize Energy Performance	Group	18
1		1	Credit	Advanced Energy Metering	Individual	1
1		1	Credit	Demand Response	Group	2
	1	2	Credit	LEED v4.1 Renewable Energy	Group	3
1			Credit	Enhanced Refrigerant Management	Individual	1
		2	Credit	Green Power and Carbon Offsets (N/A LEED v4.1)	Group	2
7	6		Materials and Resources			13
Y			Prereq	Storage and Collection of Recyclables	Group	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Group	Required
3	2		Credit	Building Life-Cycle Impact Reduction	1/2-1 3/4-G	5
1	1		Credit	LEED v4.1 BPD - Environmental Product Declarations	Group	2
1	1		Credit	LEED v4.1 BPD - Sourcing of Raw Materials	Group	2
1	1		Credit	LEED v4.1 BPD - Material Ingredients	Group	2
1	1		Credit	Construction and Demolition Waste Management	Group	2
8	8		Indoor Environmental Quality			16
Y			Prereq	Minimum Indoor Air Quality Performance	Individual	Required
Y			Prereq	Environmental Tobacco Smoke Control	Group	Required
1	1		Credit	Enhanced Indoor Air Quality Strategies	Individual	2
2	1		Credit	Low-Emitting Materials	Group	3
1			Credit	Construction Indoor Air Quality Management Plan	Group	1
1	1		Credit	Indoor Air Quality Assessment	Individual	2
	1		Credit	Thermal Comfort	Individual	1
	2		Credit	Interior Lighting	Group	2
2	1		Credit	LEED v4.1 Daylight	Individual	3
1			Credit	Quality Views	Individual	1
	1		Credit	Acoustic Performance	Individual	1
4	2		Innovation and Design			6
3	2		Credit	Innovation in Design	Group	5
1			Credit	LEED Accredited Professional	Group	1
3	1		Regional Priority			4
1			Credit	Regional Priority: EAc2 Optimise Energy Performance	-	1
1			Credit	Regional Priority: WEc1 Outdoor Water Use Reduction	-	1
1			Credit	Regional Priority: MRc1 Building Life Cycle Impact Reduction	-	1
	1		Credit	Regional Priority: Indoor Water Use Reduction (4) or Commissioning (5)		1
Y	?	N				
64	40	29	TOTAL SCORE			Possible Points: 110

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110