

Site Opportunities and Constraints Report

1. Natural Environment and Open Space

The Emerald Hills Urban Village (EHUV) is a 120 hectare (300 acre) greenfield development located in the community of Sherwood Park, east of Edmonton in the municipality of Strathcona County, Alberta. At the time of initial geotechnical field work in 2002, the site was mostly stubble fields with several low-lying areas, and soil conditions were found generally satisfactory for standard building construction and infrastructure including roads and underground utilities.

The local climate for the area consists of mild summers and cold winters, with average temperatures ranging from a low of -19.1°C in January to a high of 22.2°C in July. Temperatures exceed 30°C an average of 2 days per year and drop below -20° an average of 41 days per year. Annually, the area receives 483mm of precipitation and accumulates 121cm of snowfall and 2,289 hours of sunshine.

Stormwater in the larger Emerald Hills development drains to two separate basins with stormwater retention planned for each. EHUV drains to the northeast and discharges to a tributary of Oldman Creek, while the remainder of the Emerald Hills development is directed to the northwest and discharges to Clover Bar Creek. Stormwater management is considered a significant issue for Emerald Hills due to costs associated with infrastructure upgrades in the northwest section; however, EHUV does not contribute stormwater to the affected location.

In addition to the small park located within EHUV, several additional parks and open spaces are located in close proximity to the development. A regional park is directly to the west of the site, while multiple neighbourhood parks and stormwater management areas are located to the east, west and south. Park spaces located both within the Emerald Hills Urban Village and in the larger Emerald Hills development are intended to contribute to stormwater management.



Opportunities:**Moving green spaces around to achieve better integration**

- Investigating new pedestrian crossing points, including how the green spine in EHUV connects with the regional park to the west and the school to the south
- Removing park fences
- Level changes and landscaping can create a more integrated edge to the park
- Routing trails to define park spaces and locating paths near developments for direct access
- Creating legible green connections for pedestrians
- Creating additional green spaces that connect to EHUV's central communal park
- Using private green space to complement the central communal park

Managing and reusing storm water

- Utilising open spaces with high stormwater management value, especially the central EHUV park
- Constructing trails with pervious pavers instead of asphalt
- Integrating stormwater management locations with pedestrian routes

Challenges and Constraints:**Existing plans and construction**

- Some open space within EHUV is already built or about to be built, and other spaces have been designated but not yet designed
- Space limitations affect what is achievable within allocated EHUV land
- Installation of drainage pipes in central green space might constrain moving green spines

Balancing water management and social demands

- Ensuring stormwater management within park is not in conflict with social, recreational, and pedestrian demands.

2. Built Environment and Local Context

The EHUV project site is positioned in the northeast corner of the Emerald Hills development, bordered by a major transportation arterial to the east (Clover Bar Road), and Lakeland Drive to the South. There is no direct access from the development to Highway 16 to the north. The highway is accessible by Emerald Dr., a minor collector road to the north with significant traffic.

Public transit service is available along the outside perimeter of the development on Clover Bar Road, as well as along the Highway and on Sherwood Drive. In

addition, dial-on-demand will be available within EHUV to connect with major bus terminals. The inclusion of a long-term care facility planned for Emerald Hills Urban Village may also incorporate further internal transportation options.

When completed, the Emerald Hills Urban Village development will include a variety of development types, including:

- Independent living townhomes and side-by-side duplexes
- Multi-family condominium apartments
- Seniors apartment housing
- Residential over commercial
- Long term care facility
- Commercial and retail

This mix of development types and uses will create a diverse community and provide enhanced accessibility to local amenities including schools, parks, and shopping.



Opportunities:

Exploring higher densities

- County is willing to explore densities higher than current zoning
- Higher residential densities may enable “urban model” commercial with mixed uses, multi-storey development, and below grade parking
- Single storey retail has potential to incorporate second storey office or residential space

Making the berm more "attractive"

- Reducing fence heights
- Fencing removed where possible, and limiting wooden fences
- Reducing berm and incorporating a “green alley” in the development

Integrating east west and south pedestrian connectivity

- Exploring how green spine connects to regional park to the west and school to the south

- Incorporating “walkability” principles including street segments, open space, and private development

Designing private amenities to simultaneously enhance public amenities

- Exploring an integrated edge between the central communal park and adjacent residential development
- Developing architectural styles that address the green networks
- Ensuring housing and commercial areas backing onto green spines do not “turn their backs”

Creating an intergenerational place

- Mix of development types including multi-family, seniors apartments, long-term care and commercial uses will create a diverse community

Addressing the relationships for commercial to residential uses

- Exploring directing the green spine into the commercial area instead of along its edge
- Connecting households to local services and open spaces by emphasising principles of “walkability” in both private and public areas



Enhancing personal lifestyles and fostering sustainable behaviour

- Enhancing accessibility of amenities including schools, parks, and shopping
- Creating a social environment by serving a wide range of residents through a mix of uses

Access and connectivity to amenities for the elderly

- Increasing internal transit service in conjunction with long-term care facility
- Dial on demand service and additional transit service along Clover Bar Road
- Emphasising principles of “walkability” in public and private areas

Designing street edges that contribute to the vibrant character

- Creating a possible vibrant “main street” along Emerald Drive and enhancing streetscape and transit
- Traffic calming and streetscape enhancement along major arterial roads, including the elimination of berms and fences
- Exploring opportunities for narrowing roadways

Constraints:

Existing Plans and Construction

- Prior agreements, construction, and noise concerns make some berms and fences necessary for the development
- Construction in the southeast area of the development is already underway
- Street right of ways have been fixed

Market and Time Limitations

- Economic feasibility limits opportunities to utilise underground parking in some areas of the development
- Developers specialise in certain types of development, and concentrate on particular markets
- Unlikely that residential will be able to be integrated within retail development
- Time pressures to submit development permits

