

# Emerald Hills Urban Village

A SuN LIVING Pilot Project

The Emerald Hills Urban Village (EHUV) is a 20 hectare (50 acre) diverse neighbourhood within Sherwood Park, Alberta. The project centres around enabling and fostering sustainability through four guiding principles and twelve themes for evaluating sustainable development. [see figure 1](#)

The integration of the four guiding principles and twelve themes aim to:

1. Enable sustainable living with planning and design choices that create opportunities for residents to live within the capacity of one planet while making sustainable living easy, practical, attractive and affordable.
2. Enable quality of life with planning and design decisions that enhance well-being and social interaction in the built environment.
3. Foster sustainable living by engaging the community to create a program of initiatives and activities that influence popular attitudes and encourage change towards sustainable behaviours.
4. Foster quality of life by engaging the community in a range of social programs that will build social sustainability and ensure a healthy, connected, supportive environment for its residents for years to come.

## Developers :

Christenson Developments,  
Cameron Development Corporation,  
Best Communities (By Landmark) and  
Genstar Development

## Location:

Sherwood Park, Alberta

\$469 million project

20 hectares (50 acres)

1,600 units

1,645 m<sup>2</sup> (17,700 ft<sup>2</sup>) of office space

1,533 m<sup>2</sup> (16,500 ft<sup>2</sup>) of retail

18% Parking and Road (vs typical 31%)

Community Energy System (CES)

## A Collaborative Approach

The pilot project is a multi-stakeholder, collaborative approach where both the public and private sector work in partnership based on shared vision and values. The project facilitates and enhances a new culture for planning and development.

Emerald Hills Urban Village was chosen as the first project to apply the SuN LIVING approach which provides the methodology for implementing sustainability and sustainable living concepts.

## SuN LIVING

Initially developed through Natural Resources Canada, SuN LIVING is a holistic planning and integrated design approach comprised of five steps: commit, initiate, explore, synthesize and implement. The framework begins with broader scale concepts of sustainability and systematically unbundles these concepts into more detailed goals, targets strategies and actions. [see figure 2](#)

storm water management



CES power plant



swales



backyard gardening



## Sustainability Summary:

Illustrating the 12 Themes for Evaluating Sustainable Development

1

Land

A mix of housing types and tenures will be incorporated in the same neighbourhood to allow for diversity in age, income level and lifestyles. By integrating live-work opportunities in both residential and commercial buildings, efficiency and diversity are optimized. The commercial area is able to increase density over time. With densities increased to the interior of the village, the high wall effect is reduced providing for maximum sunlight. A greenway network will provide connection throughout the village and to surrounding areas allowing for restricted vehicular access reducing paving requirements. LEED ND (Neighbourhood Development) prerequisites and credits are to be satisfied.

2

Natural Habitat

The multi-functioning green spaces will preserve significant ecological value; maintain connectivity between and access to, natural habitat areas and green space. Open spaces aim to act as habitat for urban species and a multi-story approach to vegetation is incorporated. Native vegetation will be used to ensure ecosystem health. Green corridors are used to link habitat areas within the village and surrounding lands.

3

Water

The project aims to maintain the health of the aquatic ecosystem, reduce the demand for potable water resources and minimize the life cycle costs of water infrastructure. Storm water will infiltrate where it falls in order to reduce the amount of water that requires municipal treatment or reduce water discharged in a deteriorated state. The intent is to infiltrate storm water runoff within or adjacent to the village. The use of natural habitat and landscape to intercept, is meant to absorb and restore quality of storm water runoff. Building design will conform to standardized Green Building, LEED, and other rating protocols. The village aims to adopt a circular approach to water and wastewater resources to reduce the impact on municipal infrastructure. Wastewater is meant to be used as a resource.

4

Carbon

Through the use of renewable energy sources such as green building practices, landscaping techniques and a community energy system (CES), the community is designed for optimum energy efficiency of buildings and infrastructure allowing carbon requirements to conform to LEED Gold NC (New Construction.) The CES will reduce 3,600 tonnes of greenhouse gases which will increase over time.

5

Transport

The village and surrounding area will have a safe, vibrant, and interconnected network of streets and corridors which will minimize car access while prioritizing walking and cycling. Multiple transportation choices will be available through the reduction in distance between residence and employment locations. Higher densities and mixed uses make public transit a viable option.

6

Food

Community-based food production will integrate naturally by layering visible and accessible food production spaces throughout the village. The integration of community gardens within the open space and farmers markets within the “heart” of the village will create a sense of community and a connection with the County’s rural culture. It promotes the idea of local and fresh produce for well-being.

7

Materials

The compact design will conform with standardized green building rating protocols (LEED, Built Green, BOMA Go Green, etc.) reducing the amount of materials required overall.

8

Waste

By using the “cradle-to-cradle” model, the design will conform with standardized green neighbourhood and building rating protocols. This means the use of recycled materials and reuse, composting system, waste to energy possibilities, integrated waste management system and recycling systems.

9

Economy

Dispersed throughout the village, a range of economic opportunities for a scope of different income and skill levels will be developed.

10

Well-Being

A large, yet inviting, central public open space acts as the “heart” of the village. Recreational and both structured and unstructured social amenities are developed throughout the village. Strong linkages between the village and surrounding neighbourhoods are important for enhancing interaction. Buildings are also oriented for “eyes on the street” to create a sense of ownership of the public realm. Views and sightlines draw people into public spaces along with spaces and features that are inviting and memorable enhance pedestrian and cycling activity.

11

Equity

The village distributes a diversity of housing options throughout, enabling people from a range of economic levels, ages and abilities to reside in the same community and allowing for adaptability to changing life circumstances. Housing and commercial spaces are designed to be adaptable and flexible to accommodate lifestyle changes.

12

Culture

The village embodies a strong sense of identity that celebrates the local culture, heritage and natural amenities. The village will have welcoming gateways throughout that support a strong identity. The natural, cultural and historic features of the site are referenced in urban design, buildings and public art to create a shared sense of pride, ownership and stewardship.

**Emerald Hills Urban Village follows the concept that a sustainable community and quality of life are intrinsically connected. The project uses technology to reduce energy and resources while the design focuses on the natural environment to enhance well-being. The plan allows for diversity in employment, business and housing to bring in a range of ages and lifestyles to the area. A sense of community is enabled through culture, art and places to interact. All elements within the project interconnect to build a sense of community.**



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**Figure 1**

Four Guiding Principles and Twelve Themes for Evaluating Sustainable Development

**Principle**

**#1**

Move towards, and ultimately achieve, solutions and activities that preserve, enhance and regenerate nature and life-sustaining ecosystems.

**Principle**

**#2**

Move towards, and ultimately achieve, solutions and activities that free us from our dependence on substances that are extracted from the earth's crust and accumulate in nature.

**Principle**

**#3**

Move towards, and ultimately achieve, "cradle-to-cradle" solutions and activities in design, manufacturing and consumption such that substances produced by society do not accumulate in nature.

**Principle**

**#4**

Move towards, and ultimately achieve, social solutions and activities that allow every person to meet basic human needs and achieve their potential in life, now and in the future.

**12 themes for evaluating sustainable development**

land	transport	economy
natural habitat	food	well-being
water	materials	equity
carbon	waste	culture

**Figure 2**

The SuN (Sustainable Neighbourhood) LIVING Approach

Step

**#1**

**COMMIT**

A commitment to sustainable neighbourhood development is established.

mission

principles

themes

Step

**#2**

**INITIATE**

Key pieces needed to plan, design and implement a sustainable neighbourhood are put in place.

vision

Step

**#3**

**EXPLORE**

Opportunities and constraints are investigated and project goals and performance targets are established.

issues areas

goals

indicators

targets

Step

**#4**

**SYNTHESIZE**

Alternative designs are synthesized into a preferred concept plan and course of action.

strategies

actions

Step

**#5**

**IMPLEMENT**

The SuN LIVING Implementation Manual is prepared and passed forward.

guidelines

decision support tools

