

**BYLAW NO. 1073  
STARLAND COUNTY  
IN THE PROVINCE OF ALBERTA, CANADA**

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A Bylaw of Starland County to  
adopt the Handhills Viewpoint Area  
Structure Plan.

**WHEREAS** pursuant to the provision of Section 633(1) of the *Municipal Government Act*, R.S.A. 2000, Chapter M-26.1, a Council may pass a bylaw for the purpose of adopting an area structure plan to provide a framework for subsequent subdivision and development of land within the County;

**AND WHEREAS** an Area Structure Plan referred to as the Handhills Viewpoint Area Structure Plan has been prepared to provide a framework for the subdivision and development of a portion of the South East Quarter (SE ¼), Section Sixteen (16), Township Thirty (30), Range Seventeen (17), West of the Fourth Meridian (W.4M.) (hereinafter referred to as the "subject lands");

**AND WHEREAS** it is deemed appropriate to adopt the Handhills Viewpoint Area Structure Plan;

**AND WHEREAS** the document dated May 2004 entitled the "Handhills Viewpoint Area Structure Plan", a copy of which is attached as Schedule "A" to this Bylaw, is proposed for adoption;

**AND WHEREAS** the requirements of the *Municipal Government Act* R.S.A. 2000, Chapter M-26.1 regarding the advertising of this Bylaw have been complied with;

**AND WHEREAS** copies of this Bylaw and related documents were made available for inspection for the public at the office of Starland County as required by the *Municipal Government Act* S.A. 2000, Chapter M-26.1;


**AND WHEREAS** a public hearing with respect to this Bylaw was held in the Council Chambers at the Starland County Office on the 9th day of November, 2004 at 1:00 pm;

**NOW THEREFORE THE MUNICIPAL COUNCIL OF STARLAND COUNTY, IN COUNCIL ASSEMBLED, ENACTS THE FOLLOWING:**

1. The Handhills Viewpoint Area Structure Plan, attached as Schedule "A" to this Bylaw, is hereby adopted.

This Bylaw shall come into force at the beginning of the day it is passed.

First reading only on motion of Reeve Thompson, this 12<sup>th</sup> day of October, A.D., 2004.

  
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K. BARRY MCLEOD  
REEVE

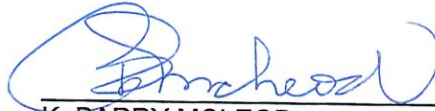
  
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ROSS D. RAWLUSYK  
CHIEF ADMINISTRATIVE OFFICER

**STARLAND COUNTY  
BYLAW NUMBER NO. 1073 – Handhills Viewpoint Area Structure Plan**


Second reading on motion of Councillor Hoover, this 9<sup>th</sup> day of November, A.D., 2004.

Third and final reading on motion of Reeve McLeod, this 9<sup>th</sup> day of November, A.D., 2004.

**DONE AND FINALLY PASSED IN COUNCIL, DULY ASSEMBLED, THIS 9<sup>th</sup> DAY OF NOVEMBER, A.D., 2004.**



K. BARRY MCLEOD  
REEVE



ROSS D. RAWLUSYK  
CHIEF ADMINISTRATIVE OFFICER

# Hand Hills Viewpoint Area Structure Plan

Bylaw No. 1073

November 2004

Prepared by



and



**PALLISER REGIONAL  
MUNICIPAL SERVICES**

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## 1.0 INTRODUCTION

This Area Structure Plan is intended to provide future planning direction for an area of land on the plateau of the Hand Hills, adjacent to Highway 851. The parcel of land is currently privately owned, however, Starland County has been presented with an opportunity to acquire a portion of the parcel for development of a viewpoint and geological interpretive area. The landowner has also expressed interest in developing a residence and possibly some commercial tourist facilities on a portion of the parcel. This Area Structure Plan aims to guide future development of the parcel of land while protecting adjacent agriculture operations, however, it does not in any way relieve an individual or organization from complying with other municipal plans or bylaws or provincial and federal regulations.

### 1.1 PURPOSE

The purpose of this area structure plan is to outline the future land use pattern and establish development guidelines for this area for interpretive, recreational, and commercial use by tourists, while minimizing impact on the environment and surrounding agricultural operations.

## 2.0 STUDY AREA

### 2.1 LOCATION

Located on a portion of the SE ¼ 16-30-17-W4M (Fig. 1), the study area contains 8.93 hectares (22.07 acres) of land and is cut off from the rest of the quarter by the Highway 851. Highway 851 is in the process of being recognized as the "Hand Hills Scenic Driving Route" and is used as an alternative route from Hanna to Drumheller. The study area is approximately 8 kilometers (5 miles) south of the Village of Delia and lies on the plateau of the Hand Hills.

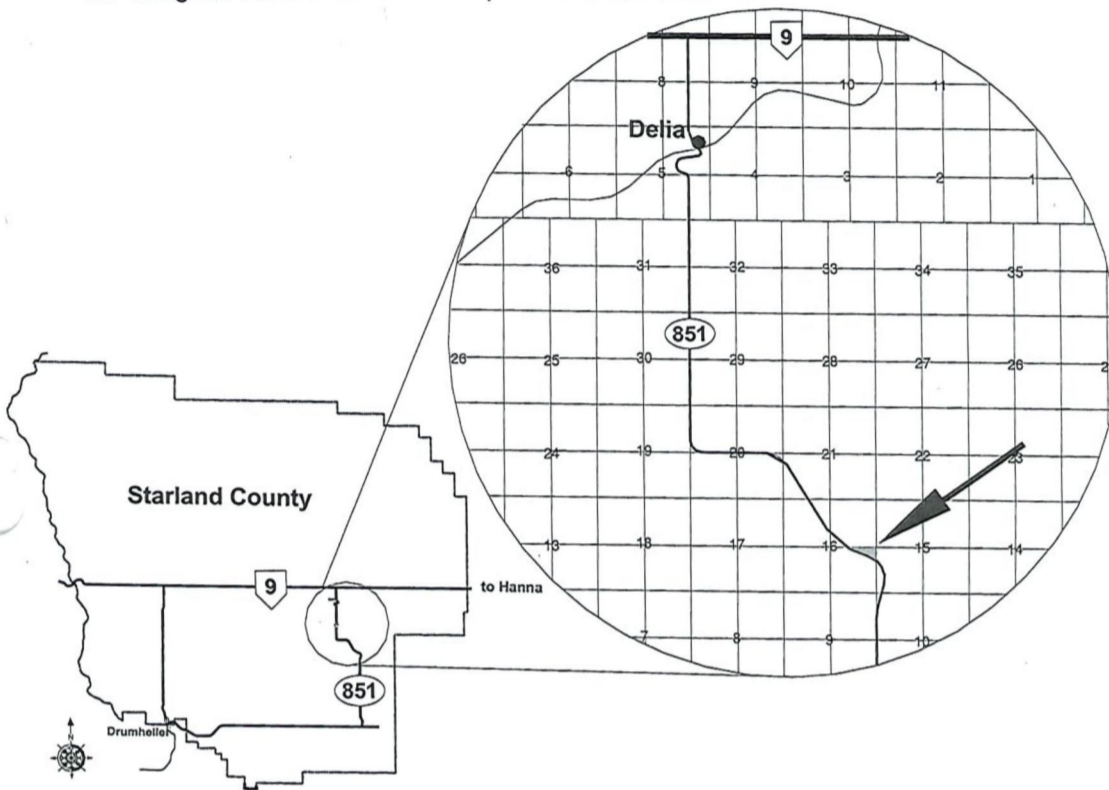
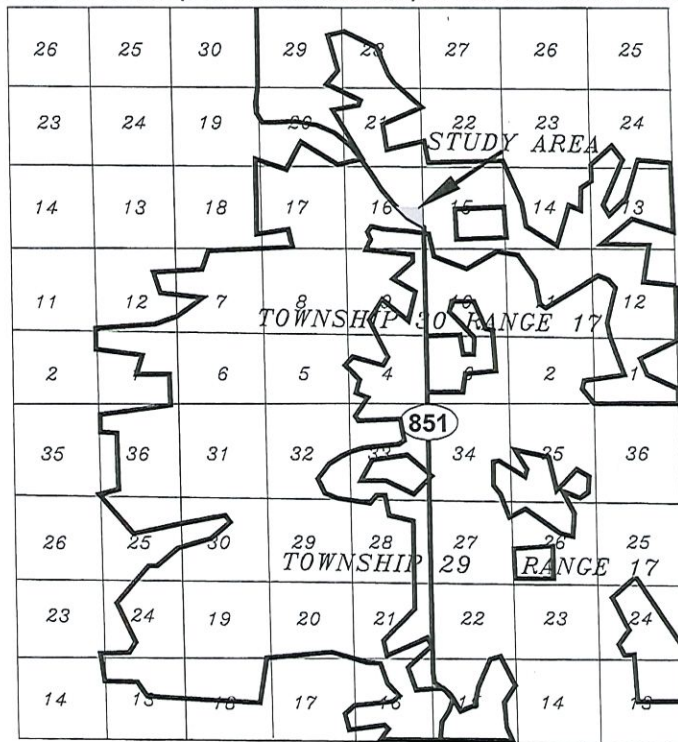


Figure 1: Location Map

**2.2 ENVIRONMENTAL SIGNIFICANCE OF THE HAND HILLS**

The Hand Hills are a prominent landform rising about 200 m above the surrounding plains, reaching an elevation of about 1070 m (3500 ft) above sea level. Recognized as an environmentally significant area (provincial level) (Fig. 2), the Hand Hills contain both unique geological features and representation of unique habitats. The topography of the hills is the result of a significant Tertiary conglomerate and gravel cap, and only a handful of hill systems in the plains have such a deposit. This "cap" slows the effects of erosion, allowing the hills to maintain their relatively high elevation. This elevation allows for the establishment of some remnant vegetation on the plateau, including some plant species which are normally found in Cordilleran or mountain regions. In general, the habitats of the Hand Hills include aspen woodlands, tall and low shrubbery, and grasslands. There are even remnant pockets of native fescue grasslands.

The geology of the Hand Hills is the main reason that they have been identified as an environmentally significant area. This geology is also the main reason that the study area has been identified as a location for a geological interpretive site and viewpoint. Through the development guidelines outlined in Section 4, this parcel of land can be developed with minimal impact on the natural features.



**Figure 2: The Hand Hills Environmentally Significant Area**

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### 2.3 DESCRIPTION OF THE STUDY AREA

Measuring 22.07 acres (9.93 ha), the study area is a triangular parcel (Fig. 3), bounded on the north and east by the boundary of the quarter line and bounded on the southwest by Highway 851. The parcel includes both relatively flat portions of the plateau, located in the northeast portion, and relatively steep escarpment leading down to Highway 851. This escarpment is in excess of 30 metres (100 ft).

There are three "coulee fingers" (Fig. 4) which reach from Highway 851 up to the plateau. The largest of these coulees effectively bisects the study area. Most of the study area contains native grasses, however, the two larger coulees contain pockets of aspen poplars.

The study area is accessed off the municipal road which lies adjacent to the east boundary of the parcel and connects with Highway 851. An access off of the municipal road is located in the northeast corner of the study area.

The study area and adjacent properties are designated "A" – Agricultural District in the Starland County Land Use Bylaw. Adjacent agricultural operations include mostly grazing of cattle with some crop cultivation. There are gravel pits located on the plateau of the Hand Hills.

### 2.4 SITE CONSTRAINTS

The conglomerate and gravel cap of the Hand Hills protects the plateau of the hills from the effects of erosion. Areas not protected by this cap are eroded into steep and often unstable slopes. Removal of the vegetation can greatly impact this erosion.

The study area contains significant and steep slopes which can effect development of the site. Not only must development incorporate methods which minimize disturbance of vegetation on these slopes, but development must also be located on stable ground surfaces. This may require development setbacks from the escarpment (Fig. 4) or completion of geophysical reports to determine the stability of a given location. As the escarpment of this site is in excess of 30 metres (100 ft), any development must be setback 60 metres (197 ft) from the front edge of the coulee break, unless otherwise indicated by a geophysical report.



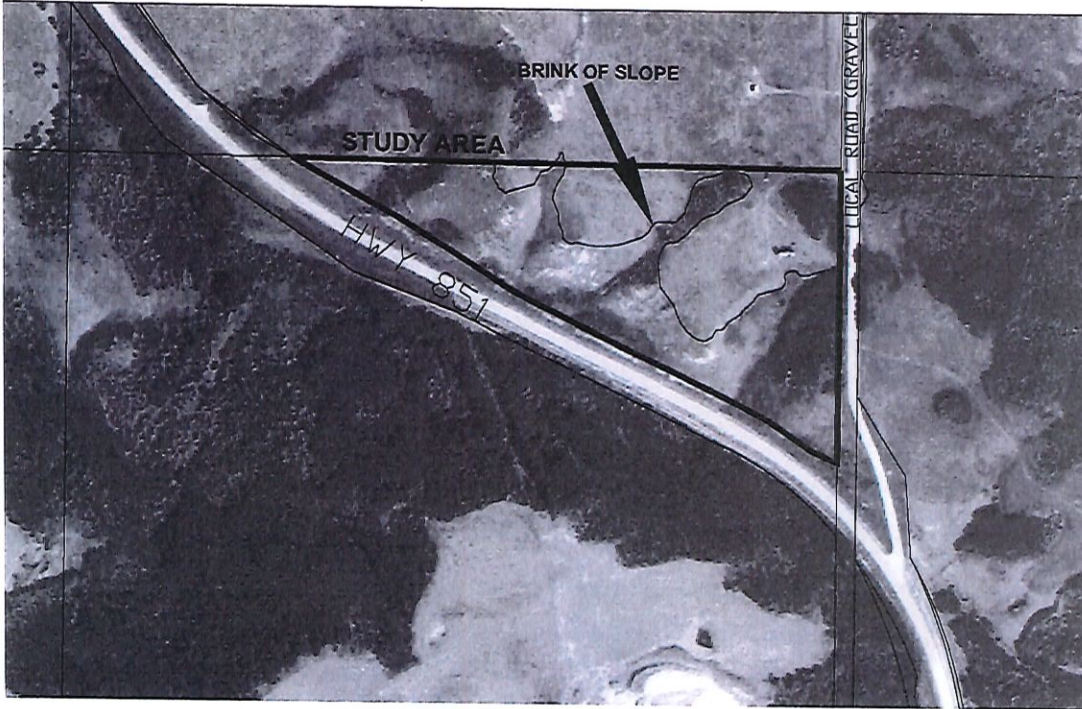


Figure 3: Detail of the study area

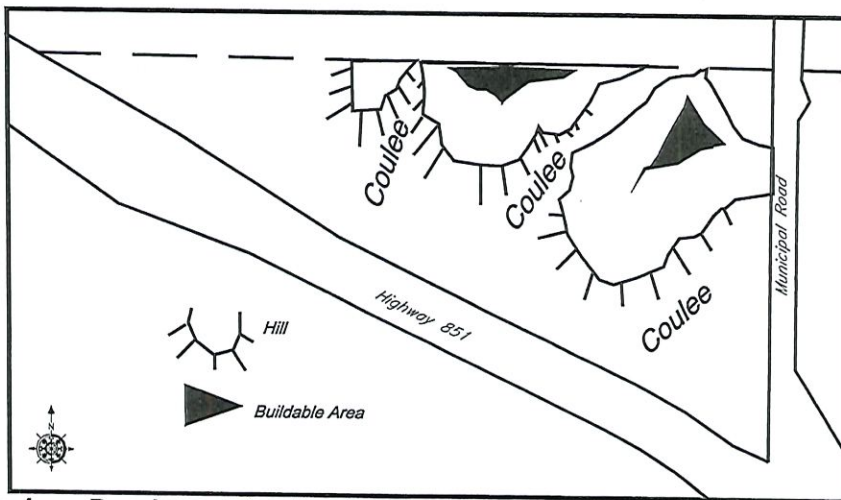


Figure 4: Development setback from coulees

### 3.0 DEVELOPMENT CONCEPT

#### 3.1 GOALS AND OBJECTIVES

The goal of this plan is to provide land for residential, educational, recreational and possibly commercial tourist facilities in the Hand Hills, with minimal impact on the natural environment and surrounding agricultural operations.

The objectives of this plan are to:

- Develop a concept that will allow the Municipality to develop an interpretive and recreational area for tourists.
- Develop a concept that will allow the landowner to develop a residence and possibly commercial tourist facilities which are secondary in nature to the residence.
- Specify compatible land uses.
- Minimize the impact on surrounding agricultural operations.
- Outline appropriate development guidelines for this site.

#### 3.2 DEVELOPMENT CONCEPT

Two parcels of land would be created (Fig. 5), each measuring approximately 4 ha (10 acres). The proposed subdivision of the parcel would follow the natural contours of the land by dividing the largest of the coulees. Access to the parcels would be via a public road, on approximately 0.22 ha (0.5 acres), which would connect to the north-south municipal road east of the study area. There will be no access directly to the parcels from Highway 851.

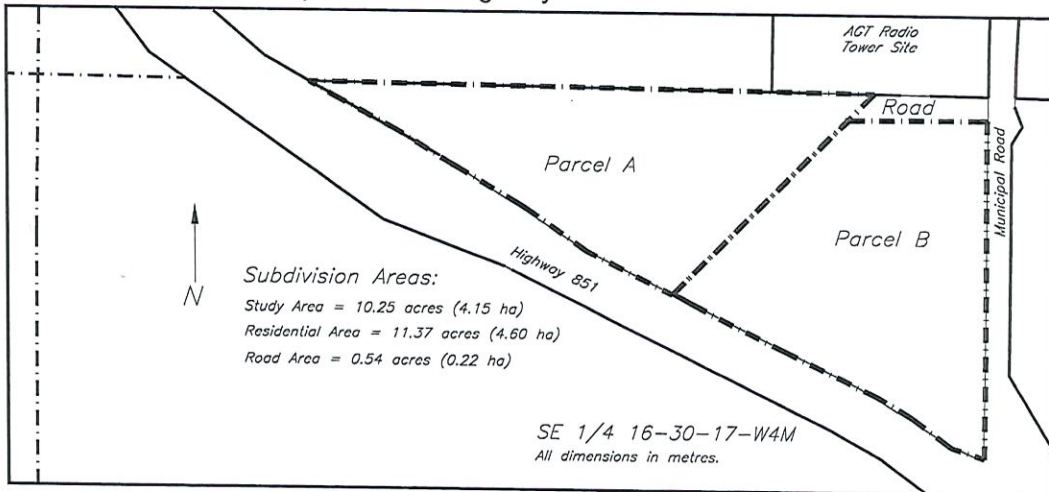


Figure 5: Proposed subdivision of study area

Parcel A, the westerly parcel, would be owned by the Municipality and operated for interpretive and recreational uses for tourists and the surrounding community. Development of this parcel may include:

- access road,
- parking lot,
- interpretive walking trail,
- viewing platform,
- interpretive panels,
- day use area,
- restroom facilities,
- accessory structures, and
- signs.

All of these uses are listed as either permitted or discretionary uses in the "A" – Agricultural District of the Land Use Bylaw.

Parcel B would be privately owned and operated. The principle use of the land would be residential with any tourist facilities (bed and breakfast establishments or home occupations) being secondary in nature to the residence. Development of this parcel may include:

- access road,
- one dwelling unit,
- additional dwelling units,
- home occupation,
- bed and breakfast establishment,
- campground,
- grazing of livestock,
- accessory structures, and
- signs.

All of these uses are listed as either permitted or discretionary uses in the "A" – Agricultural District of the Land Use Bylaw. Development permits shall be required in accordance with the Land Use Bylaw, and discretionary uses may or may not be approved by the Municipal Planning Commission.

### 3.3 TRANSPORTATION AND UTILITIES

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There will be no direct access to the parcels from Highway 851. Access will be via a public road along the north boundary of the parcel which connects to the existing municipal road along the study area's east boundary. This access road will need to be built to municipal standards. In developing this access road, some fill may be required at the top of the large coulee. Any roads or parking areas required beyond the access road are the responsibility of the developer.

No municipal sewer or water services will be provided. According to the Starland County Regional Groundwater Assessment (1999), the apparent yield of groundwater from upper bedrock aquifers is 10 to 100 m<sup>3</sup>/day (1.5 to 15 igpm) which is sufficient for the uses outlined in this area structure plan. Actual availability of groundwater has not been determined.

Sewage systems on Parcel A and Parcel B are to consist of an approved private sewage disposal system such as a disposal field, a packaged sewage treatment plant, or holding tank. An open discharge private sewage disposal system is not acceptable due to the possibility of commercial tourist developments and the steep topography of the site. Further, the Starland County Regional Groundwater Assessment (1999) identified the risk of groundwater contamination in this area to be high to very high. It would be advisable to have soil tests and percolation tests completed prior to approving any residential development on Parcel B to confirm the site is suitable.

Utility servicing and easements will be established by the relevant agencies upon application for such. The developer will be responsible for such servicing and easements.

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## 4.0 IMPLEMENTATION

Implementation of this Area Structure Plan involves the following steps:

1. Adoption of this Area Structure Plan.
2. Subdivision of the study area.
3. Development of the parcels.

It should be noted that, once adopted, this Area Structure Plan guides any future development of the study area, whether or not the parcel has been subdivided.

### 4.1 SUBDIVISION OF THE STUDY AREA

The landowner, or an individual acting on behalf of the landowner, may apply for a subdivision of the study area. This Area Structure Plan will guide the location and shape of the new parcels. Once the subdivision is approved, a plan of survey must be completed and endorsed by the Subdivision Approving Authority before it can be registered with the Alberta Land Titles Office. It should be noted that if the study area is not subdivided, the development guidelines indicated in this Area Structure Plan still apply to the areas referred to as Parcels A and B.

### 4.2 DEVELOPMENT GUIDELINES FOR PARCEL A AND B

All developments are to obtain the necessary development permits and safety codes permits as required by the Starland County Land Use Bylaw and provincial regulations. Further, all developments must comply with the guidelines in the appropriate Land Use District and the General Land Use Regulations. The Topography Features section of these regulations states that, near slopes of more than 30m (100ft), developments shall be setback 60 m (197 ft) from the front edge of the coulee, unless otherwise approved by the Development Officer / Municipal Planning Commission. It is implied that the Development Officer or Municipal Planning Commission would not grant a variance to this requirement unless it can be proven that the developments would not be at risk of sliding or subsidence into the coulee. Such proof could take the form of geophysical reports written by qualified personnel.

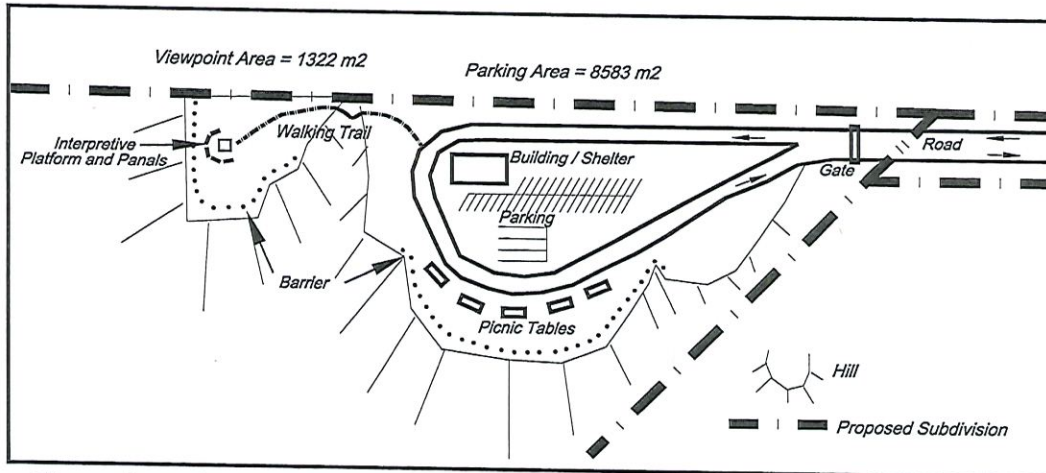
The appearance of accessory structures shall coordinate with the principle building and to be compatible in material and color with the landscape. There is to be only limited outside storage of machinery, equipment, and vehicles. Any signs must comply with the Land Use Bylaw, however the Municipality is permitted to place signs within the road right-of-way in accordance with the appropriate regulations.

In an attempt to prevent erosion, any construction should take steps to minimize the loss of vegetation cover. Further, the natural vegetation shall not be removed within 10 metres (33 ft) from the brink of the slope, and any soil exposed as a

result of development shall be re-vegetated within one year of becoming exposed.

#### 4.3 DEVELOPMENT GUIDELINES SPECIFIC TO PARCEL A

Figure 6 indicates one possible development concept which may be used for the development of Parcel A. Neither the landowner nor Municipality are bound by this development concept.



**Figure 6: One possible development concept for Parcel A**

Upon development of interpretive and/or recreational facilities on Parcel A, the following actions should be taken to minimize impact on the natural environment and adjacent agricultural operations. These action items apply only to Parcel A and in no way apply to Parcel B.

- Construction and maintenance of a fire guard along the northern boundary of Parcel A for the length of the plateau (not on the escarpment) – the access road and walking trail may serve as a fire guard;
- Installation of any or all of the following signs:
  - No trespassing.
  - No smoking.
  - All dogs must remain on a leash.
  - Please stay on the trail.
  - Enter at your own risk.
  - No overnight camping.
- Installation and maintenance of fencing, if required, to prevent unauthorized access to adjacent parcels;
- Installation and maintenance of garbage receptacles at strategic points; and

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- Construction and maintenance of a barrier and appropriate signage at the view point to discourage visitors from progressing beyond the viewpoint onto the escarpments.

## 5.0 Conclusion

The Hand Hills are an ecologically significant and geologically unique landform, and the characteristics of this area present both opportunities and constraints to development. Opportunities in the Hand Hills include interpretive and recreational facilities and commercial tourist operations in addition to residences, extensive agriculture, and natural resource extraction. Constraints in this area include steep slopes, high potential for erosion, high to very high risk of groundwater contamination, and undetermined source of water. This Area Structure Plan will guide the future subdivision and development of a 22 acre parcel on the plateau of the Hand Hills, in a way which builds on these opportunities while minimizing the impact on the environment and surrounding agricultural operations.

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## REFERENCES

Cottonwood Consultants Ltd., 1991. Environmentally Significant Areas in the Palliser Region, M.D. of Starland No. 47. 42 pages.

Prairie Farm Rehabilitation Administration and Hydrogeological Consults Ltd., 1999, Starland County Regional Groundwater Assessment – Modules 4 & 5. CD ROM.