



AREA STRUCTURE PLAN
Bylaw No. 19/1990
Adopted October 29, 1990

OFFICE CONSOLIDATION

(Including amending Bylaws to No. 15/2002)



COCHRANE, ALBERTA

GLENEAGLES AREA STRUCTURE PLAN

COCHRANE, ALBERTA

Including Amending Bylaw Nos.:

- (4/93, adopted March 22, 1993)
- (16/93, adopted March 22, 1993)
- (26/93, adopted November 8, 1993)
- (16/01, adopted August 13, 2001)
- (15/02, adopted July 8, 2002)

This document is consolidated into a single publication for the convenience of the users. The official Bylaw and all amendments thereto are available from the Municipal Clerk and should be consulted in interpreting and applying this Bylaw. In case of any dispute, the original Bylaw must be consulted.

For easy reference the amending Bylaw Numbers are noted adjoining the Sections that were amended to identify that a change has occurred in a Section, Subsection or Clause, subsequent to the adoption of the original Bylaw.

TOWN OF COCHRANE
By-Law Number 19/90

Being a By-Law of the Town of Cochrane in the Province of Alberta to provide for the Gleneagles Area Structure Plan.

WHEREAS pursuant to the provisions of Section 64 of the Planning Act, Chapter P-9 of R.S.A., 1980, the Council of the Town of Cochrane in the Province of Alberta (hereinafter called the "Council") wishes to provide a framework for subsequent subdivision and development of an area of land within the Municipality, and

WHEREAS the Council did require the preparation of an Area Structure Plan for those lands lying mainly north and east of the built up area of Cochrane and described as a portion of Section 1-26-4 W5M and a portion of Section 2-26-4 W5M.

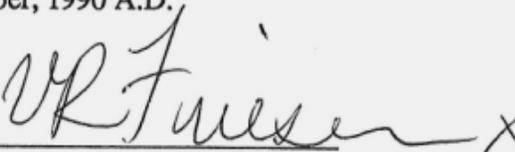
NOW THEREFORE the Council hereby enacts as follows:

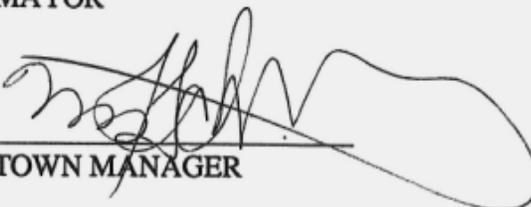
1. This by-law may be cited as the "Gleneagles Area Structure Plan."
2. The Gleneagles Area Structure Plan attached hereto is hereby adopted as the Area Structure Plan for the subject lands.
3. This by-law comes into full force and effect on the date of third reading.

READ A FIRST TIME this 16th day of July, 1990 A.D.

READ A SECOND TIME this 29th day of October, 1990 A.D.

READ A THIRD TIME this 29th day of October, 1990 A.D.


MAYOR


TOWN MANAGER

1.0 INTRODUCTION

1.1 Purpose and Objectives of the Plan

In accordance with the Municipal Government Act, this Area Structure Plan (ASP) is intended to provide a planning framework for the subdivision and development of the Gleneagles area of Cochrane. (16/01)

According to the Alberta Municipal Affairs publication “A Guide to Land Use Planning in Alberta” an area structure plan is an intermediate step between a Municipal Development Plan (MDP) and a plan of subdivision. As such, it must conform to the tenets of the MDP, but be less detailed, and more flexible than a plan of subdivision. The area structure plan should therefore describe the sequence of development for the area (i.e., phasing) the proposed land uses and densities, and the general location of the road system and utility servicing arrangement. (16/01)

As the area structure plan is a statutory document approved by the Town Council by bylaw, all subsequent development must conform to the ASP, or an amendment to the Plan must be made prior to such non-conforming development taking place. Due to this statutory situation, this plan has maintained a degree of flexibility to allow for changing technical, economic and social conditions over the development life of the area. By maintaining a certain extent of flexibility in the ASP, it is anticipated that Town Council will not be faced with a number of area structure plan amendment applications in the short run.

1.2 Policy Framework of the Area Structure Plan

1.2.1 The Municipal Government Act (16/01)

Municipal Government Act (MGA) means the Municipal Government Act, Statutes of Alberta 1994, Chapter M-26.1, and amendments thereto. According to the MGA an area structure plan (ASP) must describe development, land uses, density of proposed population, and the general location of transportation routes and public utilities. An ASP may contain any other matters the council considers necessary.

1.2.2 The Calgary Regional Plan “Deleted and all subsequent sections renumbered” (16/01)

1.2.2 Town of Cochrane Municipal Development Plan (16/01)

The role of the Municipal Development Plan (Bylaw No.17/98 and amendments thereto) is to provide policies that will direct future growth and development within the Town of Cochrane. The Plan defines for Council, administration, developers, residents, and adjacent municipalities the type and location of development acceptable to the Town. The scope of this Municipal Development Plan is comprehensive in its

approach and utilizes the flexibility offered by the Act to its fullest. The Plan includes an overview of the Town’s existing water, sanitary sewer, storm sewer, and road system and an examination of the requirements of future growth areas.

This Plan shall be considered the primary planning document for the Town of Cochrane and supersedes the policies and recommendations of the previous General Municipal Plan (GMP). All future land use plans, policies, guidelines, and developments must conform to the policies and objectives contained within this document.

1.2.3 Town of Cochrane Land Use Bylaw

Town Council adopted Land Use Bylaw 1/99 in 1999, with subsequent amendments to date. The LUB establishes land use districts and sets out regulations and guidelines for development within these districts. At the Area Structure Plan level of planning, broad land uses only are identified, which are then specified into individual land use districts at the conceptual scheme stage of the development process. The intent of the GlenEagles ASP is to develop a primarily residential area, with a large recreational amenity and possibly a small local commercial site. The residential area is designed around development cells, which can accommodate a variety of dwelling forms and tenure arrangements. (16/01)

The GlenEagles area is currently encompassed under Town land use districts. The bulk of the subject lands are designated Urban Reserve (UR) District. The purpose and intent of this district “is to provide for the continuation of existing rural pursuits and the future expansion of urban development.”

The subject lands also encompass a former Town landfill site, which is currently designated Public Service (PS) District. The landfill site has been abandoned and will be integrated in to the golf course or open space. Residential development will not encroach on this site, which will be reclaimed to meet Alberta Environment standards.

Based on the recent growth patterns within the Town, it is evident that this area is now available for urban development.

1.3 **Format of the Area Structure Plan**

The Area Structure Plan contains five sections. They are identified as follows:

Section 1 describes the general context of the Area Structure Plan in the development process, including its purpose and objectives. It also discusses the policy framework for the Area Structure Plan in relation to the other levels of planning legislation and documentation. Lastly, Section 1 describes the format of the Area Structure Plan document. Lastly, Section 1 describes the format of the Area Structure Plan document.

Section 2 contains a description of the location and background of the Gleneagles area. A detailed description of the physical characteristics of the Plan area follows. As the area has substantial elevation changes and a variety of soil types, the findings of a geo-technical study are presented, including recommendations regarding slope stability and development limits. Lastly, the Section discusses the findings of the historical resources assessment, which was undertaken for the subject lands.

Section 3 contains a detailed description of the Area Structure Plan, identifying the proposed land uses and densities. As the Plan contains a major amenity, which is indeed the focus of the development, a description of the golf course follows. Transportation and access are significant issues in the planning process of the Gleneagles lands. A detailed transportation study is found in Appendix A, which forms the basis for the road system described in Section 3. Finally, Section 3 identifies the proposed utility servicing arrangements and in conjunction with the servicing, a phasing plan for the development area.

Section 4 sets out the development policies, which guide the detailed subdivision and development of the Plan area. In some instances, these policies identify development responsibilities and where relevant, the technical specifications to be employed.

Section 5 describes the implementation of the Plan. It sets out the statutory framework of the plan in the development process, and describes the steps required to bring about the development of the lands.

2.0 THE STUDY AREA

2.1 Background

The GlenEagles area consists of approximately 234 +/- hectares (579 +/- acres) of land located in Sections 1 and 2, Township 26, Range 4, West of the 5th Meridian. As shown on Map 2, the subject lands lie within the municipal boundaries of the Town of Cochrane, in the northeast portion of the townsite, between Highway 1A and the CPR tracks.

The subject lands were annexed into the Town of Cochrane as of January 1, 1980, by order of the Local Authorities Board, at the request of Melcor Developments Ltd. and the Town of Cochrane.

The lands initially consisted of two farms, owned by the Copithorne and McPherson families, and the original alignment of Highway 1A winds through the property. A former Town of Cochrane landfill site is also located on the subject parcel. This landfill site has been abandoned and will be reclaimed to Alberta Environment standards as part of the golf course or open space development.

At the present time, a possibility exists to integrate 56 +/- hectares (139 +/- acres) to the south of the subject area into the GlenEagles development. This land, which lies

outside the present boundaries of the Town of Cochrane, in Section 36-25-4 W5M, may be suitable for additional golf course improvements.

2.2 Physical Characteristics of the Subject Lands

2.2.1 Topography and Soils

As indicated on Map 3, the topography of the land is a combination of steep hillsides and flat terrace or benchlands. The steep slopes form the valley of the Bow River. Elevations on the subject lands range from a low of 1134 metres (3720 feet) above sea level near the CPR tracks in the southwest portion of the site to a high of 1341 metres (4400 feet) at the northeast boundary of the site adjacent to Highway 1A.

The steep slopes, with inclinations from 2.5:1 to 5:1, contained within the site pose the major constraint to development. Although there are certain areas of steep inclinations, there is no evidence of slumping or instability.

A “Report of Geotechnical Conditions” of the subject lands was undertaken for Melcor Developments Ltd. By Pennell Geotechnical Engineering Ltd. In April 1979. The report addressed the feasibility of urban residential development of the lands. General findings of the report are as follows:

- ♦ Drainage of the area is excellent as a result of the steep slopes and the two major ravines on the lands.
- ♦ The entire area is void of tree growth.
- ♦ Bedrock underlying the area and outcropping in isolated locations consist of Paskapoo Formation sandstone with some grey siltstones and shale.
- ♦ The primary development area is a high level terrace, predominantly composed of glacial tills. Some clay and silt deposits are also present on the terrace areas.
- ♦ Surficial soils are glacial clay till, which is a heterogeneous mixture of gravel, sand, silt, and clay.
- ♦ The pre-consolidated glacial till subsoils will provide excellent bearing conditions for building and road construction. The glacial till will also provide good trench conditions for utility placement.

The report concluded that the terraced area is suitable for urban residential development.

However, the report also states that setback limits must be established from the top of major escarpments.

To this end, an additional geotechnical study was undertaken by Geo-Engineering (MST) Ltd., which identified top of slope and slope stability lines for the purposes of determining the specific development limits of the residential cells proposed in the GlenEagles ASP. However, as this ASP is intended as a policy document, the actual

development limits will be established at the tentative plan of subdivision stage. These will then be subject to the approval of the Subdivision Authority, in consultation with Alberta Environment and the Town of Cochrane. (16/01)

2.2.2 Historical Resources

An “Historical Resources Overview Assessment” of the subject lands was prepared for Melcor Developments Ltd. by Lifeways of Canada Limited in May 1979. As the lands have been substantially disturbed by cultivation and farming activities over the past several decades, little potential was found for significant prehistoric or historic sites on the subject lands.

The study found that “the high benchlands, part of the Big Hill Glacial Lake Calgary land forms, which constitute the majority of land suitable for prehistoric occupation, are ploughed or otherwise disturbed. Prehistoric tipi rings or other stone feature sites (cairns) would have been destroyed in these areas, which will be of limited archaeological value. The ploughed benchlands are situated in a climatically exposed location unsuited for a major prehistoric campsite. Small scattered camps of little value or concern may be present within or below the plough zone”.

Alberta Community Development has determined that “the structure plan area has been subject to an historical resources overview (1970) and an historical resources impact assessment under Historical Resources Research Permit 80-184. The Archaeological Survey of Alberta has no concerns of conditions regarding the GlenEagles Area Structure Plan.” As well, it has determined that “no known historic sites are situated on the proposed GlenEagles structure plan area. The Historic Sites Service has no concerns or conditions regarding the GlenEagles Area Structure Plan.” (16/01)

In terms of palaeontological resources, Alberta Community Development has stated that fossils of vertebrates, invertebrates, and plants have been recovered in the general area, and exposures of such fossils are excellent in the bedrock. As such, Alberta Community Development recommends that an Historical Impact Assessment be undertaken, consisting of palaeontological monitoring of bedrock exposures during construction activities. (16/01)

3.0 THE PLAN

3.1 The Plan Concept

The Town of Cochrane, as with a number of other towns in the Calgary Region, experienced brisk growth in the 1980s. This growth can be partially attributed to the relative location of Cochrane within a short commute of Calgary. However, the natural beauty of the Town’s surroundings and the desire of people to acquire a lifestyle when choosing a new living environment are significant factors in the Town’s recent growth.

Given these factors, the subject lands are proposed for a comprehensively designed residential/recreational community development with the major focus being a public golf course.

The GlenEagles Area Structure Plan has been developed on the basis of the various senior policy documents discussed above, including the Town of Cochrane Municipal Development Plan. Figure 3 of the Municipal Development Plan, entitled “Land Use Concept”, indicates that the primary land use for the GlenEagles area is to be residential development. In addition, Figure 3 also indicates parks and open space in the GlenEagles Plan area. The proposed land uses in the GlenEagles ASP therefore conform to the Municipal Development Plan. (16/01)

As a means of developing the GlenEagles area into a unified subdivision, a “country estate” theme is proposed through the use of unique entrance features, architectural controls, and street lighting design.

Council may consider permitted the design and construction of the collector road to a standard in keeping with a country estates theme. The final design of the collector road will be determined as part of the development agreement at the tentative plan stage.

Local roadways within each residential cells will be developed to urban standards with curb and gutter design, and sidewalks will be provided on one side of the street.

Pedestrian access will be directed to a continuous integrated pathway system for both safety and aesthetic purposes. The exact alignment of the pathway system will be determined at the tentative plan stage, in consultation with the Town administration and the Cochrane Planning Commission. (16/01)

3.2 Land Use

The GlenEagles area will be primarily residential in character. A local commercial development may also be included in the plan area. Utilizing the natural contours of the land, a golf course has been designed to wind throughout the residential subdivision, providing large areas of green space. Map 4 indicates the generalized land uses provided within the GlenEagles ASP. (4/93)

3.2.1 Residential Development

The character of the subject lands and the golf course design dictates that the residential component of the ASP be built in individual clusters or cells of development. The precise locations and shapes of these cells and ultimate housing type contained within them (Single-Family and Multi-Family) will be determined by the Town at the subdivision stage and will be subject to the overall density provisions of the Municipal Development Plan and this plan. (4/93)

It is anticipated that the majority of the residential units will be designed as single-detached residential lots. However, it is also the intent of the Area Structure Plan to provide a mix of multi-family residential units in a variety of dwelling types.

The Area Structure Plan indicates a number of potential multi-family cells. The densities of the individual development cells are not fixed thereby allowing flexibility, however, the overall plan densities must be maintained in order to conform with utility servicing and road designs. The overall residential density will be in the order of 12.5 units per gross developable hectare (5 units per acre), and the Area Structure Plan area can accommodate approximately 1,100 residential units in total. The proposed densities are in keeping with existing development densities in Cochrane, and conforms to the Municipal Development Plan. Table 1 gives a breakdown of generalized land uses. (16/01), (15/02)

It is expected that one or more residential cells may be designated as mature family development. This type of housing development is becoming increasingly popular and addresses the need to find alternative housing arrangements to meet the lifestyle of an ageing population base in Alberta.

TABLE 1: LAND USES

<i>Land Use Type</i>	Approximate Area		Percent of Total
	Hectares	(Acres)	
Residential (total) *	59.83	(147.83)	25.54
- Single detached	36.03	(89.03)	
- Multi detached	23.80	58.80)	
Golf Course (total)	114.36	(282.58)	48.83
- Golf Course (net)	100.00	(247.10)	
- Accessory Uses **	14.36	(35.48)	
Commercial (total)	3.90	(9.64)	1.67
- Local Centre	1.20	(2.91)	
- Hotel/Conference	2.70	(6.67)	
Municipal Reserve ***	8.05	(19.89)	3.43
- School Site	4.05	(10.00)	
- Tot Lots/Walkways	4.00	(9.88)	
Collector Roads ****	10.20	(25.21)	4.36
Balance and E.R.	39.40	(97.36)	16.82
Total	234.22	(578.75)	100.00

* Includes local roads

** Includes clubhouse and maintenance facilities

*** Municipal reserve calculation equals 10% of gross developable lands after E.R.-M.R. for golf course lands to be deferred

**** Includes R-O-W for future connector road as shown in Map 10.

3.2.2 Commercial Development

The proposed local commercial centre, which will provide for basic needs of the GlenEagles area, will occupy about 1.2 hectares (2.97acres) of land and be located along the main collector road to the south of Highway 1A. (4/93)

3.2.3 Golf Course

The proposed golf course is designed as a regulation 18-hole public facility. The course routing takes maximum advantage of the natural terrain providing golfers with views of the Bow River Valley and the Rocky Mountains. The golf course also provides substantial exposure to the residential development cells. A series of lakes will be created which will be formed by an earthen dam on the upper end of an existing natural drainage course. Water will be introduced to these lakes from an intake on the Bow River to supply irrigation needs of the golf course. The lakes also provide storm water retention capacity for the proposed development. The lakes serve as hazards of the golf course and are an aesthetic feature for the golf course and residential development in the immediate vicinity.

A golf practice centre is proposed as part of this public facility. Located across the main collector roadway from the clubhouse, it may include a practice range, practice green and sand traps. The golf course maintenance centre is proposed to be located at the east end of the development in the location presently occupied by the former McPherson homestead.

3.2.4 Municipal and Environmental Reserves

As discussed in Section 2.2.1 under Topography, the subject lands have considerable elevation relief, including some steep slopes and ravine features. The GlenEagles ASP Land Use Concept recognizes these topographic features and incorporates them into the design of the public golf course facility. The golf course comprises approximately 50% of the total land base of the GlenEagles development area, some of which would normally be designated as environmental reserve, but the bulk of which could otherwise be developed for residential development.

For the purposes of the public golf course development, certain lands that could be dedicated as environmental reserves may, in consultation with the Town of Cochrane and Alberta Environment, form part of the golf course. (16/01)

In accordance with the Municipal Government Act (MGA), when a parcel is subdivided, up to 10% of the site area (after environmental reserves have been dedicated) may be required for municipal reserve. Municipal Reserve (MR) and Municipal School Reserves (MSR) will be dedicated for those lands, which are for residential and commercial development (excluding the golf school, which is essentially an extensive recreational use). Therefore, the MR and MSR dedication will be 10% of 80.46 hectares or 8.05 hectares.

As part of this municipal reserve dedication, a possible future MSR site with direct access to the main collector road has been identified and has been deemed acceptable to the Municipal District of Rocky View School Division. The site, which is approximately 4.05 hectares (10.0 acres) in size, can accommodate an elementary school with associated recreational and play field facilities.

In addition, tot lots of approximately 0.2 hectares (0.5 acres) each will provide sufficient play areas for the various development cells. The number and location of these tot lots will be determined at the tentative plan of subdivision stage.

As discussed below, a comprehensive pedestrian/bicycle pathway system will be an integral part of the GlenEagles development. Council may consider a municipal reserve credit for those areas of the main pedestrian/bicycle pathway system, which are not developed on environmental reserve or roadway.

3.2.5 Pedestrian Pathway System

An integral part of the GlenEagles development is a pedestrian pathway system. The system shall include a bicycle pathway, which will generally parallel the collector road, and walking trails, which will generally follow escarpment areas to allow for circulation throughout the plan area and provide a recreation amenity for residents. The precise locations and standards of the pathway system will be determined at the tentative plan of subdivision stage.

Design Principles

The system will:

- ♦ be separated from automobile traffic,
- ♦ include at least one connection to the areas to the west,
- ♦ connect to all residential development cells,
- ♦ provide access to views and escarpment areas,
- ♦ have minimum standards consistent with Town design criteria, being utilized at the time of development of each phase,
- ♦ be designed to minimize danger to users from adjacent golf course activity. (4/93)

3.3 **Utility Servicing**

As discussed in Section 2.2, the subject lands have considerable elevation relief and other topographic constraints, which impact utility servicing. In addition, the development of the golf course facility in conjunction with the residential cells require innovative utility servicing arrangements.

The proposed servicing in this report is preliminary only and subject to change based on the detail design for each phase of development. The details of the servicing for each phase will be negotiated within the context of a development agreement at the tentative plan of subdivision stage. The servicing section addresses water, sanitary, sewer, storm utilities. As well, the report outlines collector and local road standards to be applied.

3.3.1 Phasing

(4/93)

As shown on Map 6, the GlenEagles ASP area has been separated into seven development phases. These phases have been established on the basis of utility servicing and logical development cells and should therefore be regarded as a guideline for development as opposed to a specific development pattern or timetable.

In order to retain flexibility, the phasing indicated could be revised at the tentative plan stage and may involve splitting a phase into stages or merging two or more phases. Despite the flexibility in the phasing program, it is expected that development will occur in a west to east pattern as shown on the Plan.

3.3.2 Sanitary Sewer

The initial phase of development will be serviced by extension of the proposed sanitary sewer required to service the Hearthstone Development.

Subsequent phases of development will be serviced by an extension of a gravity sewer main from the existing sewage treatment plant to the southwest portion of the site (see Map 7).

3.3.3 Storm Sewer

The storm water management scheme for the development area (see Map 8) will involve:

- ♦ construction of a conventional piped storm drainage system within the residential areas;
- ♦ construction of storage ponds within the golf course to store piped drainage from residential areas, overland flows from undeveloped areas and areas north of Highway 1A, golf course drainage, etc.;
- ♦ use of natural surface drainage system for the golf course and undeveloped areas;
- ♦ channelling of overland flows from rare events to the Bow River.

3.3.4 Water Supply

The initial phase of development will be serviced by the existing reservoir, located along the northwest boundary of the site.

Subsequent phases of development will require construction of additional supply lines, pump stations, pressure-reducing valves, distribution system, etc. The construction of the infrastructure will be phased. The existing Town's reservoir will be used as a source of water for supplying the entire development.

The development area lies within four water pressure zones. Part of the development will be gravity fed while water supply to the rest of the area will be pumped (see Map 9).

The preliminary servicing is based on the study undertaken by Brisbin and Sentis Engineering Ltd. (see Appendix B).

3.3.5 Transportation System

In accordance with the Municipal Development Plan, the GlenEagles Area Structure Plan provides a connection from Highway 1A in the northeast corner of the plan area to the Central Business District via First Street in the southwest portion of the plan area. This connection is achieved utilizing a collector road, with individual cells of development serviced by local roadways, as indicated on Map 10. (16/01)

In addition to this roadway system, which is adequate to service the GlenEagles plan area, a right-of-way as indicated on Map 10 will be protected to primary collector standards, which would allow a connection from areas to the south of the CPR track to Highway 1A, as indicated in the Town of Cochrane Transportation Study. This of this right-of-way may, however, be altered in the event that a revised transportation study indicates a more suitable route for this connection. In the event that a more suitable route is determined, the GlenEagles Area Structure Plan will be amended *accordingly*.

It is proposed that the possible connector shown on Map 10 be registered as a public utility lot (P.U.L.) at the tentative plan stage. A caveat registered against the P.U.L. can insure that the lands revert back to the adjacent landowner(s) (less any environmental reserve) in the event that this road connection is not required.

3.3.6 Shallow Utility Services

The following shallow utility services will be provided:

- ♦ an underground electrical system (including street lighting),
- ♦ a natural gas distribution system,
- ♦ a telephone system,
- ♦ a cable television system.

All lots will be front serviced and easements as designated by the Town of Cochrane and the utility companies will be provided.

3.3.7 Irrigation Water Supply

The golf course has an irrigation requirement in the order of 375,000 gallons per day for a five (5) month period. This equates to 200 acre-feet of water annually. Water for irrigation will be diverted from the Bow River at an approximate quantity of 200 acre-feet annually to be withdrawn at a point in the SE¼ 2-26-4-W5.

On-site storage ponds will be located in natural drainage runs to collect storm runoff, which will serve as a secondary source of water for irrigation purposes.

4.0 DEVELOPMENT POLICIES

4.1 General Policies

- 4.1.1 All subdivision and development shall be in accordance with the statutory frameworks set out in the Municipal Government Act, the Town of Cochrane Municipal Development Plan, and the Town of Cochrane Land Use Bylaw. (16/01)
- 4.1.2 The GlenEagles Plan area shall consist of a mix of residential and local commercial land uses, focused around a public golf course facility. (16/01)
- 4.1.3 The landfill site shall be properly contained and reclaimed to the satisfaction of Alberta Environment.
- 4.1.4 In accordance with Alberta Community Development recommendations, palaeontological monitoring of bedrock exposures shall be undertaken by a qualified archaeologist during construction activities. (16/01)
- 4.1.5 At the discretion of the Development Authority, the developers will be required, at their own cost, to provide a Municipal Environmental Impact Statement (MEIS), Visual Impact Statement, geotechnical analysis, and any other requested environmental assessment documentation prior to redesignation, subdivision, or development in accordance with the MDP. (16/01)
- 4.1.6 Developers of proposed recreational, commercial, and industrial developments shall be required to prepare and implement a stormwater management plan. The cost to prepare the plan shall be borne by the developer and will include, but not necessarily limited to, the following:
- ♦ existing drainage features;
 - ♦ stormwater related environmental issues (first flush effects, stockpile snowmelt, soil erosion);
 - ♦ minor and major system design criteria (1:100 year event, return period, calculation of flows, rainfall intensity, description of the proposed system);
 - ♦ design criteria for flows originating off-site;
 - ♦ erosion and sediment control especially in escarpment areas;
 - ♦ operation and maintenance. (16/01)

4.2 Residential Policies

- 4.2.1 The residential component of the Plan shall consist of a mix of single-detached and multi-unit dwelling units designed within development cells. The overall density of

residential development shall not exceed 12.5 units per gross developable hectare. The overall number of residential units should not exceed 1,100 units. (16/01), (15/02)

- 4.2.2 The specific density and mix of each development cell shall be determined at the tentative plan of subdivision stage of the approval process.
- 4.2.3 Residential development shall occur on a phased basis in accordance with the Area Structure Plan. The timing of development of each phase will be determined by servicing considerations and local economic conditions.
- 4.2.4 Boundaries and setback limits for residential development cells located along escarpments shall be in accordance with geotechnical analysis and slope stability studies to be undertaken by qualified engineers at the tentative plan stage.
- 4.2.5 Architectural design guidelines should be established in consultation with the Town and implemented by the developer to encourage compatibility between buildings.
- 4.2.6 Residential areas shall incorporate as part of the overall design of the subdivision, pedestrian walkways, and public reserve areas.
- 4.2.7 Infill development on vacant parcels or redevelopment of under-utilized parcels will be encouraged in order to maximize the use of existing roads, utilities, parks, and other community services [MDP 8.4.9(b)]. (16/01)
- 4.2.8 Multiple dwelling residential development shall generally be subject to design controls as outlined in Appendix E to ensure they complement the character of the existing neighbourhood, site layout, and scale. Issues regarding privacy, parking, and landscaping should also be addressed [MDP 8.4.11(c)]. (16/01)

4.3 Golf Course Policies

- 4.3.1 The golf course should be a public facility, oriented towards providing Cochrane residents with an opportunity to utilize the golf course, as well as providing a destination attraction for tourists and non-local golfers.
- 4.3.2 Lands used for golf course development are not considered reserve land dedication and reserve requirements for these lands shall be met in full through registration of a deferred reserve caveat. In the event that subdivision is proposed on these lands at some future date, full dedication of reserve lands shall then be obtained.
- 4.3.3 The development permit application for the golf course should include a detailed geotechnical analysis prepared by a qualified professional engineer, which addresses slope stability, dam design, soil erosion, pond design, and irrigation impacts, to the satisfaction of Alberta Environment in consultation with the Town of Cochrane.
- 4.3.4 Prior to subdivision of lands adjacent to the proposed golf course, the developer shall provide a report, which outlines the location of all fairways in relationship to the

proposed lots and those measures, which are proposed to minimize conflicts between the golf course and adjacent uses.

- 4.3.5 Where a local roadway divides a golf course development, the necessary crossing should be clearly visible to motorists and employ safe means of slowing or stopping traffic when crossings are in use. Where a major collector roadway intersects the golf course, grade-separated means shall be employed for golfer and pedestrian crossing.
- 4.3.6 The developer shall be responsible for obtaining authorization from appropriate authorities to divert water from the Bow River for golf course irrigation.

4.4 Open Space and Reserve Policies

- 4.4.1 Total municipal reserve requirements shall equal 10% of the gross developable area, excluding the golf course, less any environmental reserve dedication. Reserves shall be based on the entire GlenEagles area, rather than on individual residential and commercial cells, with deferred reserve caveats filed on the property until the balance of reserves have been dedicated upon completion of the development.
- 4.4.2 As part of the municipal reserve dedication, a proposed school and park site, approximately 4.05 hectares (10 acres) in size, shall be provided in the west part of the GlenEagles development. (4/93)
- 4.4.3 Tot lots of approximately 0.2 hectares (0.5 acres) each shall be developed to service the GlenEagles subdivision. No residence shall be located further than 400 metres (1312 feet) from a tot lot. The exact number and location of these tot lots shall be determined at the tentative plan of subdivision stage.
- 4.4.4 Environmental reserve shall be dedicated along escarpment areas, which are not suitable for golf course or other urban development, as determined by geotechnical analysis.
Precise location of reserve sites shall be determined at the tentative plan stage.
- 4.4.5 A pedestrian pathway shall be constructed to Town of Cochrane standards to provide a connection from the developed portion of the Town into the GlenEagles plan area. This pathway should serve to link the following:
- ♦ environmental reserve,
 - ♦ pathway systems in adjacent developments, and
 - ♦ community and school facilities.
- 4.4.6 The specific alignment and location of the pathway shall be determined at the tentative plan of subdivision stage. Those areas of the pathway not deemed as environmental reserve may receive credit for the purposes of municipal reserve dedication.
- 4.4.7 Major and minor pedestrian paths and bicycle routes shall be located along or visible from streets and linked to local destinations. Bicycle parking facilities should be

provided at key locations. Pathway design should implement The Principles of Crime Prevention Through Environmental Design (C.P.T.E.D.) referred to in Appendix F in the Municipal Development Plan [MDP 8.7.3(g)]. (16/01)

4.4.8 “Deleted” (4/93)

4.4.9 A landscaping and tree-planting program, to be specified in a development agreement, shall be provided at the tentative plan stage.

4.5 Commercial Policies

4.5.1 Local commercial floor space, should not exceed 0.93 square metres (10 square feet) per capita for the estimated population served. (4/93)

4.5.2 Local commercial development should be limited to retail and service stores only, which are compatible with local area needs.

4.5.3 The local commercial centre shall provide goods and services consistent with a neighbourhood oriented facility.

4.5.4 “Deleted” (4/93)

4.5.5 Regional retail shopping malls shall not be allowed in any locations outside the downtown or downtown expansion area. Commercial services oriented to the convenience and service needs of area residents will be permitted outside the downtown [MDP 8.5.3(k)]. (16/01)

4.6 Transportation and Road Policies

4.6.1 The GlenEagles Plan area shall be serviced by a major access point off of Highway 1A at the north east corner of the site, and by an access to the west portion of the Plan area via a partial intersection onto Highway 1A. (16/93)

4.6.2 The Plan recognizes that a major grade separated intersection will eventually be constructed near the northwest corner of the site at Highway 1A and shall provide a sufficient buffer to allow unimpeded construction of this intersection. In addition a partial grade separated intersection is ultimately required at the west access onto Highway 1A, consisting of ingress eastbound and egress westbound. (16/93)

4.6.3 Council may consider permitting the construction of the collector road as shown on Map 10, to standards in keeping with a “Country Estates” subdivision, those standards to be set out in the context of a development agreement at the tentative plan stage.

4.6.4 Internal residential roadways may be constructed as private roads within the context of a condominium title.

- 4.6.5 Where residential lots are constructed in close proximity to Highway 1A, council may require that a noise analysis be undertaken, and appropriate sound attenuation measures employed where noise levels are anticipated to exceed those standards as set out by Canada Mortgage and Housing Corporation (CMHC).
- 4.6.6 No subdivision shall occur prior to the development of a public roadway to the northeast access onto Highway 1A to the satisfaction of the Municipality. (16/93)
- 4.6.7 “Deleted” (16/93)
- 4.6.8 A right-of-way shall be protected to primary collector standards as indicated on Map 10, to allow the connection of lands to the south of the CPR tracks to Highway 1A at the north-eastern boundary of the GlenEagles Plan area. In the event that a future Transportation Study identifies an alternate route to achieve this connection, this right-of-way will be abandoned by an amendment to the Cochrane Municipal Development Plan and the GlenEagles Area Structure Plan. (16/01)
- 4.6.9 All public residential roadways shall be constructed to urban standards as set out in Table 2, in accordance with Cochrane Town standards.
- 4.6.10 The Town-wide transportation system should be amendable to alternatives and provide choices including automobile, walking, cycling, and eventually transit, including intermunicipal rapid transit [MDP 9.5(h)]. (16/01)
- 4.6.11 Road system designs and standards are encouraged to account for the long-term need for public transit service [MDP 9.7(a)]. (16/01)

TABLE 2: ROADWAY STANDARDS

Class of Roadway	Primary Function	Number of Lanes	Right-of-Way Width	Design Speed (km/h)	Type of Access and Control
Primary Collector	To provide for traffic movement, and access to development cells	2 or 4 moving 0 parking	27.5m	50	Access only as shown on Map 10
Collector	To provide for local traffic movements and access to local streets and properties	2 moving 0 parking	22m	50	Direct access to adjacent to property frontage.
Local Residential Street	To provide access to residential properties.	2 moving 2 parking	15m	50	Direct access to adjacent property
Rear Lane	To provide rear access to residential or commercial lots	Not applicable	9m if services 6m if no services	15-30	Not applicable

4.7 Utility Servicing Policies

- 4.7.1 The GlenEagles subdivision shall be developed in a series of phases, based on individual cells of development. The actual timing of development of each phase shall be determined by servicing considerations, *including sewage treatment capacity* and local economic conditions.
- 4.7.2 Sanitary and storm servicing shall be designed in accordance with Town of Cochrane standards. Exact alignments of sewer lines shall be determined at the tentative plan of subdivision stage.
- 4.7.3 Water supply, treatment, and distribution facilities shall be adequately designed to meet projected domestic consumption and fire-flow requirements.
- 4.7.4 The developer may be responsible for certain costs arising from provision or necessary upgrading of utility lines and associated facilities to service the development area, those costs to be negotiated in a development agreement at the tentative plan stage.
- 4.7.5 Off-site levies or acreage assessments to recover the costs of providing major public utilities will be imposed by the Town in respect of land that is to be developed or subdivided, and which has not been previously subject to an off-site levy. These levies shall be assessed on a gross acreage basis, excluding those lands that are developed for golf course or environmental reserve, according to the Town's off-site levy schedule at the time of subdivision.
- 4.7.6 Golf course lands shall be subject to the off-site levies at the current rate at the time of development, only in the event that future subdivision for the purposes of *urban* development occurs.
- 4.7.7 All utilities shall be underground.
- 4.7.8 Detailed requirements for the provision of services shall be determined at the tentative plan stage
- 4.7.9 Upgrades to the water system will be required to achieve the Land Use Concept illustrated on Map 3 of the Municipal Development Plan, and include the following:
- ♦ No additional storage to service the ultimate development within the Town boundary provided reservoirs are constructed in GlenEagles and South Ridge;
 - ♦ For GlenEagles, a new reservoir and a booster station upgrade [MDP 10.3(f)]. (16/01)
- 4.7.10 In order to rectify existing deficiencies in the Town's current sanitary sewer system (Map 7, MDP) an upgrade for a gravity main from GlenEagles is required [MDP 10.1.2]. (16/01)

5.0 PLAN IMPLEMENTATION

As stated in Section 1.0, the GlenEagles Area Structure Plan is a statutory document, which guides the development of the subject lands. As such, the ASP has been approved by the Town of Cochrane Council by way of a bylaw.

All subsequent development plans must conform to the principles and policies of the GlenEagles Area Structure Plan. The implementation stages in the development process include applications for land use amendment and subdivision. At the tentative plan subdivision stage, all detailed engineering design and specific locations for each element of the plan are established. The engineering details are then negotiated within the context of a development agreement, which outlines development and fiscal responsibilities.

Any application for land use or subdivision, which does not conform to the approved area structure plan, will require an amendment to the area structure plan.