



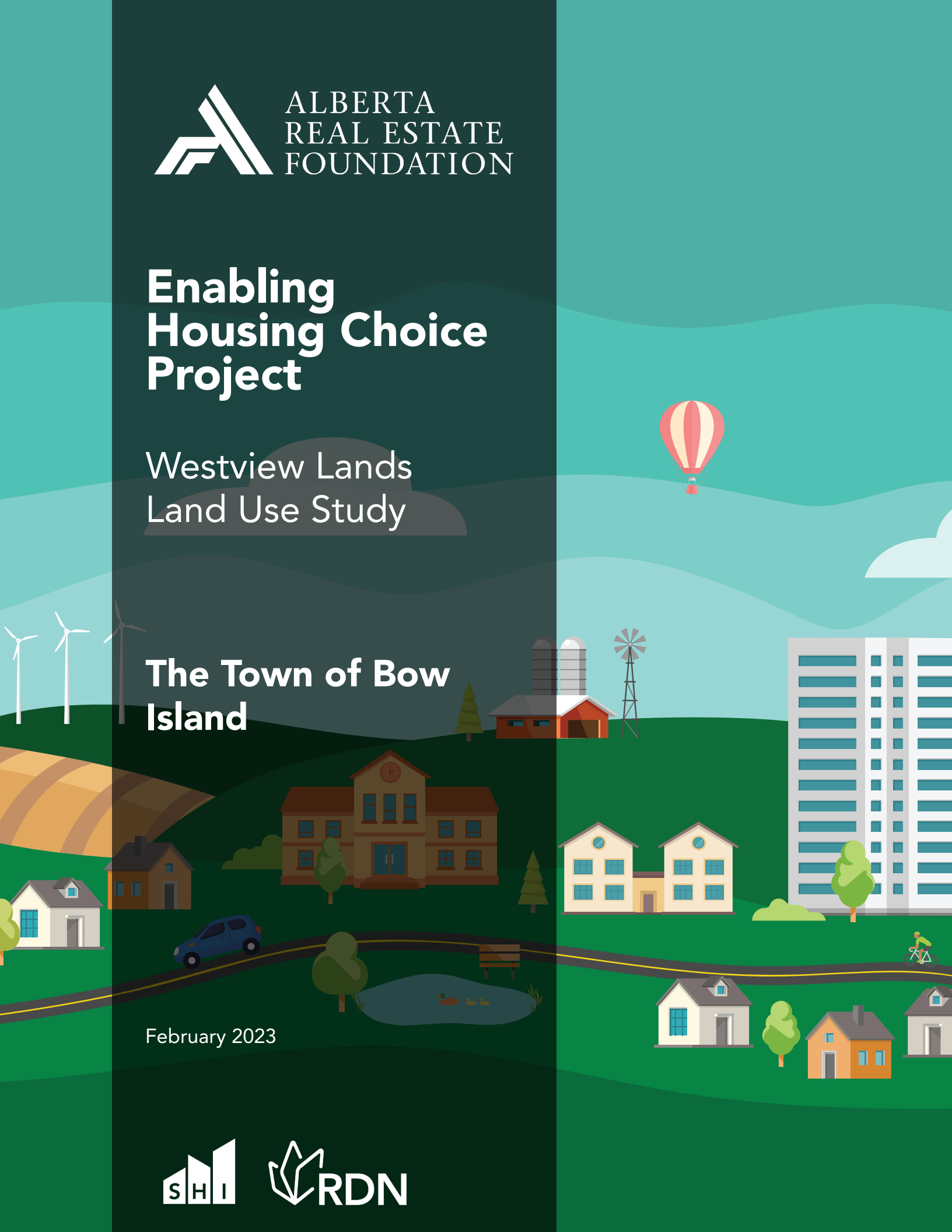
ALBERTA
REAL ESTATE
FOUNDATION

Enabling Housing Choice Project

Westview Lands
Land Use Study

The Town of Bow
Island

February 2023





LAND ACKNOWLEDGMENT

The Enabling Housing Choice Project encompasses all of what we call Alberta, and is the traditional and ancestral territory of many peoples, presently subject to Treaties 6, 7, and 8 including the Blackfoot, Cree, Dene, Saulteaux, Nakota Sioux, Stoney Nakoda, and the Tsuu T'ina Nation and the Métis People of Alberta. We acknowledge the many First Nations, Métis and Inuit who have lived in and cared for these lands for generations. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We make this acknowledgment as an act of reconciliation and gratitude to those whose territory we reside on and that which we refer to in this research.

RDN is committed to supporting the implementation of the Truth and Reconciliation Commission of Canada's Calls to Action, and believes in the need for meaningful engagement and consent with Indigenous peoples in the community. Colonialism is a current ongoing process, and we need to build our mindfulness of our present participation. As this project specifically touches on development and planning concepts which are built on a colonial system of governance and land use management, we also recognize that we have more work to unpack the systems in which we are upholding and working within.

PROJECT ACKNOWLEDGMENTS

Thank you to the Alberta Real Estate Foundation for their funding and support of this project. We would also like to express our appreciation for the Town of Bow Island for hosting the engagement event and helping the Enabling Housing Choice tackle housing diversity and choice.

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EXECUTIVE SUMMARY

INTRODUCTION

On the behalf of the Rural Development Network (RDN), the Sustainable Housing Initiative (SHI) partnered with the Town of Bow Island to undertake a Land Use Study that offers recommendations for the efficient and sustainable utilization of municipal land. This study is supplemented by an engagement strategy that seeks to bolster community support for housing diversity in Bow Island.

This research will contribute to the Enabling Housing Choice Project by providing insights on effective implementation methods for housing diversity. The Enabling Housing Choice Project aims to provide insight on how Albertan municipalities can support growth in their communities and help provide more housing options and choices to their residents through local policy changes and capacity building strategies.

SHI and the Town of Bow Island’s partnership will support the project’s goals in constructing transformational policy change while contributing to the creation of an Enabling Housing Choice Guidebook. Furthermore, it will assist the Town of Bow Island in determining areas of opportunity for municipal land development that further enable housing choice in the community.

PURPOSE

The goal of the Bow Island Land Use Study is to help the Town determine best options and recommendations for a 19 acre lot of municipal land, called Westview Lands. Land uses, transportation corridors, urban design, and development opportunities were examined in order to develop a vision for the site along with recommendations for multiple development concepts that will:

- » Support Bow Island’s planning documents and strategic goals;
- » Include ideas and considerations of the townspeople of Bow Island; and
- » Strengthen community ties and support for housing diversity.

REPORT OVERVIEW

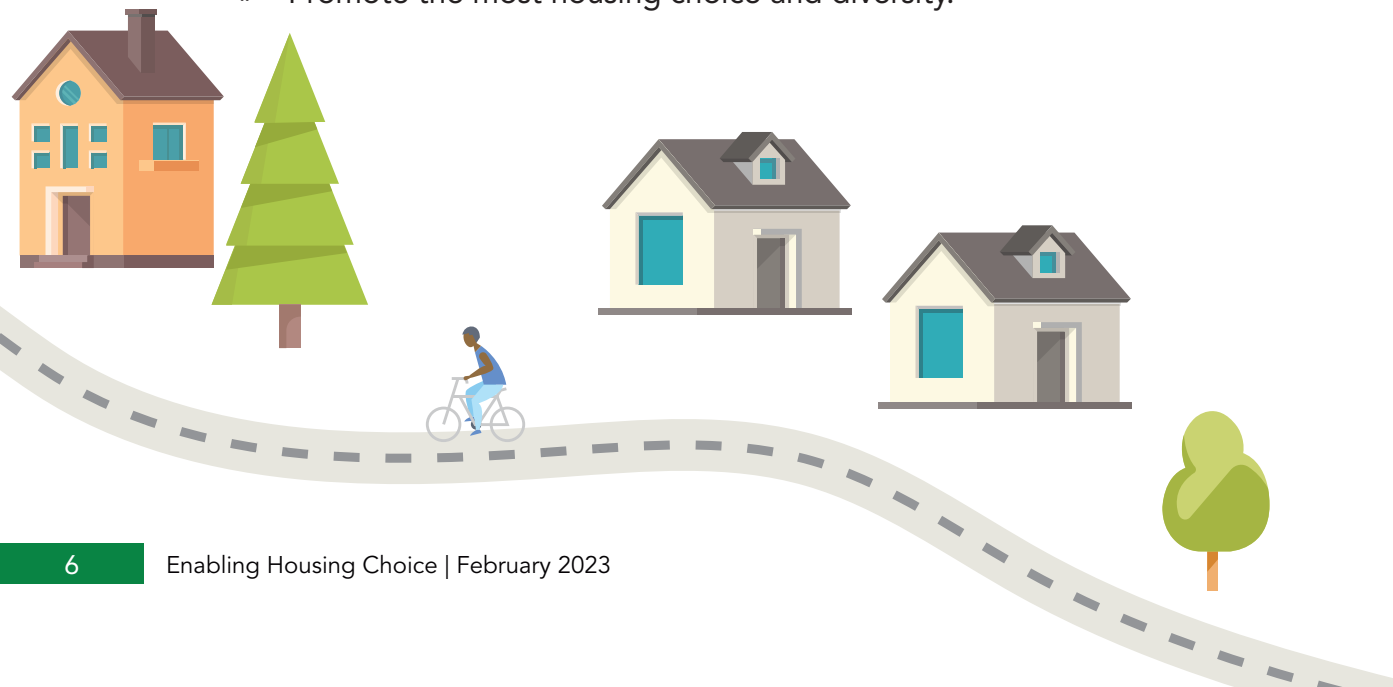
To establish the outcome of this Land Use Study, Section 1 presents a background analysis of the parcel and surrounding areas, as well as a municipal policy review. Conducting a background analysis ensures that when creating the land use concepts, that relevant policies are adhered to and that best practices for designing the final land use concept are followed.

Section 2 looks at visioning and ideation of the recommended land use concepts, where options are created and justified. This section highlights the thought process of how the land use concepts were ideated and visualized. Prior to the creation of this Land Use Study, engagement was conducted in Bow Island through an online survey and a subsequent in-person engagement event.

Section 3 elaborates on the engagement process and how the EHC team incorporated the feedback and concerns of Bow Island residents into the concept ideation and how this informed the final land use concept recommendation. For further information regarding the engagement activities that were conducted, please refer to the What We Heard Report in Appendix 1.

Lastly, Section 4 expands on the final concept recommended and addresses which strategies would be best fit to be implemented for the Town of Bow Island. This concept will:

- » Align with the Town's overall strategic goals and housing policies as identified in the Town of Bow Island's Municipal Development Plan;
- » Incorporate feedback and concerns from Bow Island residents;
- » Embrace the proposed care facility centre and integrate those who are living at the care facility into the community;
- » Establish recommendations for a successful and vibrant recreation area; and
- » Promote the most housing choice and diversity.



BACKGROUND & ANALYSIS

STUDY AREA

Context & Background

Bow Island has approximately 19 acres of vacant municipal land located in the north west portion of the town’s boundaries. Bow Island’s Municipal Development Plan (MDP) has planned for a portion of the site to the north to be retained as a stormwater retention pond as the area was formerly a part of the old water reservoir site. In the south, the plan stated the area was to be developed for mobile homes as the sewer infrastructure was not sufficiently deep for basement additions.



Although Bow Island’s MDP had set plans for the site, the plan is quite outdated and the site context has changed. The site is no longer a wetland and is quite barren. Now, Bow Island’s Administration is currently exploring options to split the site into two or possibly three developments which may include: a park for recreation use, a continuing care site, and/or denser residential housing. During the initial stages of creating a plan for this site, Bow Island conducted a survey in June of 2022 asking residents 8 questions around whether or not they would support the proposed uses for the site and what that would look like. The survey received relatively positive responses, with 70% of residents

supporting the proposed developments. Majority of residents were highly supportive of a park or recreational area on the site, however there was some pushback on the continuing care site and denser residential housing.



Aerial view of Westview Lands parcel, courtesy of Benchmark Geomatics Inc.



The site is currently bound by 6 Avenue W on the south side of the site, but is not bound by any other transportation routes on the north, west, or east boundaries. There is one official access point at the end of Westview Cres leading into the site, however, there are other areas of the site that have potential to be access points. The site is currently zoned Residential District (R-1), which allows for Accessory Buildings & Uses, and Detached Dwellings, essentially single detached homes. The site would have to be rezoned to accommodate for different uses.

Aerial view of north access point to Westview Lands parcel, courtesy of Benchmark Geomatics Inc.



Characteristics of Sub-Areas

Land uses adjacent to the study area include the Residential District (R-1) to the west and the north sides of the site, the Residential General District (R-2) to the east side of the site, and the Railway Industrial District (M-3) to the south side of the site. The site is generally surrounded by residential uses, with single detached housing to the west and north and primarily mobile homes to the east. While the south of the site is zoned M-3, much of the area is vacant with the exception of a church towards the south west of the site.

Further north of the site lies a quadrant zoned Urban Reserve District (UR) which will be developed to be a residential neighbourhood to accommodate for future growth.



POLICY & ZONING REVIEW

County of Forty Mile & Town of Bow Island Intermunicipal Development Plan

The County of Forty Mile & Town of Bow Island Intermunicipal Development Plan (IDP) highlights the working relationship between the County of Forty Mile and the Town of Bow Island since Bow Island resides within the centre of the County of Forty Mile. The IDP looks at the area in a higher level, adhering to the Municipal Government Act (MGA) and the South Saskatchewan Regional Plan (SSRP). Although the lot does not lie in the fringe area of the plan, it is important to consider that residents in the County may access the services the lot will provide. Cooperation and collaboration between the county and the Town is important as their economies are essentially linked.



Bow Island's Municipal Development Plan

Bow Island's Municipal Development Plan (MDP) was adopted in 2010 to provide a guide to the growth of land development within the town. Although the MDP is outdated, Bow Island is currently in the process of developing a new MDP. While that is being created, the current MDP's vision and goals will be taken into account. Their overall vision is to create a clean, beautiful, safe, vibrant, and dynamic community. The lot must envision these qualities when being developed.

The MDP states that the total land required for residential use from 2021 to 2030 is 15 hectares. Bow Island has two quarter sections or 122 hectares of vacant residential land available to accommodate this growth. The lot being 7.69 hectares will contribute to that growth. Logically, the town is developing from south to north in order to minimize the cost of servicing. The lot is the last of the southern portion that needs to be developed before the town starts developing their northern parcels, so it could be seen as a milestone for the development of Bow Island.



Developing the parcel with intentions of attainable and a diversification of housing adheres to the Residential Development Policies within the MDP, specifically Policy Section 3.3 Housing, where the general policy objective is to ensure adequate supply of housing

that takes into account the age, family and economic structure of the residents of the community. The MDP also has Residential Design Policies that encourage the use of residential design principles and the desire for housing diversity that will help guide the urban design of this Land Use Study. Additionally, the recreational component of this Land Use Study complies with the Parks, Recreation, and Community Facilities policies that dedicates municipal land for health facilities, seniors homes, public utilities, and new parks.

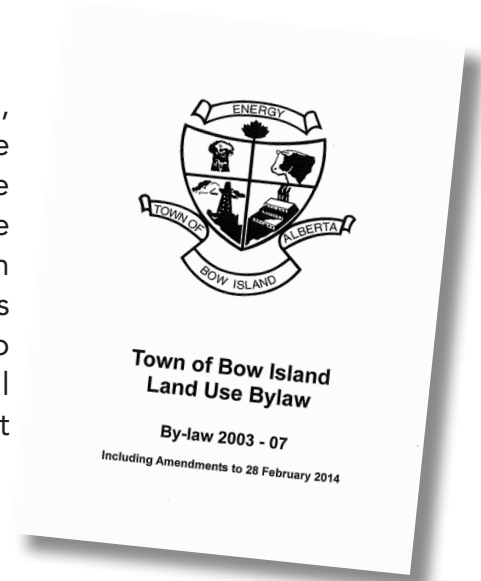
Bow Island’s Strategic Plan

Bow Island develops their Strategic plan every few years. The vision, mission, values, and objectives outlined in the Strategic Plan of 2022-2025 would certainly be supported by the development of this lot. The proposed lot would specifically help with these objectives:

- » Foster an environment that is inclusive and encourages participation of all residents.
- » Advocate for Health Care Services within the community.
- » Foster and promote orderly development of residential and commercial properties.
- » Provide a variety of recreational opportunities and facilities which encourage healthy living and an active lifestyle that meets the needs of the community.
- » Promote and beautify the Town of Bow Island to attract visitors to the community, improve our image.

Land Use Bylaw

Bow Island’s Land Use Bylaw (LUB) was created in 2003, however, the Town is currently going through a Land Use Bylaw renewal. This study acknowledges that a future conformity analysis of the site may be required to ensure that zoning requirements are satisfied in accordance with the Land Use Bylaw Renewal. For the purposes of this study however, the current Land Use Bylaw was adhered to when performing the conformity analysis, ensuring that all recommended land uses are compatible with the current LUB zones.



CONFORMITY ANALYSIS

The lot is currently zoned Residential District (R-1), but will need to be rezoned to accommodate for different uses. To the west and the north are single detached dwellings zoned R-1 backing onto the lot. While the proposed development will have higher densities, regulations outlined in the Land Use Bylaw will be adhered to and ensure that

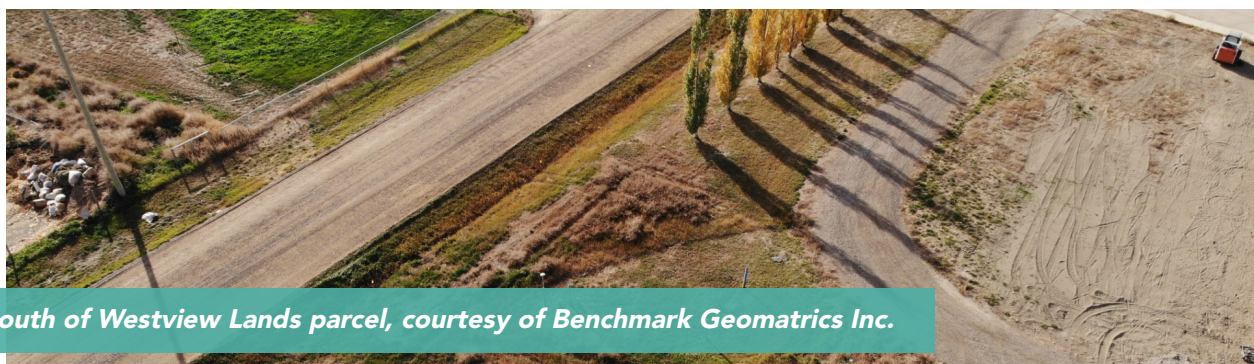
neighbouring residents will be taken into consideration so that they will not be negatively impacted. Additionally, the proposed development will add recreational and green space to the area for all residents to enjoy.

To the east of the proposed development are lots zoned Residential General District (R-2). District R-2's purpose is to accommodate for gentle density with the permitted uses being Accessory Buildings & Uses, Detached Dwellings, Semi-Detached, Dwellings, and Mobile Homes.

Gentle Density is ground-oriented housing that is more dense than a single detached house, but still similar in scale and character. These are housing forms like semi-detached housing, townhouses, and small scale apartment buildings to name a few.

District R-2's current permitted maximum height is 15 metres. While the proposed development may be a larger height transition, proper setback regulations will be followed and shadowing analysis will be performed to ensure the surrounding properties are not negatively impacted. This eastern strip of land has a majority of semi-detached dwellings and mobile homes. District R-2's Class 1 Discretionary Uses include, but are not limited to, Community Buildings & Facilities, Family Care Facility, and Multiple Family Dwellings which are within the uses of the proposed development. With District R-2 being adjacent to the lot, it serves as an adequate transition to higher densities which are proposed on this lot.

Although the south of the lot is zoned Railway Industrial District (M-3), the land is currently vacant. If there were to be development in the south in the future, the permitted uses for District M-3 are Accessory Buildings & Uses, Offices, and Retail & Commercial Establishments. Future development would positively impact residents of the proposed development, since it would increase employment opportunities, but also commercial needs. Additionally, since an arterial road separates the southern lots and the proposed development, noise would not likely impact the proposed residential development.



South of Westview Lands parcel, courtesy of Benchmark Geomatics Inc.

VISIONING

INITIALIZATION

The Town of Bow Island determined that the community needs a recreation area, added housing diversity, and a care facility centre. With the ideation of the Westview Lands site, there are boundaries and restrictions that must be accommodated. On the north-east corner of the Westview Lands site is where the water plant is situated, and is currently owned by the Highway 3 Regional Water Services Commission, which cannot be developed on. Additionally, there is a water retention pond on the north portion of the site which collects water runoff from the adjacent neighbourhoods during rainfall events. This water retention pond area also cannot be developed due to engineering and environmental complications. Taking into consideration the restrictions at hand, programming the space is required to determine the land use on the Westview Lands site.



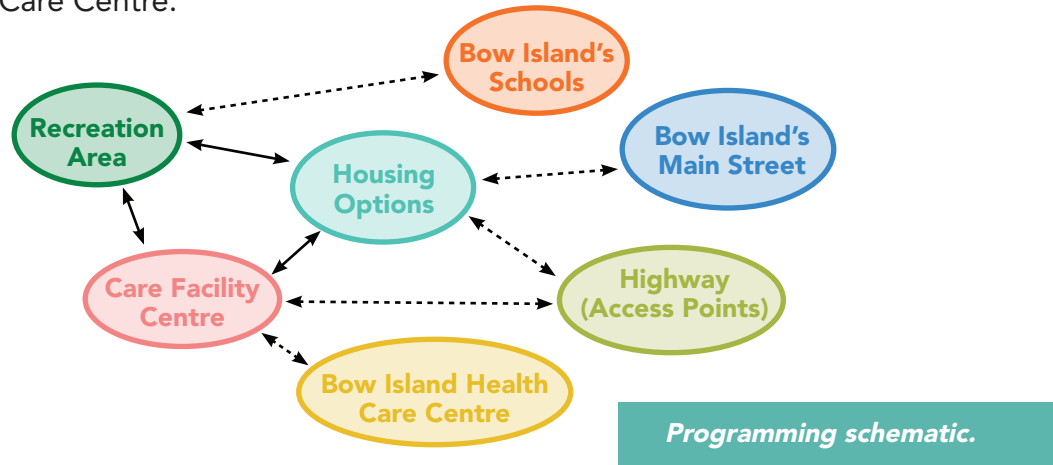
Aerial view of stormwater retention pond on Westview Lands parcel, courtesy of Benchmark Geomatics Inc.

PROGRAMMING SCHEMATIC

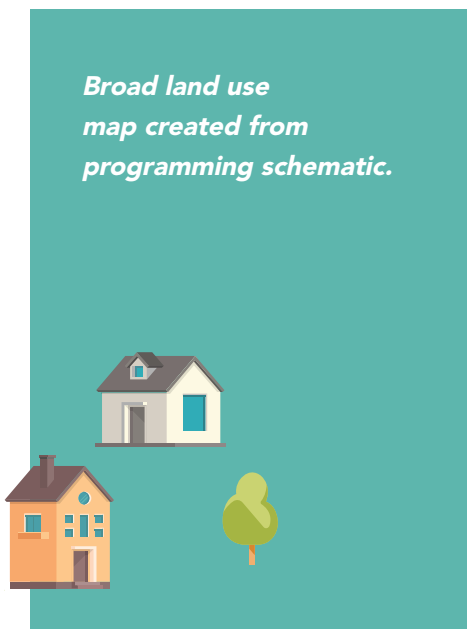
Programming the space and interpreting the adjacencies are necessary to understanding best land use locations. The Town of Bow Island needs a recreation area, added housing diversity, and a care facility centre on the Westview Lands site and with proper programming of the space, it can be determined which items should be adjacent to certain areas.

Starting with the items that are going to be situated on the site, the recreation area should be adjacent to the housing options and care facility centre so that residents can easily access the green space and encourage activity and well-being. The recreation area should be located closest to the school in the north so that children who want to play after school can visit the recreation area with ease.

The additional housing options that will be on the site should be close to the care facility and recreation centre. The additional housing options would be beneficial adjacent to the care facility so that its employees can live within walking distance and work close to their homes. Additionally, with higher densities in housing options, more residents would need to have access to the highway and Bow Island Main Street so that residents can travel in and out of their neighbourhood without heavy traffic impacts. The care facility centre would also benefit from being close to the highway access points and the Bow Island Health Care Centre as this care facility will not be providing long term care. Therefore, if any emergencies occur, residents will have the fastest access to the highway and the Bow Island Health Care Centre.



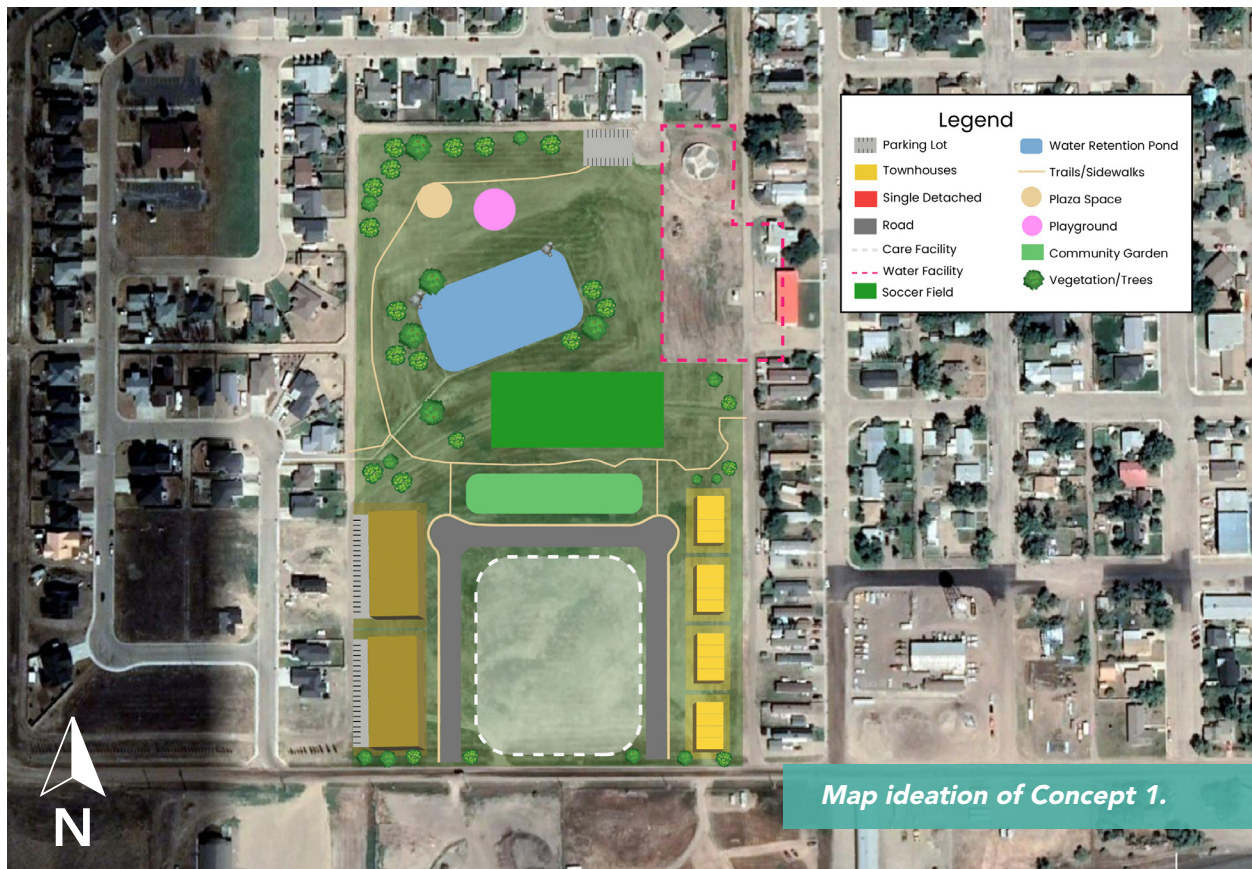
Understanding the adjacencies, a broad land use map was created with the recreation area in the north, housing options in the south-east, and the care facility centre in the south-west. By programming a schematic for the parcel, the EHC team created three concepts that could be applied to the Westview Lands parcel (see the concept maps* on pages 14 to 16).



Concept 1 follows this broad land use map; however, while working on creating the other concepts, other restrictions and concerns were highlighted which caused delineation from the broad land use map. Although Concept 2 and Concept 3 did not precisely follow the broad land use schematic, these concepts still tried to capture the programming in a sense that the recreation area is to the north and the housing development and care facility centre is central-south of the parcel. Understanding that the concepts have to hold an adaptability to different interested parties is important in creating the best uses and layout for the Town.

Concept 1

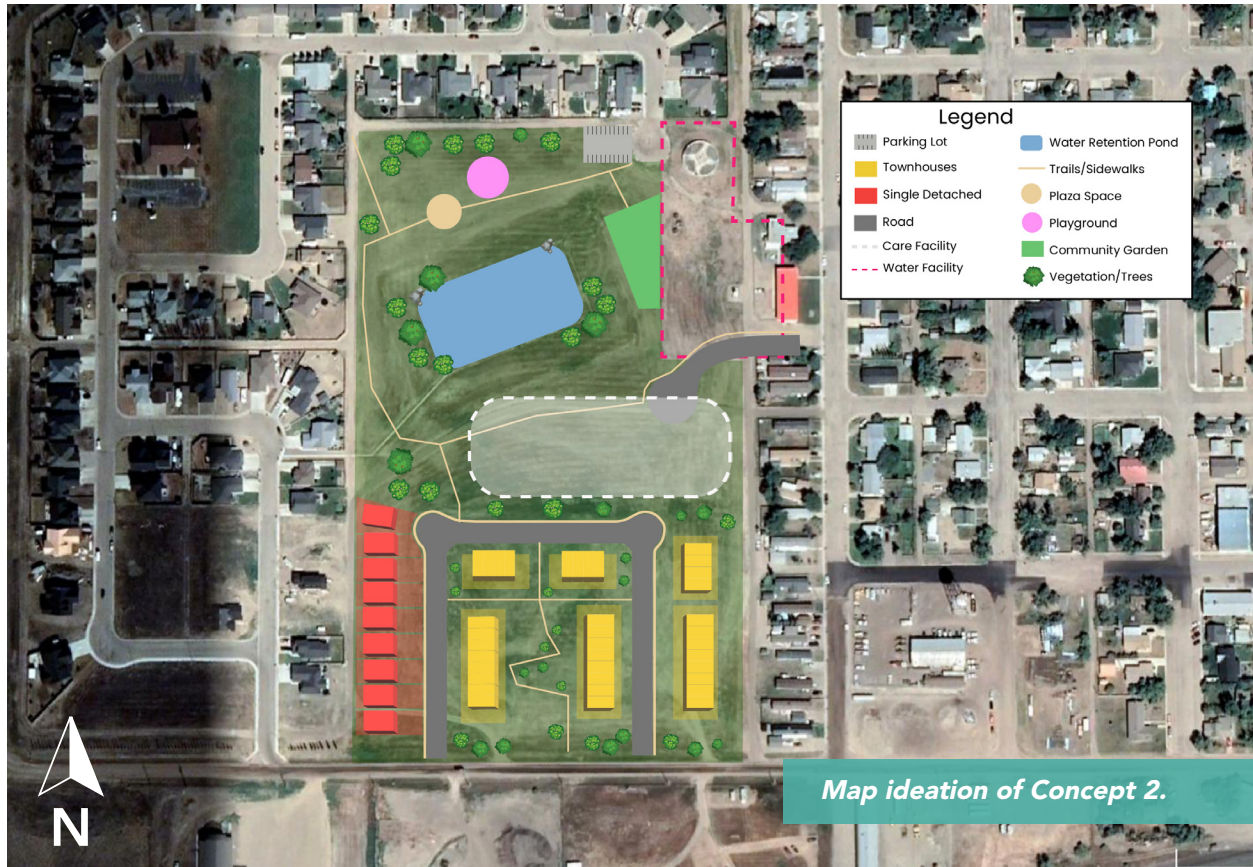
Concept 1 was created with the primary programming schematic taken into consideration.



In this concept, the care facility is situated in the southern portion of the site to be integrated with the housing developments. The townhouses are on the east to provide an adequate transition from mobile homes to the care facility. This concept focused more on green space and the recreation area with more space allocated to it. The community garden is larger and in the centre of the development so that people within this community and the neighbouring homes can utilize it. With the additional green space, a soccer field can be placed in the recreation area. The walking trails connect the recreation area to the north, west, east, and south neighbourhoods to ensure there is easy access to the recreation area from all areas of the community.

Concept 2

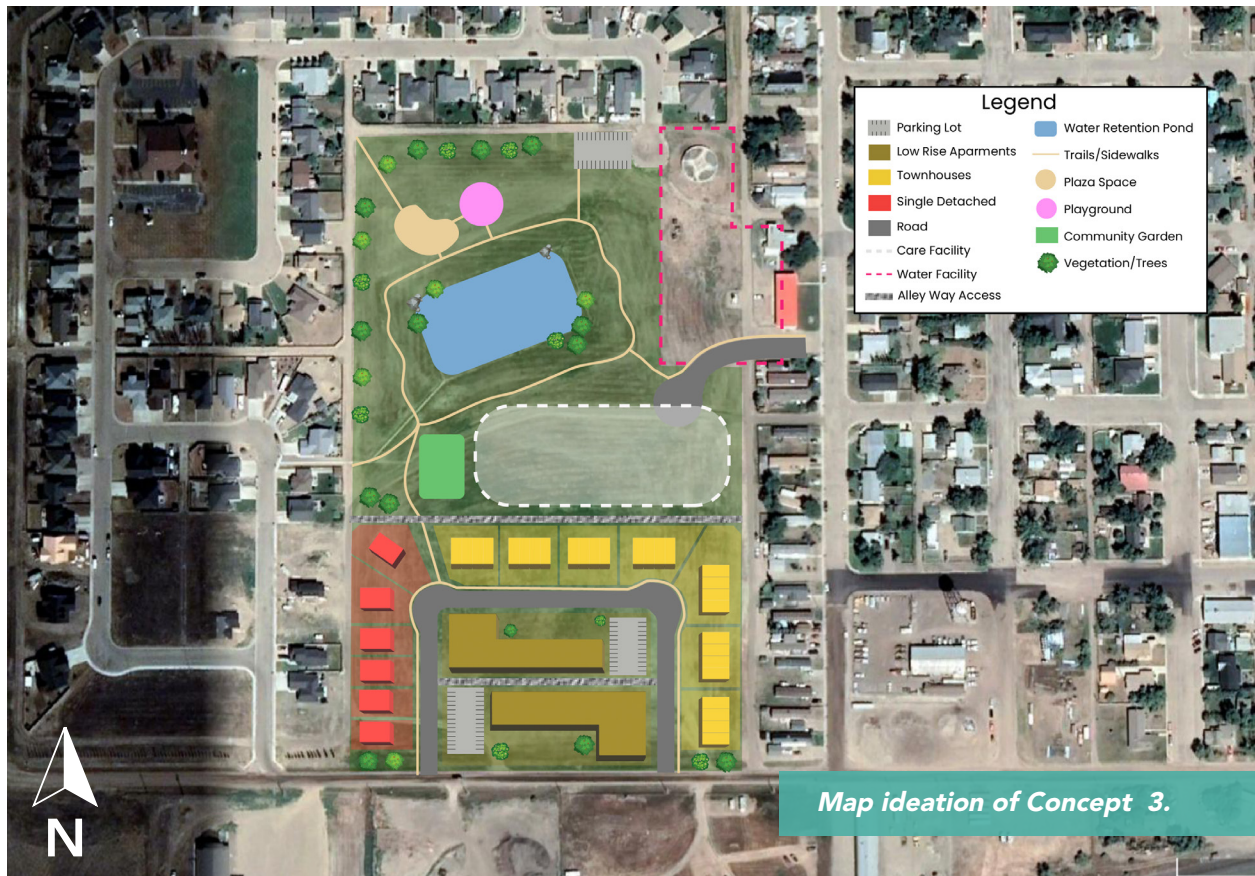
When creating Concept 2, additional restrictions in regards to the care facility centre arised which prompted the care facility centre to be situated between the housing developments to the south and the recreation area to the north.



This concept was worked on between Bow Island and Scheffer Andrew LTD. It was created to be more spacious with walking trails throughout the whole area. The park and plaza is situated in the north to be closer in proximity to the school. The care facility is situated in the centre of the site because there were concerns about patients wandering outside the facility so close to a busy roadway. Instead, the care facility centre will be facing north so that if patients were to wander out of the facility, they would safely wander into the community garden. The townhouses in this concept are placed more spaciouly to provide more open space to the residents, and promote gentle density within the town.

Concept 3

Concept 3 was made with the main objective of increasing housing diversity and connectivity.




The trail system connects throughout the neighbourhood with links to the north, south, west, and east suburbs. Development would start from the east to the west, building the townhouses first so that people who require diverse housing options can obtain them as soon as possible. Developing east to west would also be more cost effective for the Town as there is currently existing infrastructure to support development. Higher density is also placed in the south-east to be more closely connected to the highway and main commercial area to the east of the development. Having the apartment buildings in the south-centre of the development gives proper setbacks and little to no sun shadowing on other housing forms. In this concept, the care facility is situated in the centre of the site so that the care facility would have its own access point from the east. The community garden will also be situated near the care facility and housing developments, so residents can access this amenity within a shorter walking distance. Similarly to the other concepts, the park and the plaza is situated in the northern portion of the lot to be in closer proximity to the school in the north so children head to the playground after school. The care facility is situated in the centre of the site because there were concerns about patients wandering outside the facility so close to a busy roadway. Instead, the care facility centre will be facing north so that if patients were to wander out of the facility, they would safely wander into the community garden. The townhouses in this concept are placed more spaciouly to provide more open space to the residents, and promote gentle density within the town.

ENGAGEMENT

BEST PRACTICES

Creating purposeful participation is essential in promoting and encouraging housing diversity. By understanding the best approach to community engagement, community push back can be mitigated and allow community members to engage in meaningful conversations and education. To create a thoughtful and robust engagement strategy, determining the public participation goal for this strategy can provide clarity and direction. For this Land Use Study, *Involve* is the best approach from the IAP2 Spectrum of Public Participation.

The IAP2 Spectrum of Public Participation is a model to help define the role of community members in public engagement. The spectrum details five general modes of public participation laying on a continuum of increasing influence over decision-making showing what the goal is for public participation and how to achieve that goal. *Involve*, as seen on the diagram, is in the middle of the spectrum. Understanding the Town of Bow Island knows they need a recreation area, additional housing diversity, and a care facility centre on the Westview Lands site, the EHC team worked with community members through the process to ensure their concerns and aspirations are considered as the best approach for this Land Use Study. By having *Involve* as the goal, the EHC team conducted an online survey and engagement event to work with the public throughout the process and provided opportunities for communication and accepting feedback for the decisions of the development.

IAP2 Spectrum	INCREASING LEVEL OF PUBLIC IMPACT ON DECISION 				
	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
GOAL	To provide balanced and objective information in a timely manner.	To obtain feedback on analysis, issues, alternatives, and decisions.	To work with the public to make sure that concerns and aspirations are considered and understood.	To partner with the public in each aspect of the decision-making.	To place final decision-making in the hands of the public.
PROMISE	We promise to keep you informed.	We promise to listen to and acknowledge your concerns.	We promise to work with you to ensure your concerns are directly reflected in the decisions made.	We promise to look to you for ideas to incorporate this in decisions as much as possible.	We promise to implement what you decide.



WHAT WE HEARD

The Engagement Strategy for the Town of Bow Island focuses on connecting with residents regarding the Westview Lands project by involving them throughout the process. To ensure that public concerns and aspirations are consistently considered and acknowledged, the EHC team conducted an online survey and a public engagement event in the Town of Bow Island which is thoroughly detailed in the What We Heard Report.



ONLINE SURVEY

The EHC conducted an online survey to ask specific questions surrounding community members' views on the need for housing choice and diversity. The survey was then used to help formulate the design and layout of the Westview Lands lot as well as determining the type of housing needed in the town. This survey was conducted through a Google Form that was open for a span of two weeks and advertised through Bow Island's utility newsletter and social medias.

From the online survey, community members exhibited an overall consensus that more housing diversity is needed in the Town. The majority of respondents believed there are not enough housing options for people with disabilities and not enough variety of bedroom units to accommodate different peoples' needs. In summary, community members believed that townhouses are most needed in Bow Island. However, community members are open to other housing options, particularly apartment buildings that were rental or owned.

ENGAGEMENT EVENT

Through collaboration with the Town of Bow Island Administration, the EHC team conducted an engagement event at the Multiplex, a banquet hall in Bow Island. This event was a drop-in engagement session held on November 30, 2022. The purpose of this engagement event was to inform residents about the work happening for the Westview Lands, but also seek feedback regarding the land use concepts for the site. By providing multiple activities, community members could engage with the EHC team and the work happening on the Westview Lands site in different ways that were comfortable and interesting for them. These activities included:

- » **Concept Ideation**, where participants were able to come up with their own ideas on where the placement of features and amenities could go and how the development could look on Westview Lands;
- » **Collecting Opinions on the Concepts**, where community members could analyze, discuss, and submit their opinions on the concepts that were made from the information found in the online survey; and
- » **Housing Typology Education**, where community members could read about the different types of housing typology and built form with the help of our team members explaining what they mean.

The event hosted 20 to 25 community members who were generally supportive and eager to learn about the work being done on Westview Lands. The major concerns regarding the development of Westview Lands pertained to environmental considerations and any required environmental assessments that should be conducted. Opinions on the amenities and community spaces included positive feedback for the recreation area and the community garden, with a few concerns surrounding increased traffic and garden security. Most participants were not opposed to the care facility, but wanted to ensure the ongoing support of the hospital and that services are not being overly duplicated. The majority of the community members responded positively to the concepts, however, it was evident that Concept 3 was most favoured. Overall, most participants acknowledged the importance of providing housing for workers and new residents in the community and were open to embracing new housing forms.



Engagement event at the Multiplex in Bow Island.

RECOMMENDATIONS

FINAL OPTION

Based on our research and engagement findings, the EHC team recommends that the Town of Bow Island adopt Concept 3 for the Westview Lands parcel. This concept had the most support from Bow Island Administration and residents, and focused on supporting housing diversity and connectivity in the community. Taken together, this concept satisfies the most amount of interested parties due to the following considerations:

- » The recreation area has sufficient community amenities for current and future residents to enjoy;
- » The care facility centre is situated in a manner that is most beneficial to integrate the residents of the facility with community members; and
- » The housing area has multiple different forms of housing choice which are positioned to provide a smooth transition of built form from the neighbouring suburbs.

FUTURE LAND USE & MIX

The intent of this Land Use Study is to understand the most beneficial layout for a care facility centre, housing diversity, and recreation area for the Westview Lands parcel. With Concept 3, the land uses interact with one another in a way that heightens the use and enjoyment of the area.

Recreation Area

While the recreation area is situated to the north of the parcel due to environmental restrictions, it is also the most beneficial location on the parcel because of its proximity to the school. Additionally, the recreation area acts as a central community gathering area, as it is immediately surrounded by suburban housing development. As a central gathering space for the community, the recreation area also has pathways and trails that link the adjacent neighbourhoods together, promoting physical activity and overall stronger connectivity. The recreation area has five vantage points from adjacent neighbourhoods, one of which has a parking lot to accommodate residents who live further from this area so that they can enjoy recreational amenities as well. Lastly, the community garden is located near the care facility and the housing development to the south to provide ultimate ease of access for residents living in the area.

Care Facility Centre

Although the care facility centre is not situated where the original programming schematic found it to be most beneficial, the EHC team had taken into consideration the needs of the developer and the residents that will be staying within the care facility. Situating the care facility near the centre of the parcel addresses the safety concerns that the developer had raised. If there were to be patients that wandered out of the care facility, they would encounter the recreation area or community garden, instead of a busy road. Additionally, people living in seniors care or those with disabilities in care are often isolated from the community which can put a strain on their mental, and in turn, physical health. By positioning the care facility in the centre of the parcel facing the recreation area, patients are encouraged to utilize the community gathering space and enjoy the green space which can benefit their well-being and health. The recreation area serves to stimulate socialization and connect community members while helping integrate care facility residents into the broader community.

Housing Diversity

Encouraging housing diversity development is the main goal for the Town of Bow Island and for the EHC project. To determine what housing choices would best fit the Town's needs, the EHC team considered what the residents want and need for the Town through the online survey that was circulated. Townhouses and apartment buildings were determined to be the most needed housing types in the Town, thus this concept incorporated those needs in ways that minimize potential negative impacts on properties adjacent to the parcel. Additionally, promoting these housing types specifically complies with the Town's MDP and the following policies:

3.3 Housing

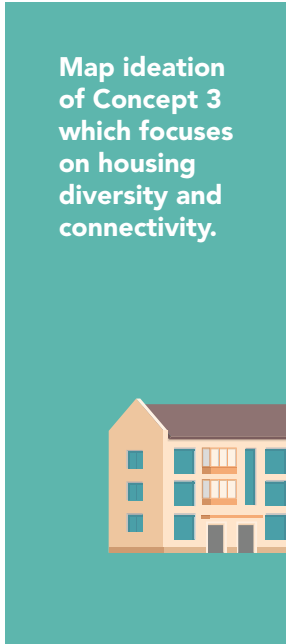
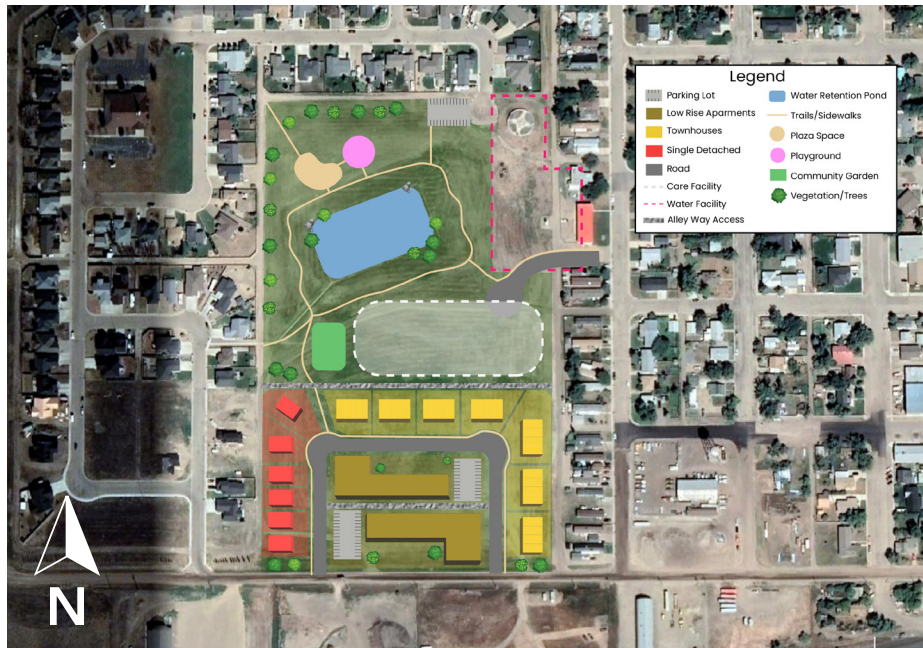
- » To accept and anticipate higher densities as an outcome of providing a greater variety of housing.
- » To encourage the development of duplexes, row housing (townhouses), fourplexes and multi-family low rise apartment buildings as housing alternatives.

3.4 Residential Design Principles

- » To incorporate a variety of housing types into all residential developments.

Single detached housing will be situated south-west of the parcel, creating a smooth transition to the townhouses situated around the potential road. Having townhouse development start from the south-east portion of the parcel and developing contiguously also creates efficiencies when development occurs by starting development where there

is currently existing infrastructure. Locating the apartment buildings in the south-centre of the parcel allows for little to no sun-shadowing on the other housing forms because of the separation of the road, while incorporating additional proper setbacks. Furthermore, the proposed location for the apartment buildings has little to no impact on the surrounding housing development, but has a large positive impact on the people who require diverse housing choice.



DISTRICTING

There are two potential directions for establishing districts within the Westview Lands parcel: to treat the whole parcel as a Direct Control District (DC), or to subdivide the parcel and redistrict the areas. Although creating this parcel as a whole DC District would allow for more flexibility and control in determining land uses and urban design, DC Districts are difficult to change after they are established. Since the parcel may take time to be developed completely, the need for alterations to the DC District may arise. However, altering a DC District may prove to be an arduous process as it would require the Town to change the entire district through an amendment to the plan rather than merely changing a single area of the parcel.

Due to these potential complications with implementing a DC District, the EHC team recommends that the Westview Lands parcel would be best suited to be subdivided and rezoned. The recommendation for districting would be to divide the parcel into two districts:

1. **Institutional District (I):** The recreation area and the care facility centre may be subdivided and rezoned into the Institutional District (I). Within the I District, the Parks & Recreation Facilities fall into Class I Discretionary Uses, and Institutional

To encourage the direction to increase housing diversity, the EHC team recommends a density target of 38.9 du/ha. While the density units per hectare is not high, it reflects the gentle density that the town needs and can achieve. The housing development would take up approximately half of the parcel which is around 8.24 acres. Within Concept 3, there are approximately 6 proposed single detached dwellings, 28 townhouse units, and 96 apartment units. The apartment building is proposed to be a low rise apartment building which has a maximum of four stories. If there are two low rise apartments on the parcel, with 12 units on each floor, the Town will be able to meet the density target.

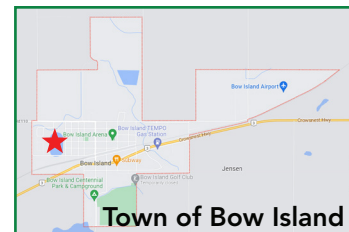
Housing Density - Westview Lands

Types of Units: Single Detached, Townhomes, Low-Rise Apartment Buildings

Number of Housing Units: 130 Units

Area Size: 8.24 acres or 3.34 hectares

Density: 38.9 du/ha



NEIGHBOURHOOD DESIGN

The neighbourhood design of the housing development holds consistency with the suburban development to the west of the parcel. When creating this design, the EHC team wants to ensure that there is a coherent design with the development that the Town already has, to smoothly integrate this neighbourhood into the surrounding community. Although the proposed plan will include different forms of housing other than the traditional single

detached home, the EHC team is recommending certain design strategies to integrate these housing forms with the character of Bow Island.

There are many different types of townhouses; however, the EHC team recommends the traditional townhouse style to adhere to the character of the Town. Traditional townhouses share sidewalls with neighbouring units and typically have a basement, are two-storeys, and are often smaller than a single detached house. Townhouses may have a detached garage that resides in the rear of the development or an attached garage that exists at the front of the development.



Example of townhouses with front porches and detached garage in the rear, located in Edmonton.

Having a detached garage will allow the townhouse to have a shorter setback from the front of the lot, so that residents are encouraged to interact with the street. Creating these developments with front porches also help with public realm interaction and creating natural surveillance to keep the area feeling safe and welcoming. Having an attached garage can provide consistency with the single detached homes in the neighbourhood to the west of the parcel. Supporting housing diversity means having different housing typology, but it also means having different built forms of housing development, so that people can choose what best fits their needs.



Example of townhouses with attached garage.

A low rise apartment building is four stories or less in height. The EHC team recommends low rise apartment buildings that have four stories to provide the most units that low rise apartment buildings can provide. These low rise apartment buildings can be rental apartments or condominium apartments, where the difference is whether the units can either be rented or owned. Considering the potential housing needs of the care facility centre’s employees, the EHC team proposes to have a mix of rental and condominium apartments to provide short or long term housing options, while accommodating those, who would rather own a smaller unit than a single detached house. To have a variety of unit sizes, the apartment units are proposed to consist of studio units, 1 bedroom units, 2 bedroom units, and 3 bedroom units. As shown in the What We Heard report, the residents of Bow Island believe that all different types of bedroom units are needed for the Town.

The proposed low rise apartment buildings are L-shaped to protect the building and vegetation from wind, but to also allow green space within the lot. Although the recreation area is nearby, the EHC team wants to enhance the rural feel of the town and provide green space within the apartment lot so that residents can enjoy nature and the public realm even when they do not have a private back yard. In the green space within the apartment building lots, placing picnic tables and street furniture will allow the residents of the apartment building to interact with one another and enjoy the outdoors. Proper landscaping and gardening would integrate the built form of the apartment building into the neighbourhood and provide vibrancy and a welcoming environment.



Example of a low rise apartment building with landscaping and gardening.

RECREATION AND COMMUNITY SPACE

Low Impact Development (LID)

The Westview Lands parcel previously held an old water reservoir site, which is now a stormwater retention pond for the proposed recreation area. The stormwater retention pond will hold and distribute rain runoff from the neighbouring suburbs. For the recreation area, the EHC team recommends the usage of low impact development (LID) design.

Low Impact Development LID design works as an approach to land development or re-development that functions with the natural environment to manage stormwater.

Because the stormwater retention pond is being preserved on the parcel, LID design will further enhance the area in a sustainable and effective manner. With LID design, the recreation area can maintain and restore the natural hydrological processes of the site and provide opportunities for natural processes to take place, creating a flourishing green space for community members. LID design must consider the characteristics of the area, which include, but are not limited to:

- » Maintenance responsibilities;
- » Soils;
- » Frost depth;
- » Local precipitation and hydrology; and
- » Vegetation suitability to precipitation characteristics.

LID design strives to capitalize on the natural characteristics of the site, which means understanding and adapting to the area's environmental conditions and features. The Town of Bow Island is a relatively dry area with lots of sun, therefore landscaping and vegetation should be designed to thrive in low-precipitation environments.

Xeriscaping Method

Xeriscaping is a landscaping method that requires little to no irrigation and focuses on water conservation. The City of Lethbridge is 110 kilometres south west of Bow Island, and has similar climate characteristics to the Town. Lacking frequent precipitation, Lethbridge prioritizes xeriscaping in its boundaries and has created a toolkit called *Xeriscape: The Seven Principles of Landscape Water Conservation*, to enhance their vegetation and green spaces in low-precipitation environments. With similar climate characteristics, it would be beneficial for Bow Island to employ xeriscaping in the recreation area which aligns with LID design. The toolkit explains the top principles of xeriscaping:

1. **Plan and Design:** to design the landscape in a way that reduces the amount of applied water and maximizes natural precipitation. In terms of the recreation area, there are proposed vegetation and trees surrounding the area to create windbreaks that help keep the plants and turf within the recreation from blowing dry, while also creating a sound barrier for the neighbouring suburbs.
2. **Improve the soil:** to utilize soil that is able to drain quickly yet stores water at the same time. Soil testing and preparation is essential in making sure that the proper soil type is adequate for the vegetation.
3. **Vegetation:** to select native plants native to the locale. The toolkit provides a list of plants native to southern Alberta which would compliment Bow Island's landscape and climate.
4. **Turf areas:** to reduce turf areas as much as possible. The proposed recreation area has open turf space to maintain its green space appeal and functionality of a recreation area, but holds an abundance of vegetation to reduce unnecessary irrigation.
5. **Irrigation:** to conserve water and avoid over-irrigation. Management of water is essential, however, must be done in a strategic schedule to obtain the best outcomes.
6. **Mulch:** to utilize mulch to retain soil moisture and temperature. In areas where there are clusters of vegetation, it is important to use mulch to keep the soil moist and reflect less heat.
7. **Maintenance:** to maintain the xeriscape. Proper management of the green space is essential in creating a successful recreation area, and requires relatively low maintenance.

Through xeriscaping and LID design, the potential of the recreation area can be maximized to function sustainably, but also heighten the enjoyment for residents. By using LID design, the recreation area can help maintain the hydrologic cycle by using soil, vegetation, and topography to its advantage and create a flourishing green space.



Community Garden

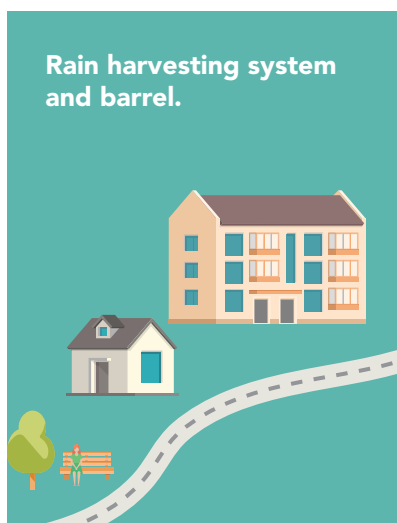
The community garden will create a space for community gathering and social integration. It was well received by the residents of Bow Island; however, there were concerns around security and maintenance of the community garden. To address these concerns, the EHC team recommends the use of green infrastructure, as well as Crime Prevention Through Environmental Design (CPTED) principles.

Green Infrastructure

Green infrastructure are natural vegetative systems and green technologies that provide an array of environment, social, and economic benefits. Green infrastructure is often associated with stormwater management, but can also aid in improving air and water quality, providing habitats for animals and plants, reducing economic costs in a sustainable way, and enhancing human health.

Rain gardens are effective and low-cost infrastructure that use a combination of soil and plant material to capture and treat stormwater. Integrating rain gardens within the community garden can maintain the community garden through providing temporary rainwater storage and filter runoff. Many rain gardens can be implemented through affordable do-it yourself projects, where the community can come together and work on a common goal. Some resources include *Rain Gardens - Improve Stormwater Management in Your Yard* by the Canada Mortgage and Housing Corporation, and *Resources for Rain Gardens* by 1200 Rain Gardens.

Additionally, rain harvesting can aid in low-cost maintenance of the community garden as it involves the collection of rainwater in a rain barrel or cistern so that the garden may supplement fresh water supply, instead of the community paying for the utility costs of water. Through green infrastructure, the community garden can stay self-sufficient and well maintained with the help of Bow Island residents and administration.



CPTED Principles

To combat security concerns for the community garden, CPTED principles help reduce crime through the design of physical space. Some of the CPTED strategies that can be implemented in the community garden can include natural surveillance, territorial reinforcement, and mechanical forms of surveillance and access control.

Natural surveillance employs the use of feelings of safety through human sense. To accomplish this, the community garden is situated in an area where there is higher foot traffic due to its proximity to the care facility centre and the housing to the south. With more people walking through the trail and by the community garden, the area is visually accessible and creates sightlines of people gathering in the area. To ensure natural surveillance, the community garden and neighbouring trails must have lighting to support the uses.

Using design to encourage people’s sense of ownership is referred to as territorial reinforcement. By creating a sense of ownership, people will take responsibility for public safety and security. Although this can be defined by creating a defensible space such as constructing fences around the community garden, it can also be accomplished through regular maintenance of the area. If constructed, fences should be used to provide a transition from the public to private space, while ensuring adequate visibility both from within and outside the space. Furthermore, keeping the area maintained and cleaned on a regular basis demonstrates taking pride in the ownership of the space. If community



Community Garden with fencing.

members using the space are encouraged to keep the area clean, this will further promote protection of the community garden, making it defensible in nature. With respect to these CPTED principles, and ensuring the creation of safe community spaces, The EHC team recommends that the community garden:

- » Has a clear and active relationship to the surrounding neighbourhood;
- » Is highly connected to the trail system by making clear distinctions between the public trail system and the community garden space; and
- » Provides clear orientation for users while identifying where the entrances and exits are in the space.



Example of community made signage to encapsulate Forest Hill's Town character.

Furthermore, mechanical forms of surveillance and access control are more controlled forms of CPTED, where use of cameras and locks are used to distinguish what people can and cannot do in a particular space. Certain supplies for the garden should be held in a shed and locked to ensure things do not get stolen or damaged. To ensure access control, management roles or measures for the community garden should be considered to help solidify understandings of who can use the garden and certain supplies.

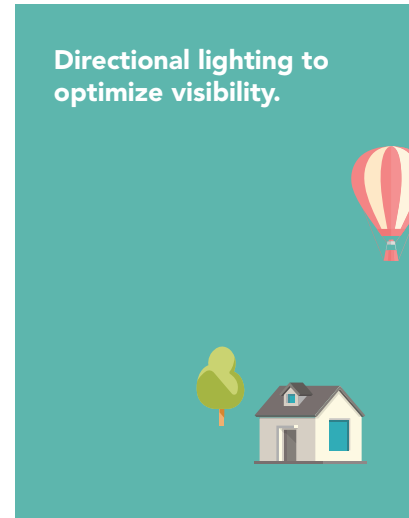
Through green infrastructure and CPTED, the community garden can provide a safe and vibrant environment for social integration and community gathering for everyone within the community.

Plaza and Trail System

The EHC team recommends certain standards to be upheld for the proposed plaza and trails, to ensure optimal use and community placemaking. The Regional Municipality of Wood Buffalo's, *Engineering Servicing Standards and Development Procedures*, provides substantial standards for park servicing and development. The proposed trail system can be classified as Class 3 trails, which are trails that provide contact with nature and natural systems. These trails are deemed to encourage high usership from a diversity of users. The EHC team proposes the trail system:

- » To have a 2.5 metres minimum width to accommodate for those with physical disabilities;
- » To expand the trail up to 3.5 metres wide at intersections, entrances, and exits that have high activity;
- » To have trail signage such as trail names, steep slopes, trail narrowing, or wayfinding signage;

- » To have lighting throughout the trail system and at critical areas such as the plaza, playground, and community garden;
- » To have a lighting style that reflects the light downward for optimal use;
- » To have adequate spacing between light poles, therefore having 2.3 to 3 times the height of the pole spacing between each light; and,
- » To have street benches throughout the trail system to address accessibility concerns as many people from the care facility may need areas to rest throughout their walk.



The plaza and trail system will be essential in creating a vibrant space of community gathering for the residents of Bow Island. The plaza must be a place that embodies the town’s character while also being sustainable and maintainable for the town. Picnic benches in the plaza will allow for residents to linger throughout the space and interact with the community. However, providing the right material for the benches are essential in reflecting the character of the town while remaining adaptable to its environmental conditions. Bow Island may get a lot of wind, therefore, the EHC team recommends using heavier materials such as concrete for the picnic benches. Concrete benches require lower maintenance than wood benches, which can easily erode after years of use, whereas concrete will last much longer. With light posts around the recreation area, there is an opportunity to brand the area with the Town’s identity through the use of street lamp signs and other promotion materials. These are all things that contribute to placemaking - the shaping of public space that channels the ideas and characteristics of the community that is using it.



NEXT STEPS

The Land Use Study was initiated in response to the need for housing diversity and care facility centre, which overall contributes to the furthering of development in the Town of Bow Island. This drive to develop Westview Lands parcel addresses the needs of the Town, as well as policy goals within the Town’s MDP and strategic goals. Overtime, the implementation of these ideas and recommendations are expected to make Bow Island more attractive to reside in by providing more housing choice, strengthen community ties, and enhance the long-term livability of the Town. Following the submission of this Land Use Study, the EHC team will develop a progress tracker to report on project milestones and achievements to ensure positive changes will be made.



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Email: housingchoice@ruraldevelopment.ca

Website: <https://www.housingredefined.ca/enabling-housing-choice-project>