AREA STRUCTURE PLAN





HIERITAGE HILLS

COCHRANE, ALBERTA APRIL 2014





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Introduction

The Heritage Hills Area Structure Plan will guide the development of the subject lands to achieve a complete community with desirable places for Cochrane residents to live and work as well as to connect to an extensive open space system.

BACKGROUND:

As a gateway to the west, the Town of Cochrane is located approximately 40 km west of both downtown Calgary and the Calgary International Airport, and only a one hour drive east of the Rocky Mountains. It is located at the intersection of two major highways; Highway 1A (Bow Valley Trail) which runs east-west and provides access to Banff National Park from Calgary, and Highway 22 (Cowboy Trail) which runs north-south through the Kananaskis Country.

The Town's desirable location has resulted in rapid residential growth in recent years. In response, the Town annexed lands to the north and south, effective January 1, 2004, from Rocky View County through an Annexation Agreement.

The Heritage Hills community is located in the north annexation area as shown in Figure 1.

Subsequent to the annexation a Concept Plan was prepared in 2005 for the westerly portion of the Heritage Hills area to guide initial development. Approximately one-third of the Plan area was developed under the 2005 Concept Plan. This Concept Plan did not include the lands along the northern portion of Heritage Hills. These lands, in combination with some of the land on the north side of Township Road 262 located within the boundaries of Rocky View County, formed part of the Annexation Agreement. It was agreed that these lands would form a jointly planned



APRIL 2014



non-residential, light industrial area known as Area B. In 2012 both the County and the Town agreed that a light industrial area located in the northern portion of Heritage Hills no longer fit within the long term goals of either municipality, and both Councils agreed to withdraw from the joint planning process of Area B. It then became necessary to plan for these lands, and the completion of this Area Structure Plan for the entire community of Heritage Hills was seen as the most appropriate next step.

PURPOSE:

An Area Structure Plan (ASP) is the highest level planning document for a community and identifies suitable land uses, park/open space concepts, transportation networks, and other key elements for a community. The ASP policies shall be aligned with the recent Municipal Development Plan (2008), Cochrane Sustainability Plan (2009) and Open Space Master Plan (2012).

In order to guide the development of the remaining portion of Heritage Hills in compliance with these higher-order municipal planning documents, as well as support the landowners' vision for the community, the Town of Cochrane has prepared this Area Structure Plan (referred to as the Heritage Hills ASP).

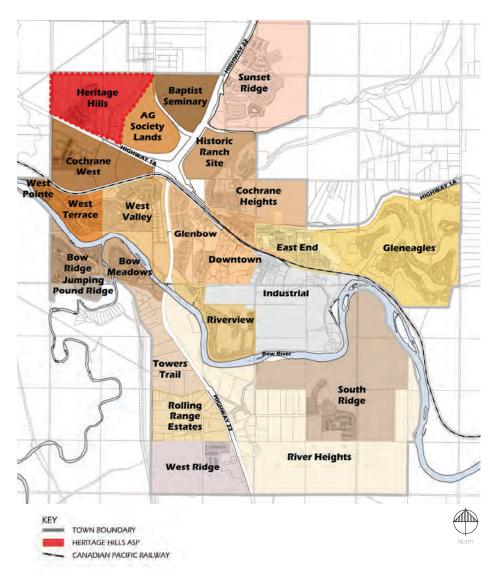
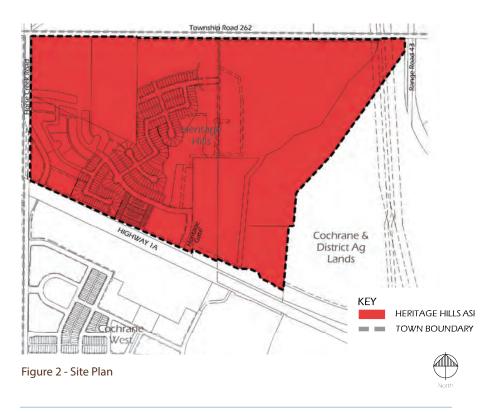


Figure 1 - Location Plan





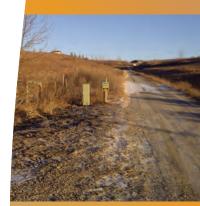
The Heritage Hills ASP applies to those lands shown in Figure 2, an area which consists of approximately 92.72 hectares (278.36 acres). The Heritage Hills ASP Plan area is defined as the Town of Cochrane limits to the north and west, Highway 1A to the south, and the Cochrane and District Agricultural Society (CDAS) lands to the east. The ASP boundary includes the existing built up areas of the Heritage Hills community as well as the remaining yet to be developed lands. .

Highway 1A forms the southern boundary of the Plan area. As growth in Cochrane continues and regional traffic on Highway 1A increases, a number of improvements will be required along this highway. Ultimately, Highway 1A through the Cochrane area will require an increase in the number of travel lanes. During the future development of Heritage Hills, access into and out of the Plan area will be coordinated between Alberta Transportation, the Town of Cochrane, and the area developers.

1.2 CURRENT LAND USE AND OWNERSHIP

A portion of the Heritage Hills ASP area is currently under development. Existing land uses include [Figure 3] single-family and townhouse residential units as well as public service lands (for active parks, green spaces, stormwater facilities, potable water reservoir, and environmental/natural areas). Two commercial sites in the southwest corner have land use in place but are currently undeveloped. The remainder of the ASP lands are designated under the Land Use Bylaw as Residential – Urban Reserve, a holding district for future development, and are currently being utilized as rural residential/acreage, agricultural or their natural state (due to topographical limitations).





The Plan area lands are currently owned by Private Corporations including MGM, Gordon and Wendy Lackey and individual residents of the community.

1.3 ADJACENT LAND USES

Adjacent lands to the Plan area include the developing Cochrane West area (Heartland Community) to the south and the CDAS site to the east. Further east is the Baptist Seminary. Big Hill Creek, the Cochrane Ranche Historic Site, and the Cochrane Ranche House (which contains the Town of Cochrane Administrative Office and other civic facilities) can be found across Highway 22.

The area to the west and north of the Plan area are within the jurisdiction of Rocky View County and contain agricultural and country residential uses. To the north is Rocky View County's Cochrane North Area Structure Plan (adopted 2007), as well as the Cochrane Gas Extraction Plant.

The preparation of the Heritage Hills Area Structure Plan involved a review of various municipal, inter-municipal and provincial policy documents and studies in order to provide the planning context. In addition, many background studies, such as geotechnical investigation, environmental site assessment, historical resources impact assessment, slope stability assessment and biophysical impact assessments were undertaken and existing studies were reviewed for this ASP. The following section describes how this ASP responds to the background information investigated as part of this planning process.

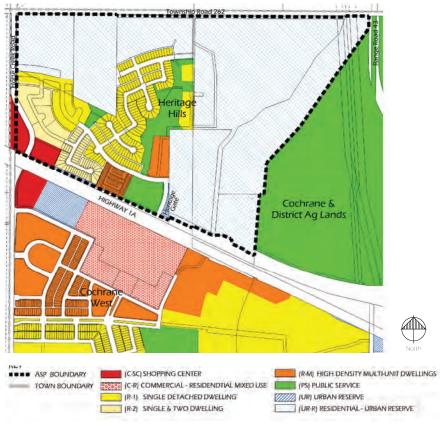


Figure 3 - Current Land Use Concept





Background Information

2.1 POLICY CONTEXT

2.1.1 MUNICIPAL GOVERNMENT ACT

Section 633 of the Municipal Government Act requires that Area Structure Plans contain the sequence of development, the land uses, the proposed population density, and the general locations of major transportation routes and public utilities for a plan area.

The Heritage Hills ASP addresses these requirements primarily through the Land Use concept presented in Figure 6, but also through the policies and objectives found throughout the document.

2.1.2 ALBERTA LAND USE FRAMEWORK

In 2008, the Government of Alberta published the Alberta Land Use Framework, which consists of seven strategies to improve land use decision-making in Alberta. One of the strategies is to create regional plans for seven land use regions that are based primarily on watershed boundaries. The Town of Cochrane lies within the South Saskatchewan Regional Plan area, which is currently being prepared. All statutory plans are required to align with their corresponding Regional Plan and once the South Saskatchewan Plan has been completed and adopted, a review of existing municipal planning documents such as this ASP should be conducted to ensure conformance to the Regional Plan.



The Alberta Land Use Framework is being implemented through the Alberta Land Stewardship Act, which was proclaimed on October 1st, 2009, and by way of amendments to other relevant provincial legislation

2.1.3 MUNICIPAL DEVELOPMENT PLAN

Section 14.3.2(b) of the Town of Cochrane Municipal Development Plan (adopted in 2008) outlines the requirements for an Area Structure Plan to be adopted in Cochrane. Each plan shall address those matters identified in the Municipal Government Act, as well as, but not limited to, the following points:

- (i) parks and open space;
- (ii) utilities;
- (iii) conflicts between incompatible uses;
- (iv) interface with highway and railway rights-of-way;
- (v) urban design;
- (vi) ecologically significant areas;
- (vii) sustainability standards.

Accordingly, the Heritage Hills Area Structure Plan addresses the above matters in Section 4 and Section 5, as well as Figure 6.

With respect to specific provisions of the Town of Cochrane Municipal Development Plan, the Heritage Hills ASP provides guidance for development with respect to:

- Slope lands and associated development setbacks;
- · Pipeline setbacks;
- · Ridgeline impacts;
- Providing complete communities through a variety of land uses including public facilities, a variety of housing forms, and support services; and
- · Connectivity to the broader Cochrane area

2.1.4 COCHRANE SUSTAINABILITY PLAN

The Cochrane Sustainability Plan (adopted in 2009) details six interconnected systems of sustainability that act as the guideposts for development in the Town of Cochrane:

- culture
- social
- · natural environment
- economic
- built environment
- governance

The plan also includes thirteen pathways to a sustainable future. Each pathway outlines the description of success and targets that Cochrane is working towards in order to achieve its vision of sustainability. It is incumbent on development in new planning areas to identify how it is meeting the goals to the various pathways and thereby achieving a more sustainable future.

The policies in many areas of Section 5 of this ASP are designed to create the parameters for development that will help Cochrane work towards achieving its sustainability targets.

2.1.5 COCHRANE OPEN SPACE MASTER PLAN

This ASP incorporates the following directions for community development outlined within The Cochrane Open Space Master Plan (2012):

- preserving ecological networks;
- providing for a variety of open space through a hierarchy of parks;
- programming multi-use spaces (eg. schools and playfields);
- · identification of key community landscapes and viewsheds; and,
- providing both internal and external pathways to better connect to other parts of the Town.

2.1.6 INTERMUNICIPAL DEVELOPMENT PLAN AND RANCHEHOUSE ACCORD

The Town of Cochrane is surrounded by Rocky View County. The two municipalities have maintained a good working relationship and jointly prepared the Inter-municipal Development Plan (adopted in 2001) and the RancheHouse Accord (signed in 2010) to maintain and enhance this relationship. Several key policies in this Area Structure Plan address issues of foremost importance for both municipalities, including the mobility network, land use transition, and other connectivity features. As well, Rocky View County is the landowner of the Cochrane & District Agricultural Society facility abutting the eastern portion of the Plan area.

2.1.7 CALGARY METROPOLITAN PLAN

In June 2012, the Calgary Regional Partnership prepared an update to the Calgary Metropolitan Plan which focuses on minimizing the human footprint by intensifying development into compact communities that are well-served by transit and protect ecologically sensitive natural areas. The Partnership is also actively exploring a regional transit strategy. The Heritage Hills ASP meets the planning objectives outlined by the Regional Partnership by designing communities which use the land base effectively and preparing for future municipal and regional transit systems.

2.1.8 CURRENT AREA STRUCTURE PLAN PREPARATION

As discussed above, Town Council adopted by resolution the Heritage Hills Concept Plan in 2005. A portion of the community was developed under the guidance of the 2005 Plan. This ASP builds upon the previous Concept Plan while also reflecting the objectives of Council for developing complete communities in line with the municipal development vision and sustainability targets outlined in the Municipal Development Plan and Cochrane Sustainability Plan.

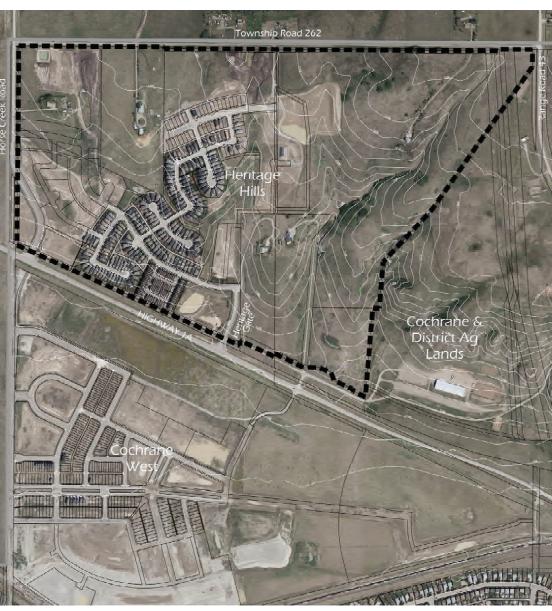
2.1.9 STATUTORY PLANS FOR ADJACENT LANDS

As previously indicated, the lands immediately to the north of Heritage Hills fall within the Cochrane North ASP (2007), approved by Rocky View County Council. The ASP area does not include the area directly north of the northwest part of Heritage Hills, as that land formed part of the Area B joint planning area described earlier. The ASP area does identify the rest of the lands to the north as Residential Infill. The ASP projects that if the Future Growth Policy Area of the Plan area is developed to higher standards and densities, the area could house approximately 10,000 residents. The Cochrane North ASP also shows road connectivity and habitat connections to this Heritage Hills ASP area.









KEY ASP BOUNDARY TOWN BOUNDARY 5M CONTOUR INTERVALS

Figure 4 - Topography



2.2 PHYSICAL CONTEXT

2.2.1 TOPOGRAPHY

The subject lands rise in elevation approximately 70 metres from the lower lands located along Highway 1A to the uplands located to the north. Elevations vary from 1164 metres (3819 feet) along the south boundary to 1165 metres (3822 feet) in the northeast corner of the Plan area. These elevations and the contours of the Plan area are illustrated in Figure 4.

There are two major north-south drainage courses within the Plan area - one in the existing developed area and the other in the easterly portion of the area. Slopes within the Plan area range from gentle slopes and flat lands to slopes of 50% where the escarpment is at its steepest.

The lands provide spectacular views of the Rocky Mountains, the foothills, and the Town of Cochrane to the west, south and southeast.

2.2.2 ENVIRONMENTAL SITE ASSESSMENT

Phase I Environmental Site Assessments and respective updates have been completed for the lands within the Plan area by Stantec in 2005, 2006 and 2013, and by Biophilia Inc. in 2012.

Based upon the results, a majority of the Phase I ESA reports concluded that no known environmental concerns related to the subject sites were identified in the record reviews or the site reconnaissance visits. A portion of the Plan area located on the Lee ownership lands has revealed evidence of potential environmental concerns as a result of current and/or historical on-site land uses. Recommendations for this particular portion of the land include a Phase II ESA to perform a subsurface assessment to evaluate the soil and groundwater quality around the aboveground storage tanks (ASTs), the repair shop on site, and the burn pit in the northeast portion of the site. As well, all debris and waste material found onsite (used tires, wood debris, scrap metal, empty drums, and household appliances) should be removed and disposed appropriately offsite.

Additionally, monitoring and sampling of the existing groundwater monitoring wells is recommended during a Phase II ESA to verify the presence or absence of hydrocarbon impacts associated with the oil and gas activities on adjacent properties. Thirteen (13) wells in the Plan area have been identified, but their exact location has not been documented. Stantec recommends that all water wells in the Plan area be located and decommissioned properly prior to site development.

Five (5) pipelines run through the northeast corner of the Plan area. No hydrocarbon impacts were identified in the areas assessed by Stantec in 2007. It is recommended that ERCB and facility licensees be contacted to obtain the minimum setback distance for any future development of this portion of the Plan Area.

A Phase I ESA will be required at the Neighbourhood Plan stage for any lands not covered by the previously completed Phase I ESA and as well as any identified Phase II and III ESA assessments will be required prior to land use redesignation.









Figure 5 - Design Constraints & Considerations

2.2.3 BIOPHYSICAL IMPACT ASSESSMENT

A Biophysical Inventory and Ecological Assessment have been completed for a portion of the lands within the Plan area by Stantec (2005) and URSUS Ecosystem Management Ltd. (2005). These assessments conclude that no database exists of any rare plants in the subject area, and no rare plants or restricted weeds were observed on site. Additionally, no records of wildlife species-at-risk can be found in the subject area and no Alberta Sustainable Resource Development concerns have been reported. It may be advisable to conduct a species-at-risk survey as due diligence with respect to the federal Species at Risk Act and Alberta Wildlife Act. The Migratory Birds Convention Act has potential implications for the timing of construction. It is most convenient to initiate ground clearing in areas where migratory birds may nest before April or after August. The subject area does not lie within any environmentally significant areas, as defined by Alberta Community Development.

In May 2013, Hab-Tech Environmental conducted a reconnaissance-level field visit to two wetlands mapped by AECOM (2011) for the Town of Cochrane Wetland Inventory within the Heritage Hills Plan area. Wetlands #35 and #36 mapped by AECOM (2011) were visited in May 15, 2013 with the purpose of verifying their occurrence and wetland class. The early growing season limited full wetland plant species identification. Wetland #35 is an ephemeral wetland Class I dominated by non-native plant species: smooth brome (Bromus inermis) and Canada thistle (Cirsium arvense) (see Figure 5). Wetland #36 was not found as earth moving has been previously completed at this site and no wetland characteristics were found

2.2.4 SLOPE STABILITY ASSESSMENT

A Slope Stability Assessment was completed by Levelton Consultants Ltd. in 2013. Levelton was retained to review the available geotechnical and slope stability information for the Heritage Hills site, perform a slope stability analysis, and determine the top of slope, 15% line, stability line, and setback line as per the Town of Cochrane Municipal Development Plan and Land Use Bylaw (see Figure 5).

The report found that the Plan area generally slopes from north to south and has two distinguished ravines. These ravines exist within the eastern portion of the Plan area, and a third ravine exists within the central portion of the subject site. The majority of the site has slopes of less than 15%, and slope angles can be more than 33% within ravine side slopes.

The assessment established that the slopes of the subject site appear safe with no signs of overall instability, with a factor-of-safety of at least 1.5. Additionally, Levelton recommends that: no steepening of the overall slope or significant changes to the site grading within the Plan Area should be made without review by Levelton; site grading and cut/fill operations for development purposes should be designed and planned in collaboration with a qualified geotechnical engineer - final gradients of areas subject to site grading or cut/fill operations shall not exceed 25% (4H:1V); retaining walls may be required, as part of the development, and should be designed considering global stability of the slope; and, to maintain stable conditions, management of surface water





is imperative. The on-site material is susceptible to erosion by running water and thus caution must be exercised during and after construction. Erosion and Sediment control plans will need to be prepared and followed to ensure that excessive erosion does not occur as this may lead to progressive instability of the entire slope.

Based on this information, the development will not negatively affect the slope, provided that the above recommendations are followed.

To support the plan amendment, Geo-Slope Stability Services (2023), have confirmed that the proposed areas of 15% slope that were previously deemed stable and developable is still a valid conclusion with a 1.8 Factor of Safety.

2.2.5 GEOTECHNICAL ASSESSMENT

A Geotechnical Assessment (2011) has been conducted for the Plan area by Sabatini Earth Technologies in 2005 and 2006. There are no geotechnical issues which are considered significant constraints for the proposed developments. The soil profile consists generally of a layer of clay overlying sand. No groundwater was encountered within the upper 7.6 metres in the six test holes drilled. The clay ranges in plasticity from low to high, with the highly plastic clay presenting challenges with respect to development. While soil conditions will not present any significant constraints for development, particular attention must be paid to the presence of highly plastic clay, which will need to be addressed at the detailed design stage.

2.2.6 HISTORICAL RESOURCES IMPACT ASSESSMENT

A Historical Resources Overview (2006) was conducted for the Plan area, followed by a Historical Resources Impact Assessment (HRIA) (2006 and 2013) by Stantec. The HRIA resulted in the discovery of four subsurface historical resource sites, all located within the ephemeral drainage. No features such as tipi rings or rock cairns were found on remaining portions of the subject land. Each of the sites examined in full detail were of low cultural and historical significance and no further study of these sites was recommended. Based on the results of the HRIA, Stantec recommends Historical Resources Act (HRA) conditional clearance for the proposed development in Heritage Hills. It is noted that HRA Clearance has been obtained for selected parcels within the proposed development area. However, it is required that a construction monitoring program for paleontological resources be undertaken.

COCHRANE EXTRACTION PLANT (GAS PLANT) 2.2.7

The Cochrane Extraction Plant is one of the largest natural gas extraction plants in North America. It is located approximately 1 kilometer north of the community of Heritage Hills. Gas enters and leaves the plant via pipeline. Due to the activities of the gas plant, there is a 1 kilometer emergency zone surrounding the plant.

The Plan area is located entirely outside of the emergency zone (see Figure 5). The design of the ASP encourages mobility patterns to direct residents towards the south, away from the gas plant. Additional, open space elements have been added to the northern portions of the community.

2.2.8 UTILITY RIGHT-OF-WAY CORRIDORS

Due diligence investigations with the Alberta Energy Regulator (AER) found that there are a series of gas pipelines that traverse the northeast corner of the ASP Plan Area. These pipelines run from the gas plant through the site and continue southward. The Plan area contains two sweet natural gas pipelines, one gas transmission line, and two High Pressure Vapour (HPV) oil pipelines:

Pipeline R/W	Substanc	e Operator	High Pressure	H2S	Setback
811 0195	Sweet Natur Gas	al Foothills Pipeline Ltd.	Yes	No	No
791 0826	Oil	Alberta Ethane Development Company	Yes	No	No
7856JK	Oil	Caledonian Midstream Corp.	Yes	No	No
1059ID & 211 063	34 Gas	Nova Gas Transmission Itd	No	No	No

Due to the nature of the pipelines, no additional setbacks are required in addition to the existing leased rights-of-way as per the Alberta Energy Regulator (AER) setback requirements, however proximity agreements may be required by the owners of each utility to develop up to their right of way.

2.3 SERVICING

2.3.1 WATER

Similar to many communities in the Calgary region, the Town of Cochrane, and therefore Heritage Hills, draws its water supply from the Bow River. Current water licenses held by the Town provide the capacity to service a population of approximately 35,000-40,000 people, depending on the extent of water conservation measures and future demand. However, the development of Heritage Hills, in conjunction with that of other growth areas in the Town, may result in a future population that exceeds the current water licensing capacity. There are options availiable including the purchace of new license or allocation through the Calgary Regional Partnership. Policies within the Calgary Metropolitan Plan confirm that the water licenses held by the City of Calgary can be shared with member communities under the agreement that the development will occur at a minimum density standard of 19.8 units per hectare (8 units per acre).







2.3.2 SANITARY

The Plan area will be serviced by way of extensions from the Town's existing sanitary collection system. The sewage is ultimately collected at the Town's primary pump station, which forwards all Town sewage to the City of Calgary system for treatment and disposal. Upgrades planned for the pumping systems into the City of Calgary in 2013, will increase the pumping capacity of the system to 230L/s, which can service an equivalent population of approximately 27,400 people. Based on the projected population growth, the capacity of this transfer station will be reached in approximately 2021. It should be noted however, that the actual phasing of the residential, industrial and commercial constructions can impact the date that the maximum flow is met. Once capacity is met, further upgrades to the disposal system will include twinning the lift station and the pipeline to Calgary, with the potential of phasing the project to first twinning the pipeline followed by the lift station.

2.3.3 STORM DRAINAGE

Stormwater Management Plans will be required in conjunction with the preparation of Neighbourhood Plans and will be subject to Alberta Environment review, as well as Town approval. The Plans will need to assess catchment boundaries, stormwater quality and flows, proposed release rates and pond locations.

It is noted that requirements for stormwater management are continually evolving and subsequent development planning will adhere to all policies and regulations in effect at the time that future Neighbourhood Plans are being prepared and submitted.

2.3.4 TRANSPORTATION

Currently there is only one point of access to Heritage Hills from Highway 1A at the intersection of Heritage Hills Gate. This intersection will be signalized in the future. The ASP proposes a second access point to the east on the highway to facilitate both community access as well as long-term access to the adjacent Cochrane & District Agricultural Society facilities to the east (currently the Ag lands have an existing access in this vicinity that was planned to be removed in the future).

In addition to vehicular mobility, potential transit service was considered in the development of the Plan. As future development beyond Heritage Hills (e.g. to the north and east) is unplanned at this time, Heritage Hills would likely be at the terminus of a local route. The internal road network is laid out in a way that would allow transit to loop through the community on the collector road and would access Highway 1A.

In order to facilitate additional opportunities for alternate modes of transportation, pedestrian mobility will be enhanced with pathways throughout the Plan area as well as regional pathway connections leading beyond Heritage Hills.

2.3.5 OTHER INFRASTRUCTURE

The Town of Cochrane has franchise agreements with the major utility providers within the Calgary region to provide the services necessary for successful urban development. Such services also include the provision of high-speed internet, which the Town views as an essential component for the economic viability of the municipality



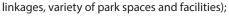


Public Consulation

3.1 PUBLIC ENGAGEMENT

Throughout the process of drafting and adopting this Plan, the Town of Cochrane and the developer's representatives have provided the following public engagement opportunities to supplement the agency circulation and public hearing, required by the Municipal Government Act, when developing a statutory plan:

- Land owner within the ASP area have worked together and with the Town to facilitate the preparation of the Land Use Concept;
- Two sessions and one Public Hearing have been held with the public:
 - An Open House to present the draft Land Use Concept was held on September 25 of 2013. This Open House was advertised in the local Town papers for two weeks prior to the event, signage placed at the entrance to the community as well as being advertised on the Town's website.
 - There was a strong turnout from approximately 60 existing community and area residents.
 - Feedback received was focused on:
 - building a stronger connection to the broader Town of Cochrane (pathways and road improvements);
 - increasing internal community open space amenities (pathway



- enhanced construction management (weed control, drainage, traffic);
- feedback on proposed land use interface with existing development (in particular higher density residential);
- broader community elements (gas plant information, road networks, regional path connections); and,
- appreciative of the information being presented with regards to the full build-out of the Plan area.
- A second Open House was held in November 21 2013 during the circulation of the draft ASP that was attended by approximately 20 people. The intent of this Open House was to gather further input from the community on the draft ASP and the amendments following the first open house.
- This ASP was heard at a Town of Cochrane Public Hearing as part of the formal ASP preparation and adoption process.
- As the community of Heritage Hills boarders the Town's boundary with Rocky View
 County, Town Administration took the draft ASP to the Town of Cochrane and
 Rocky View County's Inter-Municipal Committee, made up of Town and County
 elected officials. The purpose of this was to allow for comments from both Councils
 prior to taking the ASP forward for final adoption.







Development Approach

The overall vision for the Town of Cochrane, expressed in its Municipal Development-Plan, is as follows:

The community of Cochrane is committed to enhancing social well-being, environmental stewardship, and economic vitality within a context of responsible growth and community engagement. Cochrane embraces sustainability and innovation while maintaining a strong link to its vibrant western heritage.

The Heritage Hills ASP aims to create a complete and sustainable community that complies with the Municipal Development Plan and Cochrane Sustainability Plan through its objectives and policies.

4.1 CREATING COMPLETE COMMUNITIES

When the land contained within this ASP planning area was annexed from Rocky View County, it significantly increased the area available for development within the Town of Cochrane. Since that time, the Town of Cochrane has expressed, through its Municipal Development Plan and Sustainability Plan, that it is the intent of this municipality to plan and develop new areas as complete communities.





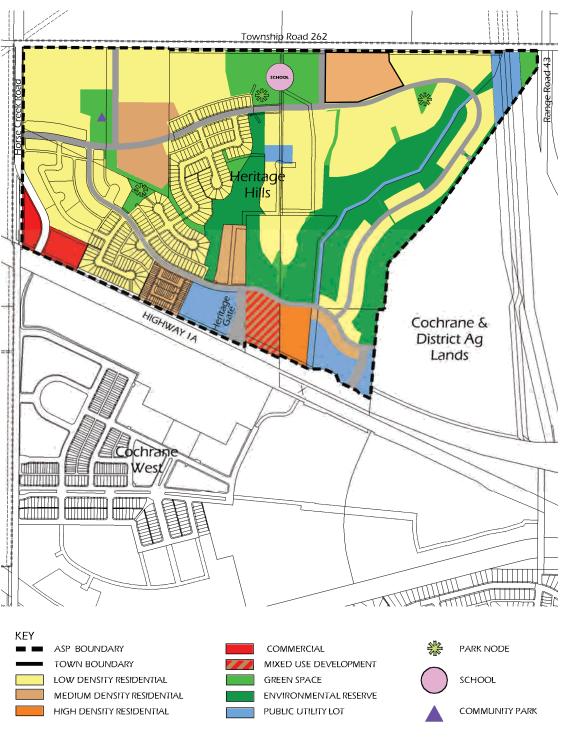


Figure 6 - Land Use Concept



A complete community is one that provides for the social, local, recreational, and neighbourhood commercial needs of residents. It should have diverse housing options, opportunities for community interaction (such as community gardens and recreational opportunities), educational opportunities, employment opportunities, transportation options (including public transit), and balanced land uses. Heritage Hills as a complete community is one of the primary objectives of this ASP.



4.2 SUSTAINABILITY

Cochrane's vision for a sustainable future has influenced the policy direction for all sections of this plan, especially with reference to the design features and land use policies. A Sustainability Matrix letter will be completed in conjunction with the Neighbourhood Plan. The purpose of this letter is to illustrate how the community will meet the sustainability objectives of the Town.

4.3 DESIGN FEATURES

This ASP incorporates design features that are summarized below and described in further detail in Section 5. The proposed land use concept is shown in Figure 6.

PARKS, PATHWAYS AND PUBLIC OPEN SPACES

Open space and parks in various sizes and functions are distributed throughout the Plan area to permit a wide range of passive and active recreational opportunities such as playfields and dog parks. A community park will be located in the western portion of the Plan area to correspond to the higher number of residents in this part of the community. The two north-south drainage courses are the central focal points of the community open space system and form a green spine that will connect with the other open spaces elements, including the playfields on the school site and the passive open spaces including a primary central park site. The north portion of the east drainage spine does not contain a pathway due to topographical constraints.

The central green spine will link the open spaces to Rocky View County to the north, the Cochrane West (Heartland) community to the south and the Cochrane and District Ag (CDAS) Lands to the east via a regional pathway system, providing a non-vehicular transportation network within the Plan area and beyond.

Connectivity (via pedestrian linkages) of Heritage Hills to the remainder of Cochrane is of high priority for the Town.



MOBILITY

This ASP emphasizes connectivity, both internally within the community as well as greater connections to the surrounding lands and regional transportation corridors. Multiple accesses to residential streets ensure that vehicular traffic can easily move throughout the Plan area.

An internal road loop system connects components of the plan and address topographic conditions.

An extensive pedestrian network provides linkages within the Plan area as well as external connections to broader community.

EFFICIENT AND EFFECTIVE USE OF TOWN'S LAND BASE

This ASP optimizes the use of development land, incorporates efficient facilities planning, such as a school site, and provides for multiple use open space facilities. Passive and active parks, as well as playfields, will provide for a diversity of activity types in the community.

The design works with the natural topography of the lands to delineate development areas and open space lands including the use of the pipeline right-of-ways (northeast plan area) as part open space system.

The ASP integrates new development with the existing built areas of the community and the adjacent Cochrane Ag lands.



SUSTAINABILITY

The major north-south drainage courses are preserved as community features. The community design strives for the efficient use of municipal infrastructure and sustainable development practices such as integrated storm water management strategies and optimization of the solar orientation of buildings

INSTITUTIONAL SERVICES

A complete community is one that meets the social needs of its residents. Institutional uses such as a school will be located in Heritage Hills to provide services for this area and other developments north of Highway 1A.

TOWN GATEWAY

The western entrance into Cochrane along Highway 1A is recognized as being significant in many statutory documents, and policies are contained in this ASP to ensure that it remains a landmark area. This may be achieved by integrating welcome signage, landscaping and building design to create an area of visual interest that accurately reflects the diversity of the Town's historic, geographic and development characteristics.

This ASP includes the potential for improvements in the Highway 1A right-of-way, at the discretion of Alberta Transportation. In addition, the Town's Western Heritage Design Guidelines will be applied to non-residential development that borders Highway1A.

VARIETY OF HOUSING TYPES AND INTEGRATED DENSITY

Heritage Hills will be developed with a range of housing types and densities that will provide affordable housing options for all income levels and create a sense of community through its mix and form, as well as its relation to other land uses.

This ASP will incorporate a mix of designated nodes of multi-family homes as well as integrating density throughout the community.



4.4 DEVELOPMENT STATISTICS

The table below (Table 1: Land Use Statistics) summarizes the general land use breakdown of the Land Use Concept:

TABLE 1: LAND USE STATISTICS

	Ha. +/-	Ac.+/-
Total ASP Plan Area	112.65	278.36
Less Registered ER	2.88	7.12
Less Proposed ER	15.03	37.14
Less Other Deductions	2.69	6.40
Gross Developable Area	92.05	227.46

In order to estimate the overall population, the Gross Developable Area (GDA) is obtained by subtracting the non-developable areas (Environmental Reserve) from the overall developable area. For the purposes of calculating densities for this Plan area the "Other Deductions" refers to the major gas pipelines corridor and the Public Utility Lots located in other-wise ER lands which will also be considered for deduction from the GDA calculation.

The Gross Developable area for the Heritage Hills ASP is approximately 92 hectares (or 227 acres). Additionally, during the Neighbourhood Plan stage, the extent of the Protected Areas will be refined, and the developable area may be updated.

It is recognized that the total estimated population will have to be refined as a result of the more detailed planning associated with the preparation of the Neighbourhood Plan. As the Neighbourhood Plan strives to achieve a density of 8 Units Per Acre (given topographic conditions), the population of Heritage Hills will be approximately 4731 residents (Table 4.2: Population Estimate).

TABLE 2: POPULATION ESTIMATE

	Ha. +/-	Ac.+/-
Step 1:	Approximate Gross Residential developable Area (acres) = +/-	227.46
	Multiply (x) Units per Gross Developable Residential Acre	8 upa
	Total Dwelling Units = +/-	1820
Step 2:	Multiply Total Dwelling Units (x) Persons per Dwelling Unit	2.6
	Total Estimated Population = +/-	4,731

The Land Use Concept for the Plan area is shown on the Land Use Concept Map (Figure 6). It is based on the Development Approach set out in Section 4. The Land Use Concept is intended to provide direction for all stakeholders on how of Heritage Hills will develop, based on the policies set out in the following sections.





Land Use Concept

5.1 GENERAL DEVELOPMENT POLICIES

5.1.1 **OBJECTIVES**

- 1. To provide policy direction on specific design features for development within the ASP area.
- 2. To encourage the standard of development within Heritage Hills to incorporate best practices.
- 3. To encourage development in this area to achieve the sustainability targets set by the Town of Cochrane Sustainability Plan.

5.1.2 **POLICIES**

1. Neighbourhood Plan submissions are encouraged to incorporate the principles of the Leadership in Energy and Environmental Design Neighbourhood Design standards (LEED-ND) as part of their community designs.





- Development Permit and Building Permit submissions for multi-family and non-residential uses are encouraged to incorporate Leadership in Energy and Environmental Design (LEED) building design standards as part of their application.
- 3. Building orientation should be optimized to facilitate solar potential.
- All development within the Heritage Hills Area Structure Plan shall be designed in accordance with Crime Prevention Through Environmental Design (CPTED) principles.
- Development Permit applications for multi-family residential and other non-residential uses within the Plan area, including schools, shall be required to include a CPTED analysis, at the discretion of the Development Authority.
- Outdoor lighting for all development, including landscaping designs for public spaces, shall have regard to dark sky lighting principles and shall be consistent with the provisions in the Town of Cochrane Land Use Bylaw.
- 7. Landscaping concepts for public spaces are encouraged to make use of stormwater reuse, naturscaping and xeriscaping designs and techniques to reduce water consumption.
- 8. Neighbourhood Plan submissions are encouraged to incorporate naturscaping and xeriscaping.
- 9. When development is proposed adjacent to ecologically significant areas, the developer shall provide a visual impact statement that includes, but is not limited to, a simulation of the development from important viewpoints which shows the impact of the development on the site and scenic resources in the area; at the discretion of the development authority See "Key Views for Consideration" on Figure 5).
- 10. Existing vegetation shall be protected when deemed significant. Where the removal of native vegetation is unavoidable, replanting that consists of native species shall be required.
- 11. All residences in the Plan area shall be located within 400 meters radius of some form of open space.
- 12. A Biophysical Impact Assessment shall be completed for all lands prior to Neighbourhood Plan and Land Use approval.
- 13. All lands within the Plan area shall require a Phase I ESA assessment prior to Neighbourhood Plan approval.
- 14. Plan areas identified as requiring a Phase II ESA shall have them completed and any remediation and/or clearance received prior to those lands receiving land use redesignation.
- 15. Historical Resource Act clearance is required prior to Subdivision Approval of any lands within the Plan area.

5.2 RESIDENTIAL

Residential policies are intended to provide a framework for the establishment of neighbourhoods that are pedestrian-oriented, that allow for a diversity of housing, and provide the residents with a sense of community. This will be accomplished through the thoughtful location of homes and buildings, the adherence to sound urban design principles, and the careful consideration of all aspects that contribute to creating a complete community.

For the purposes of this ASP, residential housing is shown as low, medium and high density (see Figure 6):

- Low density refers to single detached dwellings, semi-detached and street-oriented townhomes;
- Medium density residential refers to cluster/comprehensively-designed townhome sites and multi-family dwelling units up to three stories;
- High density refers to comprehensively-designed multi-family dwelling units greater than 3 storeys.

Specific land use designations and built forms will be determined at the Neighbourhood Plan stage.

5.2.1 OBJECTIVES

- 1. To provide a diverse housing mix that caters to all income levels.
- 2. To achieve an overall density that is consistent with the Town's objectives, as set out in the Municipal Development Plan.
- To locate the different housing forms as to enhance their relationship with the street frontage, street width, and proximity to parks, schools, recreational amenities, commercial areas and transit.
- 4. To connect neighbourhoods with all forms of mobility, including vehicular, pedestrian, bike and transit.

5.2.2 POLICIES

- A range of housing forms and densities shall be included within the Residential area of each Neighbourhood Plan.
- The minimum residential density shall be 19.8 units per gross developable hectare (8 units per gross developable acre), as specified in the Town of Cochrane Municipal Development Plan.
 - a) As per the provisions of this ASP, for the purposes of calculating densities for this Plan area the major gas pipelines corridor and the Public Utility Lots located in other-wise ER lands will also be considered for deduction from the GDA calculation.
- Affordable housing is encouraged throughout the Plan area. Developers are encouraged to liaise with the Cochrane Society for Housing Options.
- Connectivity within Heritage Hills shall be designed through the continuity
 of streets and multiple points of access to promote access and support safe
 pedestrian, bike and vehicular movements.



- 5. Consideration should be given to reducing block lengths and avoiding cul-de-sacs in order to provide pedestrian connectivity and movement.
- 6. Multi-family units shall be encouraged to:
 - a) Be adjacent, or in close priority to, the Plan area's major roadways (e.g. collectors, arterials), and transit routes;
 - b) be located in areas that would take advantage of views, vistas or other environmental features.
 - c) Provide safe pedestrian and bike access to the adjoining street;
 - d) Be in proximity to the parks and pathway system;
 - e) Provide common amenity areas such as playgrounds and community gardens where feasible; and,
 - f) Provide suitable interface treatment with existing residential areas.
- 7. Alternative housing forms (e.g. accessory suite, live/work units) may be allowed within residential areas where deemed appropriate by the Town and in compliance with the Land Use Bylaw
- 8. Figure 5 titled Design Constraints & Considerations identifies a "slope stability line" based on a geotechnical evaluation of the soil conditions associated with the lands sloping down to the Big Hill Springs Creek. This slope stability line establishes the limit for development in this area. In addition to this geotechnical setback and in accordance with the Land Use Bylaw 01-2004, Section 11.13.0, Figure 5 also indicates a "major escarpment zone" in this same area which is based on a contiguous pattern of slope conditions generally greater than 15% which further limits the extent of development. These two development constraints form the "green space" indicated for this area on Figure 6: Land Use Concept. Neighbourhood Plan and Land Use Redesignations for these lands shall be accompanied by engineering drawings and geotechnical engineering support which verifies that the site grading, roads, building sites, and yards associated with the detailed development plan can be safely developed to the satisfaction of the Town.
- 9. Residential development adjacent to Highway 1A should provide adequate screening for visual and noise impact mitigation in order to satisfy the noise attenuation standards of the Town. Noise attenuation analysis may be required to accompany the subdivision plans and engineering plans based on the proposed grading plan for the development.
- 10. To address Section 2.13 of the Intermunicipal Development Plan, that deals with the compatibility of residential development with adjacent uses across municipal boundaries, the following policies shall apply to residential areas adjacent to Rocky View County
 - a) Neighbourhood Plans adjacent to the municipal boundary shall address compatibility and minimize interface conflicts with existing and future surrounding land uses and these shall be coordinated with the adjacent landowners at the Neighbourhood Plan stage.

PARKS AND PUBLIC OPEN SPACE 5.3

The Heritage Hills ASP presents an opportunity to create a community that embraces a wide range of passive and active recreational amenities and preservation of the natural drainage corridors that will contribute to the unique needs of the community. The design of the system must ensure overall connectivity, not only within the park and open space system, but also the developed areas. The system shall promote user safety, respect the existing environmental elements and accommodate the needs of the future residents. The parks and open space system should be planned and developed in conjunction with the school site that will be developed within Heritage Hills.

5.3.1 OBJECTIVES

- 1. To preserve the two north-south drainage courses as part of the open space corridor.
- 2. To integrate the parks and open space system with the wider community through pedestrian and bike pathways.
- 3. To provide the Heritage Hills community with a variety of recreational opportunities.
- To provide spaces that create recreational opportunities for varying age groups.
- 5. To recognize the opportunity to integrate the system with the future school site so that each may provide complementary amenities.

5.3.2 POLICIES

- 1. Figures 6 and 7 generally illustrate the location of the key components of the parks and open space system, including the location of pathways. The locations shall be refined at the Neighbourhood Plan stage and ultimately be confirmed at the time of subdivision.
- 2. A central green spine, a community park and smaller green spaces shall be dedicated in the general locations illustrated on Figure 6.
- 3. A main community park shall be located as per Figure 6 and contain a range of four season elements such as:
 - childrens' play structure
 - basketball court
 - informal play areas
 - ampitheature
 - pathways and seating
 - and winter season activities
- 4. The parks and open space system shall provide a variety of passive and active recreational opportunities for residents of all ages.





- 5. Connectivity of the Heritage Hill community to the remainder of Cochrane is a high priority for the Town. The location of regional trails shall be identified at Neighbourhood Plan stage to ensure the Plan area is connected to the regional pathway that runs though the Cochrane & District Ag Lands and the Cochrane West Community to the south.
- The location of regional trails, internal pathways, access points and/or viewing
 access in proximity to environmentally significant areas is encouraged, provided
 that locating the trail, pathway, access point or viewing area in such proximity does
 not disturb the area.
- 7. Municipal Reserve may be used to create:
 - · School sites,
 - Parks,
 - Pathways,
 - Off leash dog parks,
 - Sporting facilities,
 - · A community amphitheatre;
 - · Children's play areas, or
 - Linkages between parks, schools or environmentally sensitive areas.
- 8. The Subdivision Approving Authority may register a deferred reserve caveat against the title of a parcel in order to defer the provision of Municipal Reserve, pending the future subdivision of a parcel and provided the parcel will retain its potential for future subdivision.
- Due to topographic conditions and/or small parcel size of the pre-development lands, cash-in-lieu of municipal reserve lands may be considered at the Neighbourhood Plan and Subdivision stages

5.4 SCHOOLS AND JOINT USE SITES

5.4.1 OBJECTIVES

- To provide a sufficiently-sized school site in a location that will meet the needs of the community.
- 2. To locate the school site at key crossroads or intersections in the community to highlight this important public institutions.
- 3. To encourage the integration of the school into the community through the provision of uses and services that will benefit all the residents.
- 4. To encourage the school to be located so they can take advantage of play fields and other infrastructure and reduce the cumulative size of the school site.

5.4.2 POLICIES

- A school site should be located generally as illustrated on Figure 6. The size and final location of the school site shall be determined through the Neighbourhood Plan submission and dedication as Municipal Reserve at the time of subdivision.
- The predominant use of the land within the school site shall be for educational and recreational uses, including, but not limited to: public and separate schools, sports fields, parks and playgrounds.
- School buildings and school sites should be designed and encouraged to integrate a variety of uses that benefit the community and reinforce the role of the school as the social, educational and activity centre for the community.
- 4. School sites should be centrally located to increase the opportunities for students to walk and cycle to school.
- School sites shall be located a safe distance from sour gas lines as well as overhead power lines for purposes of safety and potential use in emergency situations, to the satisfaction of the Development Authority.
- 6. The school building shall be located on a collector road and is encouraged to be located at the intersection of collector roads wherever possible.
- 7. School sites shall be designed to incorporate Crime Prevention Through Environmental Design (CPTED) principles.
- 8. School sites shall remain landscaped (graded, loamed and seeded) until such time as the school site is developed.
- 9. Passive recreational uses, such as community gardens, are encouraged to be located on school sites at the discretion of the appropriate school authority.
- 10. Bus loading and drop-off zones shall be provided in appropriate locations in order to promote free flow of traffic on the roads adjacent to a school site.







Figure 7 - Green Space and Mobility Network

5.5 COMMERCIAL

The Land Use Concept [Figure 6] shows three (3) future commercial areas in the southern portion of the Plan area along the Highway 1A corridor. The development of the proposed commercial area will depend on future market trends and future needs of the residents of Heritage Hills and the surrounding area. The suitability of the commercial area will need to be evaluated and determined during the Neighbourhood Plan stage for that area, and should commercial development not be feasible or desired, alternate, suitable development may be considered instead. Should commercial development proceed, the following shall apply:

5.5.1 OBJECTIVES

- 1. To provide for the local needs of the Heritage Hills community while creating an area that does not compete with the downtown.
- 2. To create a commercial area that allows Cochrane residents to work within the community.
- 3. To establish a commercial area that provides a non-residential tax base that will contribute to the Town's objective of having a more balanced overall assessment.
- 4. To develop the area such that it remains an attractive entrance to the Town.
- To develop a commercial area that shall be compatible with adjacent residential areas.
- 6. To provide pedestrian linkages to commercial areas within the Plan area..

5.5.2 POLICIES

- Recognizing the commercial area will form part of the entrance to the Town, it shall
 be developed so that it creates a positive visual appearance through the use of
 landscaping, attractive signage and architectural features.
- Where parcels abut Highway 1A, the rear of the building shall be built to the same design and façade treatment as the front of the building.
- All non-residential buildings shall adhere to the Western Heritage Design Guidelines.
 Uses located in the commercial area are intended to serve predominantly the local needs of the Heritage Hills community and shall not be designed to compete or have a detrimental effect on the downtown.
- 4. In the design of the commercial centre, emphasis shall be placed on the relationship between the buildings and the street to ensure a pedestrian-oriented development.
- Where commercial development abuts residential development, adequate screening and buffering of the development and the parking area shall be provided to the satisfaction of the Development Authority.



5.6 TOWN GATEWAY

Heritage Hills forms part of the Town's western gateway and as such, any development that occurs along its southern edge will have a direct impact on people's perception of Cochrane. The Town has strived to create positive entrances to the community and it is important to carry this high standard of visual treatment into Heritage Hills. The Town has adopted the Western Heritage Design Guidelines (WHDG) and they shall be applied to all non-residential buildings along the Highway 22 corridor. This will require a design review of all development along Highway 1A to ensure they meet the WHDG principles, as well as all relevant Town policies and regulations with respect to creating aesthetically pleasing entrance ways. The Town has recently adopted new welcome signage with assistance from a representative stakeholder committee for the four major entrances to Cochrane. This signage builds on the theme of Cochrane's western heritage .

5.6.1 OBJECTIVES

- To create an edge treatment along Highway 1A that, through a combination of landscaping, building design and placement, and the incorporation of existing natural features and topography into any development, creates a positive appearance to the northern entrance to the Town.
- 2. To provide the Town with the opportunity to review how the land adjacent to Highway 1A is to be developed to ensure it meets the standards the Town has established for its entranceways.

5.6.2 POLICIES

- Buildings shall be designed to present a smaller mass by using measures such as
 the reduction of the building footprint, off-setting walls, shifting rooflines to vary
 height, and articulating building elevations. The intention is to reduce building
 bulk and create visual variety. Considerations shall also be given to the orientation
 of buildings abutting Highway 1A.
- 2. Highway 1A is the western access to the Town and as such, improvements to protect and enhance its visual quality shall be undertaken.
- 3. Edge considerations should be incorporated into all forms of future development. Considerations, such as parcel size, site design, functionality, visual separation, sound attenuation, open space alternatives, view corridors, vistas, landscaping, and building materials shall be addressed to create a positive visual appearance.
- 4. Prior to approval of a Neighbourhood Plan, sketches, plans and illustrations shall be submitted to the Town showing how the Town's objectives, policies and regulations with respect to entrance ways have been addressed.
- 5. Proposed improvements within the Highway 1A right-of-way shall obtain approval from Alberta Transportation.
- 6. All non-residential buildings shall adhere to the Western Heritage Design Guidelines.

WETLAND CONSERVATION 5.7

Protection and enhancement of significant wetlands in the Plan area represents the preferred option in this ASP. However, where disturbance is unavoidable, appropriate mitigation and/or replacement will be provided to the satisfaction of relevant Provincial approval agencies and in conformance with the Town of Cochrane's policies.

5.7.1 OBJECTIVES

- 1. To provide a framework and direction on protecting, conserving, restoring and establishing mitigation measures for the Town's wetlands.
- To recognize that the treatment of wetlands is a multi-jurisdictional responsibility including municipal, provincial and federal departments, as well as non-governmental stakeholders.
- 3. To provide a framework for development in accordance with the Wetland Mitigation Hierarchy Process and the Town's Wetland Conservation Policy and thereby address the possibility that it may not be possible to protect all wetlands in place

5.7.2 POLICIES

- 1. Where a wetland exists within a Neighbourhood Plan area, the developer shall, in consultation with Alberta Sustainable Resource Development and the Town, determine whether the wetland is subject to the Public Land Act, whereby the province has claim over the bed and shore of the wetland.
- 2. During the development of the Neighbourhood Plan, a Biophysical Impact Assessment (BIA) that includes a detailed review of any wetlands and their associated riparian areas in the Plan area shall be prepared by a qualified professional.
- The BIA shall classify all wetlands according to the Stewart and Kantrud method, shall recommend which are to be preserved, what mitigation measures need to be taken, and shall provide rationale on the development of wetlands that are not to be retained.
- Where a wetland is to be retained, the BIA shall recommend a development setback that incorporates the riparian area.
- 5. In addition to the BIA, the Development Authority may require a hydrological study or a hydrogeological study or both, in order to determine how and if subsurface or surface water flows affect environmentally significant wetlands.



- 6. Once all avenues of avoidance and minimization of development have been explored, and an appropriate level of disturbance has been authorized by the Development Authority and appropriate provincial and federal authorities, mitigation for the impact on the wetland shall adhere to the Wetland Mitigation Hierarchy Process and the Town's Wetland Conservation Policy.
- 7. Where wetlands qualify as Environmental Reserve (ER) in accordance with the provisions of the Municipal Government Act, the wetland may be dedicated as ER through the subdivision process.
- 8. Where a wetland is designated as ER or otherwise protected, the following shall be permitted:
 - a) Improvements necessary to integrate the area with surrounding development and ensure its sustainability.
 - b) Drainage enhancements necessary to ensure post-development water flows;
 - c) Landscaping that is necessary to restore the wetland and its shoreline, and:
 - d) Amenities such as interpretive areas, pathways, viewing areas, etc. considered by the Town to enhance the public's understanding of the wetland. Such amenities shall obtain a Development Permit when required by the Town's Land Use Bylaw
- 9. Where wetlands do not qualify as ER, the lands may be acquired through different means such as land transfer, dedication as Municipal Reserve, registration of a conservation easement, or purchase.
- 10. Where wetlands are not acquired or protected, they shall be considered developable.
- 11. Wetlands may be included as part of the stormwater management systems, provided that the Storm Water Management Plan, prepared in support of any Neighbourhood Plan or land use redesignation, addresses the following to the satisfaction of the Development Authority:
 - a) the design of, and management of the wetland;
 - b) how the configuration will support/enhance the natural open space system;
 - c) how the wetland will balance function with the provision of habitat, and:
 - d) through what method the wetland and associated detention ponds, forebays etc. will be protected (e.g. Environmental Reserve designation).
- 12. Where a wetland is to be part of the stormwater management system, prior to subdivision approval the developer shall demonstrate to the satisfaction of the Province and the Town that the quantity and quality of stormwater entering the wetland will be such that the wetland will continue to function as it did before any development adjacent to the wetland occurred.

5.8 ENVIRONMENTALLY SIGNIFICANT AREAS

The Plan area contains some Environmentally Significant Areas (ESA). These areas will be identified during the Neighbourhood Plan stage. The ESAs may include:

- Native grasslands;
- Drainage courses;
- Escarpments; and
- Slopes in excess of 15%.

These areas play an important role in Cochrane's urban landscape by:

- Reducing soil erosion;
- Providing diverse habitats for native flora and fauna;
- · Contributing to an aesthetic urban design, and:
- Providing educational opportunities

The Town, through existing plans and policies (e.g. Sustainability Plan, Municipal Development Plan, Open Space Master Plan), provides direction on how it intends to deal with ESAs within the Town as a whole. These plans and policies will be applied to areas identified as environmentally significant, with the following providing additional direction for the Heritage Hills Plan area.

5.8.1 OBJECTIVES

- 1. To identify areas within the Plan area that are environmentally significant.
- 2. To provide guidance on how the environmentally significant areas may be protected by creating policies for the Plan area, but also recognizing that the Town and the Province have additional policies that must be respected.





5.8.2 POLICIES

- 1. ESAs identified during the Neighbourhood Plan stage are not automatically acquired and/or protected from development unless they qualify as Environmental Reserve (ER) in accordance with the Municipal Government Act.
- In addition to the grasslands, the aspen groves along the slopes of the eastern
 drainage course will be subject to review at the Neighbourhood Plan stage and
 shall be reviewed as part of a BIA that will accompany the Neighbourhood Plan or
 redesignation application.
- 3. Environmentally Significant Areas that do not qualify as Environmental Reserve in accordance with the Municipal Government Act may be protected through other means, (e.g. conservation easements, voluntary Municipal Reserve) as identified as part of a Neighbourhood Plan submission. However, where these ESAs are not dedicated, acquired or otherwise protected, the lands shall be deemed developable and the policies for the adjacent land use policy area (e.g. Residential) shall apply to those lands without requiring amendment to Figures 5 or 6.
- 4. Mitigation and creative solutions for development that may potentially impact the ESAs should be explored in the Neighbourhood Plan.





Development Servicing

6.1 SERVICING

The Plan area is currently serviced through the extension of existing Town infrastructure to accommodate Heritage Hills. As the community develops, storm and sanitary sewer systems will be sized to provide infrastructure services. The available water reservoir and pump station will be able to meet the demands of the development with necessary upgrades and future infrastructure. Details of the development servicing strategy will be determined through the Neighbourhood Plan stage, however, servicing graphics that illustrate the key servicing components for the Plan area are included as Figures 8-10.



Figure 8 - Sanitary Servicing

SANITARY

Heritage Hills is serviced through an existing gravity sanitary sewer trunk infrastructure constructed along the north side of Highway 1A which flows eastward to the Town's central sanitary collection point. This infrastructure is sized to handle full build-out of the community.

Within the Plan area, the westerly two-thirds of the community will be serviced by sanitary trunklines in the existing built areas of the community [see Figure 8]. The easterly third of the community will be serviced by new sanitary trunks in the collector road. In addition, a local network of lateral sanitary sewer infrastructure will be connected to provide service to the development.

WATER

An existing potable water supply line is located along the north boundary of Highway 1A which feeds an existing water reservoir and pump house that was constructed with the initial development to service the existing and future Heritage Hills community. The water reservoir and pumps are sized to accommodate full build-out of the Heritage Hills Plan area. A secondary main connection from Heartland into Heritage Hills will also be provided.

Heritage Hills is comprised of three potable water pressure zones (see Figure 9). The existing reservoir is located in the middle pressure zone. Water distribution lines will be extended with road infrastructure. In order to adequately service all three pressure zones, a combination of looped water lines, dual feed lines and pressure reducing valves will be required. In order to provide required water system looping, water mains may need to be extended across natural drainage courses.

Through the development of the Heritage Hills community, water mains will be extended into the Cochrane & District Agricultural lands to the east.







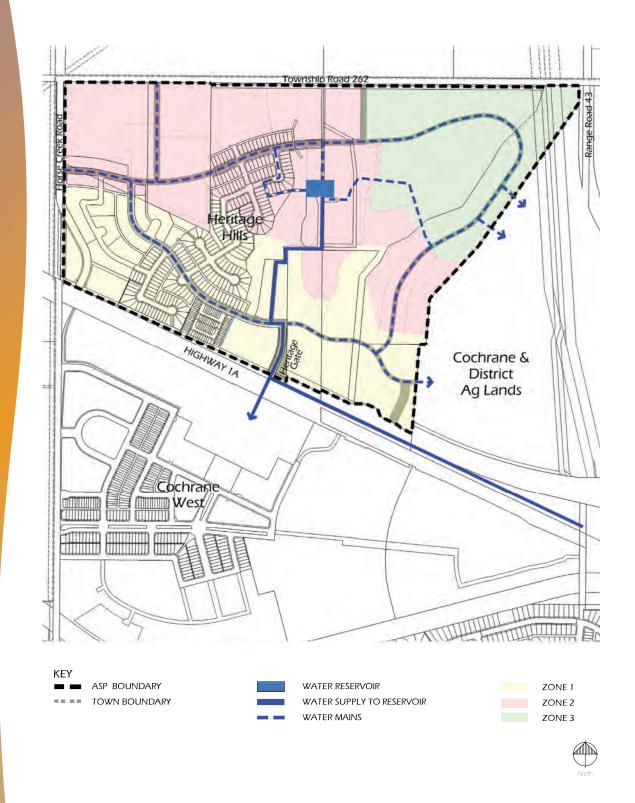


Figure 9 - Water Servicing

STORM DRAINAGE

Stormwater management for Heritage Hills will follow the Heritage Hills Staged Master Drainage Plan prepared by LGN Consulting Engineering Ltd. (November 2013) and the 2023 update to the report as prepared by Scheffer Andrew Ltd. These reports provides the design basis for the overall drainage concept for the remainder of the Heritage Hills development.

Heritage Hills will be serviced for storm drainage with stormwater management facilities as shown on Figure 10. Runoff release from the Heritage Hills development will be controlled by two stormwater management facilities. The west side is controlled by an existing stormwater management facility located in the south-east corner of their development. The east side will be controlled by a new proposed stormwater facility at the south end of the development. Runoff from the developments will be conveyed to the stormwater facilities by the storm sewer (minor) and overland drainage (major) systems.

These ponds will treat the storm water to Alberta Environment Standards and will discharge the water at the approved release rates into the existing road ditch on the north side of Bow Valley Trail (Hwy 1A), which will convey to the Big Hill Creek prior to discharging to the Bow River. Both ponds will be designed to accommodate up to the 1:100 year storm event at a minimum.

The specific number, locations and sizing of the pond(s) will be determined by a Storm Water Management Plan that is to be submitted in support of a Neighbourhood Plan application based on the catchment boundaries identified within the Plan. The stormwater management facilities will be designed to accommodate up to a 1 in 100 year storm event. The Stormwater Management Plan will be based on controlling the runoff to pre development flow rates as determined by LGN Consulting Engineering Ltd. Staged Master Drainage Plan dated November 2013.

For the development backing on to the natural drainage courses, drainage should be handled to minimize the potential for damage to the slopes while balancing the need to retain water flows to the area. Within the easterly drainage course the potential exists to incorporate a stepped storm water management system into the natural features of these lands and be contained within a linear Public Utility Lot.

The stormwater system will be designed in accordance to the City of Calgary Stormwater Management & Design Guidelines (2011) and Alberta Environment Standards and Guidelines (2006) as well as municipal standards.

WASTE MANAGEMENT

The Heritage Hills ASP should encourage easy and convienent waste, recycling and organics collection within the community. Further site design should take into consideration the need for effective and efficient collection routing, access/egress and cart/bin placement.



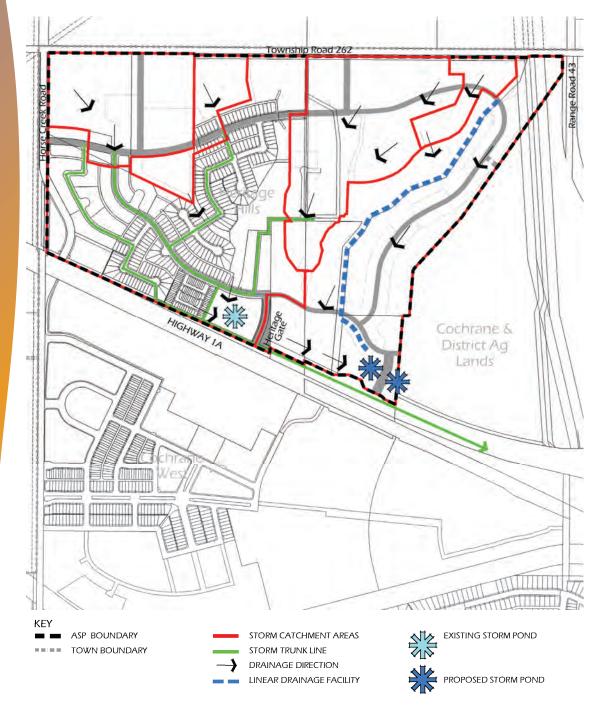




Figure 10-Storm Servicing

6.1.1 OBJECTIVES

- 1. To provide the infrastructure necessary to permit the development as proposed by the Land Use Concept.
- 2. To phase infrastructure upgrades to be commensurate with the rate of development.
- 3. To align with the provisions with the Town-wide Integrated Stormwater Management Plan (currently under preparation).
- 4. To incorporate Low Impact Development techniques and principles into the design of the area's utilities, where possible.
- 5. To develop servicing schemes that provide for sustainable infrastructure design that minimizes life-cycle costs, negative impacts to the environment, and meets the servicing standards of the Town.

6.1.2 POLICIES

- 1. Urban development within the Plan area shall be serviced with Town water, sanitary sewer and stormwater systems, as well as gas, cable, telephone and electricity.
- 2. Neighbourhood Plans shall provide servicing schemes that provide for cost effective life-cycle costs for servicing that minimize negative impacts to the environment and meet the servicing standards of the Town.
- 3. Neighbourhood Plans shall provide servicing schemes that provide methods for conservation of municipal services such as reduced potable water features.
- Development within the ASP area will be required to pay the associated Town
 Acreage Assessments and any Endeavors to Assist for front-ending of municipal
 infrastructure.
- 5. All cable, telephone and electricity for servicing development shall be underground.
- 6. Easements and rights of way shall be provided to accommodate Town utilities as necessary.
- 7. Easements, rights of way, public utility lots and road rights of way may be required, at the discretion of the Development Authority, to be dedicated or registered across undeveloped land to ensure orderly and sequential development.
- 8. The water, sanitary sewer and stormwater systems shall be designed to serve the ultimate development of the plan area as well as any required external connections.
- Water pressure zones and associated servicing requirements shall be determined to ensure fire flow requirements are met.





- 10. A Stormwater Management Plan shall be prepared with respect to strategies within the Plan area and downstream requirements prior to, or in conjunction with, a Neighbourhood Plan or a land use redesignation.
- 11. As part of the preparation of a Stormwater Management Plan "Best Management Practices" and alternatives for stormwater quality and quantity enhancements should be considered with regard to Low Impact Development Techniques and principles and put in places as part of the servicing design where feasible.
- 12. Stormwater facilities, such as stormwater ponds, are encouraged to be integrated into park and open space areas.
- 13. The details for stormwater management facilities that are to be shared across multiple ownerships shall be provided at the time of the Neighbourhood Plan process.
- 14. The alignment for utility infrastructure to service adjacent lands shall be determined at the Neighbourhood Plan process.
- 15. Wherever possible residential dwelling (excluding high density multi-family dwellings) neighbourhoods including townhouse complexes should be designed for Town of Cochrane delivered automated cart collection services (3 stream systems).





Mobility

7.1 MOBILITY SYSTEM

Within Heritage Hills, the opportunity exists to create a multi-modal transportation system that includes vehicular and non-motorized transportation as well as an anticipated local and regional transit system. As such, there is a need to identify how these systems will be constructed and implemented so that together they form an integrated mobility system.

Bunt & Associates Engineering Ltd. completed a Traffic Impact Assessment for the Plan area. The study was based on the projected build-out population of the entire community, as well as consideration for surrounding areas that may impact the traffic through the Plan area.

The ASP area is bounded by significant regional road corridors: Hwy 1A; Horse Creek Road and Range Road 45 to the northeast. In order to enhance the mobility of community members, the ASP provides for multiple connection points to these regional corridors. Figure 7 identifies the proposed road network to the Plan area including all existing and future vehicular access points. In terms of community access/egress, there are a total of five (5) entrance locations for use by residents travelling to or from the Plan Area. A primary point of access/egress is currently located along Highway 1A on the south side of the Plan area, tying to a Major Collector at the site boundary, as required to move the higher traffic volumes experienced at this location. An additional primary access onto



Highway 1A along the south frontage is proposed to enhance community mobility. Secondary access will be provided through Minor Collector standard connections on Horse Creek Road to the west and along Twp Rd 262 to the north.

The Heritage Hills Plan area will include an internal road network (Figure 7) that allows for the safe and efficient movement of vehicles within the site, as well as appropriate flows through the entrance and exit points. The internal network includes a semi-continuous loop as a Minor Collector standard roadway, with Local Residential classification roadways providing the finer web of the network. The Minor Collector roadway will be a potential bus route and will allow for parking on one or both sides of the roadway in most locations within the site (subject to confirmation in the eastern portion of the Plan area, where geographic constraints may make the provision of on-street parking more difficult). The ultimate location of the Plan area road network will generally be as illustrated in, particularly the collector roadway. Its alignment was selected based on a number of factors including existing development, topography, walking distance to transit routes, and its ability to provide development cells of reasonable size and connectivity.

Figure 7 also identifies key pedestrian corridors and linkages. The specific alignment of the pedestrian system shall be determined in the Neighbourhood Plan. A key component to the system is the provision of pathway connections to lands external to the ASP area to enhance connectivity with the greater Cochrane area.

7.1.1 OBJECTIVES

- To provide a safe, functional and efficient road system that accommodates vehicular and non-motorized traffic and meets the travel demands of the Heritage Hills community both from an external community access perspective as well as movement within the community.
- 2. Due to the number of developing parcels within the Plan area, the road network needs to be designed and implemented in a coordinated fashion.
- 3. To provide road connections to existing Cochrane & District Agricultural land to the east of Heritage Hills.
- 4. To provide for a transit system that links the Heritage Hills community to the rest of Cochrane as well as providing efficient transit service within the Plan area.
- 5. To establish a pathway system that:
 - a) complements the road network so that there is an alternative method of travel for non-motorized traffic;
 - b) provide a loop system to facilitate movement within the community; and,
 - c) connects to key open space elements within the community.

7.1.2 POLICIES

Pedestrian and Bicycle Circulation

- a) The pathway system shall be generally located as illustrated on Figure 7.
- b) Pathways should be part of an integrated park and natural space system wherever possible. Where this is not possible, pathways may be located within a road right of way or walkway.
- c) Local pathways are not shown on Figure 7 but will be located as part of each Neighbourhood Plan. When locating local pathways, they should provide direct connections to the central green spine, parks, schools, regional networks, and transit stops.

Transit Ready

- a) Transit routes shall be identified as part of a Neighbourhood Plan.
- b) The option of a transit loop layout within the Plan area, or other alternative routing options, shall be determined at the neighbourhood Plan stage as they will affect the need for designating roads as "collector" standard to accommodate bus traffic and facilities.
- c) Transit stops should be located so they serve multi-family developments, commercial areas, and schools and be within 400 metres (e.g. five minute walk) of dwelling units to encourage transit usage.

Road Network

- a) Arterial and collector roadways shall be generally located as shown on Figure 7. The sizing and classification of the roads are to be determined by the Traffic Impact Analysis completed during the Neighbourhood Plan stage.
- b) The collector road connection running east from the corner of Heritage Gate and Heritage Drive as well as the north-south road adjacent to the east side of the easterly drainage course designated as "connector roadway" on Figure 7 shall be aligned and designed to use a road standard that minimizes impacts on the slope condition of the area.
- c) Appropriate road linkages are encouraged to optimize building orientation to facilitate solar potential.
- d) East-west minor road linkages shall be established to enhance connectivity within the community and to minimize internal driving distances. The location of minor connections shall be determined at the Neighbourhood Plan stage. Developments adjacent to a collector road should provide a variety of treatments and design solutions to promote visual breaks and a variety of interfaces between the collector and the adjacent lands. Lots backing onto the collector resulting in a continuous treatment (e.g. fencing) will be strongly discouraged.





- e) Roads should provide connections to the transit route.
- f) Local roads are not shown on Figures 6 and 7 but shall be identified as part of each Neighbourhood Plan.
- g) The layout of the local road system should provide direct connections, multiple access points to residential lots, multiple route choices, provide connectivity between all parts of the community (including residential units), and allow for efficient access to transit routes.
- h) Phasing of road implementation needs to address the Town's guidelines regarding maximum number of residential units per number of site access points.
- i) Twp Road 262 (east-west road on north ASP boundary) to be widened to a Minor Arterial standard in conjunction with the development of the Plan area.
- j) The long range plans identify the need and timing for twinning of the travel lanes on Highway 1A. The timing of such twinning will be determined at the Neighbourhood plan level.







Plan Implementation

AUTHORITY OF THE PLAN 8.1

The Heritage Hills Area Structure Plan ("the Plan" or "ASP") is an area structure plan that Council has adopted through Bylaw in accordance with Section 633 of the Municipal Government Act and retains such force as provided by this regulation.

8.2 INTERPRETATION OF THE PLAN

8.2.1 MAP INTERPRETATION

Unless otherwise specified, the boundaries or locations of any symbols or areas shown on a figure or map are approximate only and shall be so interpreted.

8.2.2 POLICY INTERPRETATION

Where an introduction section accompanies the objectives and policies for any development issue, it is provided for information and clarification of the objectives and policies. Should an inconsistency arise between the introduction and an objective or policy, the policy shall take precedence for interpretation, followed by the objective, followed by the introduction.



Where "shall" is used in a policy, the policy and the actions that it requires are considered mandatory. Where "should", "may", or "is encouraged" are used in a policy, the policy and the action are considered optional, but the general intent is compliance except where unique circumstances, such as an impractical or impossible situation, require a different course of action.

8.3 PLAN AMENDMENTS

The intent of the Heritage Hills ASP is to provide policy direction and a general land use concept for development to occur within this geographic area. Build out of the Plan area is anticipated to be over 10 years, therefore a certain degree of flexibility has been incorporated into this plan to provide various options for development that still meet the vision of the Town of Cochrane. The Town of Cochrane recognizes that circumstances may dictate the need to add, modify or delete certain policies and plan elements in the future. The following objectives and policies help to clarify the procedures for an amendment and the circumstances that would warrant such action

8.3.1 OBJECTIVES

1. To provide clarity regarding the types of changes that will require an amendment to this Area Structure Plan.

8.3.2 POLICIES

- 1. An amendment shall be required where a substantive change, as defined by the Development Authority, is proposed to the text or figures of this ASP.
- An amendment application shall be referred to the Development Authority for its consideration and to Council for ultimate approval, in accordance with the requirements outlined in the Municipal Government Act.
- 3. Where an amendment to this ASP is requested, the applicant shall submit the supporting information deemed necessary by the Development Authority to evaluate and justify this amendment.
- It shall be the responsibility of the Development Authority to compile and make available a list of any amendments to this ASP.

8.4 NEIGHBOURHOOD PLANS

The Heritage Hills ASP provides principles, objectives and policies that when combined, set out how the area will develop in the future. The preparation and adoption of the ASP is, however, only one step in the planning process. Additional, more detailed work is needed before it will be possible to commence development of the area. The following sets out the next steps in the planning process.

8.4.1 OBJECTIVES

- 1. To establish a planning process that is clear and allows development to proceed in a timely fashion.
- 2. To ensure development is consistent with Town policies and regulations

8.4.2 POLICIES

- 1. Prior to, or in conjunction with an application for land use redesignation, a single Neighbourhood Plan shall be prepared for the ASP area.
- At the Town's discretion, preparation of a Shadow Concept for non-participating land owners may be considered. However, for any nonparticipating lands in the initial Neighbourhood Plan process, those lands will be required to amend the Neighbourhood Plan prior to land use redesignation approval.
- 3. A Neighbourhood Plan shall address:
 - a) future land use scenario including block design and configuration;
 - b) parcel size and residential density;
 - c) the anticipated commercial employment ratio per hectare, where applicable;
 - d) proposed open space, including active and passive open areas, natural areas and both pedestrian and bike linkages to other existing or potential adjacent developments;
 - Municipal Reserve and Environmental Reserve balance and allocation as well as other appropriate means of protecting environmentally significant areas and open space;
 - f) open space linkages with adjacent lands within and outside the Plan area;
 - g) development phasing, illustrating full build-out;
 - h) efficient means to provide access and internal road circulation over both the immediate and long term;
 - i) integration of the proposed development with existing and adjacent development in a manner that ensures compatibility with adjacent land uses;
 - j) creation of an appropriate rural-urban interface for Neighbourhood Plan areas bordering Rocky View County.
 - mitigation measures such as building design, landscaping, screening, or berming to address any on-site or off-site visual impacts;
 - any constraints to development, including but not limited to: geotechnical, environmental, and hydrogeological conditions; archaeological or historically significant features;
 - m) a Stormwater Management Plan which will determine feasible Best Management Practices for stormwater management;



- n) water and wastewater servicing strategies, including identification of rights-of-way required for connection to Town systems;
- Traffic Impact Assessment (TIA) that addresses the location of existing and future transportation networks, identifies the internal road classifications, details traffic generation and its cumulative impacts on the road network, including necessary improvements based upon traffic volume and engineering advice;
- p) Biophysical Impact Assessment (BIA) that includes field assessments which maps the habitats, describes the wildlife and vegetation, identifies and ranks wetlands according to significance, analyzes habitats and potential for species at risk, evaluates the regional ecosystems, habitat connectivity and potential for wildlife corridors, and provides recommendations for management and mitigation of the lands subject to its review
- q) transit plan showing future routing and transit stops;
- r) overall landscaping concept for all public spaces, including, but not limited to: municipal reserves (including school sites), road right-of-ways, pathways and storm water features;
- s) road names in accordance with approved Town policy
- t) proposed school site(s);
- u) recreational lands and facilities;
- v) input from affected community stakeholders, including community organizations, and social service agencies; and
- w) any other matter the Municipality deems necessary.
- 4. Land Use approval shall not be granted unless a Neighbourhood Plan has been approved by Council.
- In order to implement the policies and Figures of the ASP, the land will require redesignation by Council, subdivision approval by the Cochrane Planning Commission and approval of appropriate Development Permits by the appropriate development authority.
- At the discretion of the Development Authority, Neighbourhood Plan boundaries
 may be modified without the requirement for an amendment to this ASP where it
 can be proved that better and more cohesive planning can be achieved.
- 7. Neighbourhood Plans partially or fully contained within the Notification Area of the Inter-municipal Development Plan (IDP) shall be circulated to Rocky View County in accordance with the terms of the IDP as part of the plan review to be conducted by the Development Authority. Applicants for these plan areas are encouraged to coordinate with Rocky View County administration prior to submitting a Neighbourhood Plan application to the Development Authority.

8.5 **DEVELOPMENT PHASING**

Generally, the build out of ASP lands will generally follow the topography and will progress from south to north as indicated on Figure 11. Development phasing is a necessary part of the planning process to enable the Town to coordinate infrastructure and roadways over the long term.

8.5.1 OBJECTIVES

- To efficiently plan for Town services and roadways.
- To define the future development directions of Heritage Hills.

POLICIES 8.5.2

- 1. The phasing shall provide for a logical extension of Town services.
- 2. The phasing shall proceed in such a fashion that the school site and/or associated playfields shall be developed with the next abutting phase of development.
- 3. Park and pathway facilities shall be provided accordingly through the future phases.
- 4. Development phasing may proceed according to the servicing boundaries that are determined to exist (e.g. water pressure zones).

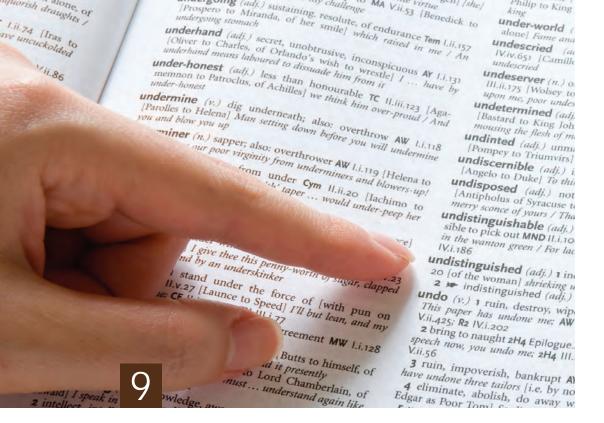








Figure 11 - Phasing Plan





Interpretations & Definitions

9.1 GLOSSARY OF TERMS

Affordable Housing means the definition for this term provided by the Canada Mortgage and Housing Corporation, as may be amended from time to time.

Amendment means a change that alters the purpose, intent, policies or Figures of the Plan

Council means the duly elected Council of the Town of Cochrane.

Crime Prevention Through Environmental Design (CPTED) means a multi-disciplinary approach to deterring criminal behaviour through environmental design.

Development Authority means the definition for this term provided in the Town of Cochrane Land Use Bylaw, as may be amended from time to time.

Gross Developable Area means the area of a site being subdivided, excluding Environmental Reserve and arterial roadways.

Gross Residential Area means an area of a site designated by a plan or bylaw to accommodate residential uses, excluding arterial roadways, environmental reserves, high school or other school sites intended to provide educational services to an area outside the plan or bylaw area, and any regional institution or public uses.

Hydrological Study means a study that addresses the distribution and circulation of water on the surface of the land and how any alterations of the land will affect the natural surface water flow and the potential impact on wetlands.

Hydrogeological Study means a study that addresses the distribution and movement of groundwater in subsurface soils and rocks (i.e; aquifers) and how the distribution and circulation of groundwater may be affected by alterations to the land, in particular potential impacts on wetlands.

Leadership in Energy and Environmental Design (LEED) means the third-party certification program and internationally accepted benchmark for the design, construction and operation of high performance green buildings, as accepted and may be amended from time to time by the Canada Green Building Council.

Leadership in Energy and Environmental Design - Neighbourhood Design (LEED-ND) means the rating system to guide and assess sustainable community development, as may be prepared and defined by the Canada Green Building Council.

Low Impact Development means a comprehensive approach to land planning and engineering design with a goal of maintaining the pre-development hydrologic regime of urban and developing watersheds.

Multi-Use Community-School Facility means a facility that combines a school with community uses which may include recreational or social uses, such as community gym access, community centre facilities, public libraries, daycares, etc.

Municipal Government Act means Chapter M-26 of the Revised Statutes of Alberta 2000, as amended from time to time.

Naturscaping means the modification and enhancement of a lot or development area through the use of natural indigenous vegetation, such as trees, shrubs, hedges, grasses, and other ground cover, in conjunction with permeable or pervious surfacing material, such as brick, stones, wood and similar indigenous landscaping materials.

Neighbourhood Plan means a plan adopted by resolution pursuant to the provisions of the Municipal Development Plan for the Town of Cochrane and this Area Structure Plan.

No Net Loss means the definition for this term provided in the Town of Cochrane Policy 1502-01, or similar, as may be amended from time to time.

The Plan means the Heritage Hills Area Structure Plan.

The Plan Area means the geographic area contained within the Heritage Hills Area Structure Plan.

The Province means the Province of Alberta.

Public Lands Act means Chapter P-40 of the Revised Statutes of Alberta 2000.

The Town or **Town of Cochrane** means the Town of Cochrane, a municipal corporation in the Province of Alberta, and where the content so requires, the area contained within the corporate boundaries of said municipality.

Subdivision Authority means the definition provided for this term in the Town of Cochrane Land Use Bylaw (Bylaw 01/2004), as may be amended from time to time.

Xeriscaping means landscaping or gardening practices that reduce or eliminate the need for supplemental water from irrigation.

