# Woodbend Estates Outline Plan









## **WOODBEND ESTATES OUTLINE PLAN**

Prepared for: 1285827 Alberta Ltd. Prepared by: Focus Corporation

060200236-110 February, 2013



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## 1.0 INTRODUCTION

#### 1.1 Foreword

This Outline Plan has been prepared for approximately 128.5 hectares of land in the Woodbend-Graminia ASP plan area of Parkland County. As seen in Figure 1, the lands are located in the north-east corner of the intersection of Fleming Road and Woodbend Road. The lands in question will be named Woodbend Estates and will be referred to as such in the text of this document. This Outline Plan has been prepared by the Focus Corporation on behalf of 1285827 Alberta Ltd.

## 1.2 Purpose

The purpose of this document is to provide a non-statutory framework to act as a general guideline for the development of this area. This Plan will address planning issues in a comprehensive manner, in order to effectively coordinate infrastructure and circulation design in conjunction with the spatial organization of land uses to ready the project for development.

### 1.3 Report Format

This report is divided into eight sections containing the relevant criteria for the evaluation of the project. Appendices providing supplementary information for this plan are attached thereafter. This Outline Plan follows the procedures laid out in the Parkland County Outline Plan Policy PD-033.

## 2.0 DEVELOPMENT AREA

#### 2.1 Location and Context

Woodbend Estates is located in the south-east area of Parkland County. The lands are located in the northwest corner of the intersection of Fleming Road and Woodbend Road as shown on Figure 1.

## 2.2 Land Ownership

Land ownership has been determined by a review of the Certificates of Title, and is based on information available at the North Alberta Land Registration District. The land title information is current as of July, 2011. Please see Figure 2 for more details.

#	Legal Description	Owner	Certificate of Title (COT)	Area (ha)
1	Lot 1, Blk 1, Plan 092 3984	Private Owner	092 115 191	31.00
2	Lot 2, Blk 1, Plan 092 3984	Private Owner	092 115 191 +1	1.21
3	Lot 3, Blk 1, Plan 092 3984	Private Owner	102 158 778	1.21
4	Lot 4, Blk 1, Plan 092 3984	Private Owner	092 115 191 + 3	31.00
5	Lot 2, Blk 1, Plan 092 3987	Private Owner	092 115 237	30.40
6	Lot 3, Blk 1, Plan 092 3987	Private Owner	092 115 237 + 2	30.60
7	Lot 1, Plan 922 2688	Private Owner	102 392 362	1.89
8	Lot 4, Blk 1, Plan 092 3987	Private Owner	092 115 237 + 1	1.21
Total				128.50

Table 1: Ownership of lands within Woodbend Estates

Figure 1: Location Context of Woodbend Estates Outline Plan Area

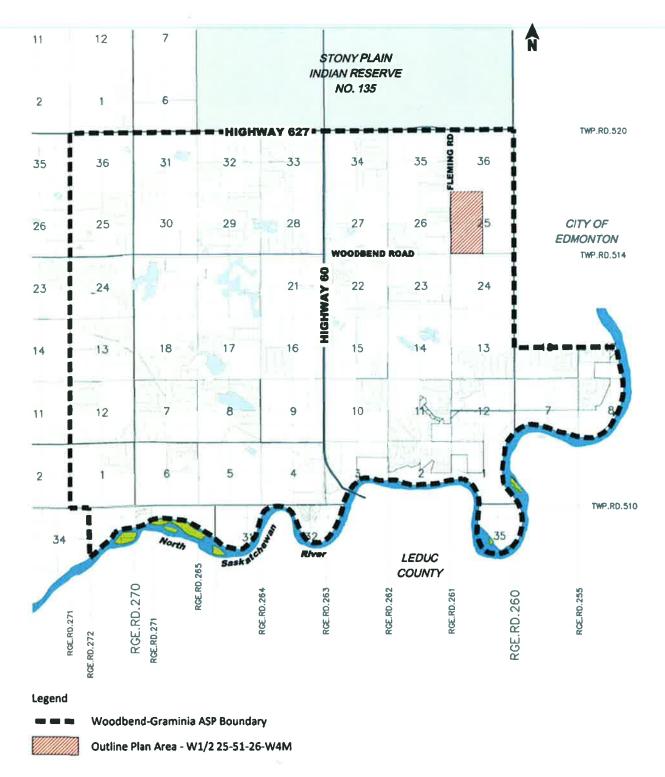
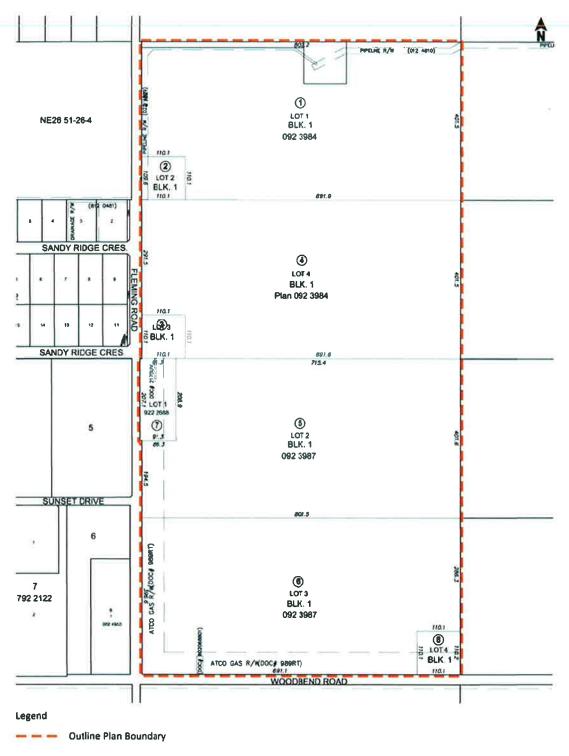


Figure 2: Woodbend Estates Ownership Plan



Note: See Table 1 for specific ownership information.

## 2.3 Adjacent Land Uses

The plan area is bound along the north and east side by cultivated agricultural lands similar to those which are found within the plan area. Along the south side of Woodbend Road, mixed agricultural land and natural areas can be found. Fleming Road binds the site along the west side, followed by the country residential subdivision called Westering Heights.

### 2.4 Topography and Vegetation

The north-west quarter section of the plan area is comprised entirely of cultivated agricultural land used for cereal crops. The south-west quarter section is comprised of approximately 60-70% cultivated agricultural land with the balance of the quarter section comprised of undeveloped land surfaced with shrub willow and two farmsteads.



Image 1: North on Fleming Road



Image 2: South on Fleming Road

## 2.5 Physical Constraints to Development

#### 2.5.1 General

Three specific issues have surfaced that currently pose physical constraints to the development. These issues are discussed further in this section.

## 2.5.2 Water Table

The following excerpt from Alberta Environment's Environmental Reference Manual for the Review of Subdivisions in Alberta defines Water Table in the following way:

Low water table conditions are present where the water table is 1.8 metres (6 feet) or more below the ground surface during the frost free period up until the end of August, and 2.4 metres (8 feet) or more below the ground surface during the remainder of the year. This definition recognizes that the water table will probably be elevated in the spring due to the infiltration of snowmelt and during the summer rainy season.

A Restrictive Covenant for Lot 3, Block 1, Plan No. 092 3987 defines the estimated location of a high water table as shown on Figure 3. Parkland County states that construction on these lands may be restricted due to these high water table conditions. The Woodbend-Graminia Area Structure Plan policy 4.5.1 states that a residential structure will not be allowed to locate on a site where the water table is less than two meters from the ground surface.

The following table, extracted from the 2011 Parkland Geotechnical Investigation report, illustrates the depth from ground surface in 8 locations around the plan area. Borehole 11-06 was plugged and no groundwater elevation measurements could be obtained at this location, however, the remaining 7 samples show a depth from ground surface that comply with County standards. This table shows that a preliminary investigation does not uncover any additional areas of concern regarding a high water table within the plan area.

Policy 2.5.2.1: Additional testing to define the location of the high water table within the southwest corner of the Woodbend Estates plan area shall be conducted prior to subdivision approval in order to conform to Parkland County standards.

Policy 2.5.2.2: Within Woodbend Estates, no residential development shall occur on lands within the defined high water table area.

Specific restrictions on development of residential land with a high water table are discussed further in Section 4.0 *Development Concept*.

Borehole	Depth from Ground Surface (m)
11-01	5.20
11-02	6.96
11-03	5.28
11-04	4.90
11-05	2.13
11-06	Damaged
11-07	2.57
11-08	4.48

Table 2: Water Table Levels in the Woodbend Estates Plan Area



Image 3: Borehole Locations from Geotechnical Investigation of Woodbend Estates Plan Area

## 2.5.3 Pipelines, Wellheads and Battery Sites

Several pipelines, wellheads, and one battery site are located within the plan area, as outlined in Figure 3 and in the tables below. The Alberta Energy Resources Conservation Board (ERCB) regulates pipelines carrying oil, natural gas and related products. The ERCB has established minimum set-back distances for development from high pressure pipelines. As none of the pipelines located within or adjacent to the plan area are high pressure, no additional set-backs outside of those in the Parkland County Land Use Bylaw are required.

#	Company	Туре	Status	High	H2S	Set-Back
				Pressure		
1	Penn West Petroleum Ltd.	Natural Gas	Operating	No	Yes	Not Required
2	Penn West Petroleum Ltd.	Natural Gas	Operating	No	Yes	Not Required
3	Penn West Petroleum Ltd.	Natural Gas	Abandoned	No	No	Not Required
4	Penn West Petroleum Ltd.	Natural Gas	Operating	No	Yes	Not Required
5	Penn West Petroleum Ltd.	Natural Gas	Abandoned	No	No	Not Required
6	ATCO Gas (North) Co-op	Natural Gas	Operating	No	No	Not Required

Table 3: Pipelines i

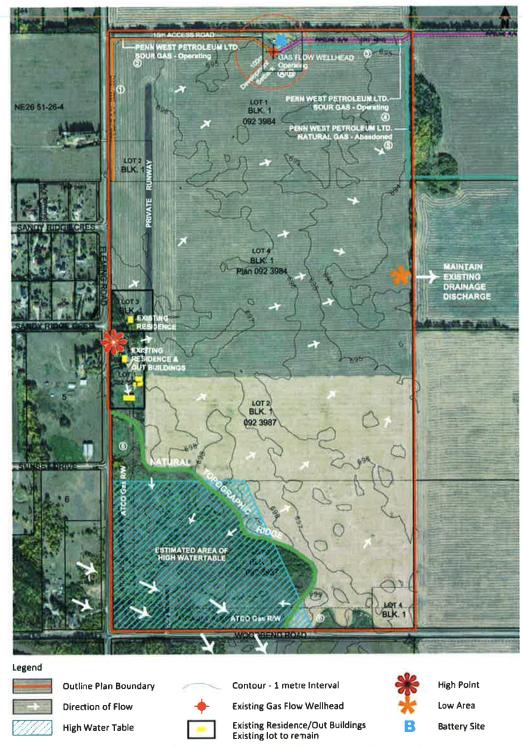
#	Company	Туре	Status	High Pressure	H2S	Set-Back
Α	West Hill Resources Ltd	Wellhead - Gas Flow	Operating	No	n/a	100 m
В	West Hill Resources Ltd.	Battery Site - Gas Flow	Active	No	n/a	100 m

Table 4: Wellheads and Battery Sites in the Woodbend Estates Plan Area

## 2.5.4 Existing Residences

As can be seen in Figure 3 on the following page, two existing residences have been identified in the plan area. These residences will remain on the development property, and will maintain existing access to their property off of Fleming Road.

Figure 3: Site Features in Woodbend Estates Area Plan



Note: Oil and gas information shown on this plan is referenced from AbaData and the ERCB, Information is subject to errors and omissions.

## 3.0 POLICY FACTORS

### 3.1 Capital Region Growth Plan

Within the Capital Region Growth Land Use Plan there are principles and policies to govern growth and development of municipalities that are located within the Capital Region. Parkland County falls within this jurisdiction. The Woodbend Estates plan area, however, falls outside of any "Priority Growth Area" identified by the Capital Region Board. As such, Principle II(c) within the Land Use Plan entitled "Allow Growth Outside of Priority Growth Areas" is applicable to this development concept. Insofar as the development that is being proposed is compatible with existing development, the levels of service are appropriate, and that the development will not adversely impact the provision of regional services, this type of growth outside of an identified Priority Growth Area is appropriate, and up to the discretion of Parkland County.

This development proposal does not require submission to or approval by the Capital Region Board as it is consistent with its policies and regulations at this time. Further, this Outline plan is a non-statutory document and, as such, does not require submission to the Capital Region Board for approval.

## 3.2 Municipal Development Plan Bylaw 37-2007

The Parkland County Municipal Development Plan Bylaw 37-2007 identifies the plan area as Country Residential Core, which allows for multi-lot residential subdivisions.

In accordance with Policy 3.10, Woodbend Estates will comply with the Parkland County MDP in that the developer will be able to "demonstrate to the satisfaction of the County and Alberta Environment that each lot can be serviced with an on-site water well or cistern and a private sewage disposal system". Policy 7.1, regarding Municipal Reserve Dedication, states that "at the time of subdivision, the full municipal reserve dedication entitlement (10%) as prescribed by the Municipal Government Act shall be required".

This Outline Plan respects the intent of the Municipal Development Plan's strategy for Country Residential development and Municipal Reserve dedication.

## 3.3 Land Use Bylaw No. 20-2009

The Plan area is currently designated (CR) Country Residential District. The proposed land uses of this Outline Plan conform to this district and will not require redistricting. Parcel size requirements for purposes of new parcel creation include:

- Manufactured home, single wide and single detached dwellings shall have a minimum parcel area of 0.8 ha (2.0 ac) of contiguous developable land and a maximum parcel area of 4.1 ha (10 ac) for a single parcel.
- Minimum parcel width at the parcel front shall be 30.0m (98.5 ft) excepting that it may be 20.1 m (66 ft) fronting on an internal cul-de-sac.
- The maximum width: depth ratio for a residential parcel shall be 1:4.

This Outline Plan respects the intent of the Parkland County Land Use Bylaw Subdivision Section 5.1 regarding country residential land use requirements in the County.

### 3.4 Woodbend-Graminia Area Structure Plan

The subject lands fall within the Woodbend-Graminia Area Structure Plan (WGASP) plan area. Currently, the WGASP designates the subject lands as Agricultural (AG). An ASP amendment will re-designate the subject lands to Country Residential (CR) to align the WGASP with the land use intent of the current Municipal Development Plan Bylaw 37-2007, the Land Use Bylaw No. 20-2009, and this Outline Plan.

## 4.0 DEVELOPMENT CONCEPT

### 4.1 General Concept

The residential principles of this plan are to provide country residential lots that complement the area, while retaining its rural character. The intent is to allow for the creation of a number of new country residential parcels and incorporate the two that currently exist. These new lots will respect the integrity of the existing home sites. Parcels will generally range from 0.8 ha (2 ac.) to 2.0 ha (5 ac.) in size. The sizes and configuration of parcels in the development concept have been proposed due their efficient use of space taking into consideration the required transportation network, existing topography and development constraints found within the plan area and general market acceptance. They also conform to the minimum size, frontage and width-depth ratio requirements set out in the Parkland County Land Use Bylaw.

Each residential parcel will be required to confirm the availability of at least 2 acres of developable lands through a comprehensive geotechnical evaluation. Therefore, the plan provides for the following policies:

Policy 4.1.1: The Woodbend Estates plan area shall be developed as a Country Residential subdivision in general accordance with Figure 4 (Development Concept).

Policy 4.1.2: Development within the Woodbend Estates plan area shall conform to the regulations within the (CR) Country Residential District of the Parkland County Land Use Bylaw.

## 4.2 Environmental and Municipal Reserve

A large area in the south-west corner of the plan area has been identified as having a high water table, further investigation is warrented to determine if it is developable in accordance with Parkland County and Alberta Environment standards.

The Woodbend Estates development concept has incorporated this area into the Open Space plan as seen in Figure 4. A portion of this area may not be suitable for conventional residential use andmay be dedicated as Environmental Reserve in accordance with Alberta Environment regulations. Portions of this area have been determined, through preliminary investigations, to have a water table that is within acceptable Parkland County standards (greater than 2.13 metres) and is therefore, developable. The portion of this area located within the designated park area will be dedicated as Municipal Reserve. Further geotechnical investigation will determine the precise location and size of the developable area.

Two additional small areas of park, in the southeast corner of the plan area will provide a buffer from Woodbend Road, as well as encompass the entirety of the Atco Gas Utility Right-of-Way that exists in that area. This area will be dedicated as Municipal Reserve. A 6m vegetated strip of land that will act as a buffer between the development and Fleming Road on the western side of the community will also be included in the Municipal Reserve dedication for this plan area.

A total of approximately 20.9 ha of land will be dedicated as Environmental/Municipal Reserve within the plan area. The determination of developable land will be made through further geotechnical investigation at the subdivision stage. At that time, the total area of Environmental and Municipal Reserve dedication will be determined. If the total amount of Municipal Reserve dedication does not reach 10 percent of the Gross Developable Area, the additional required Municipal Reserve will be paid as cash-in-lieu.

Policy 4.2.1: Municipal Reserve within Woodbend Estates shall be dedicated as land where possible generally as shown on Figure 4. Municipal Reserve dedication will be in the form of a combination of land and cash in lieu of land for the plan area and shall total 10 percent of the gross developable area.

## 4.3 Development Statistics

DEVELOPMENT STATISTICS	Area (ha)	GDA %	Units	People/Unit	Population
Gross Area	128.50	75			
Gross Developable Area (GDA)	128.50	100.00			
Environmental/ Municipal Reserve	20.90	16.26	**	( <b>***</b> )	<u> </u>
Stormwater Management	2.10	1.63	100	3 <del>77</del> 3	550
Roadways	11.10	8.64	( <b>22</b> 7	<u> </u>	-
Country Residential	88.00	68.48	101	2.8	283
Existing Residential	2.80	2.18	2	2.8	5
PUL/Well Site (Future Residential)	3.60	2.80	4	2.8	34
Total	128.50	100.00	107		322

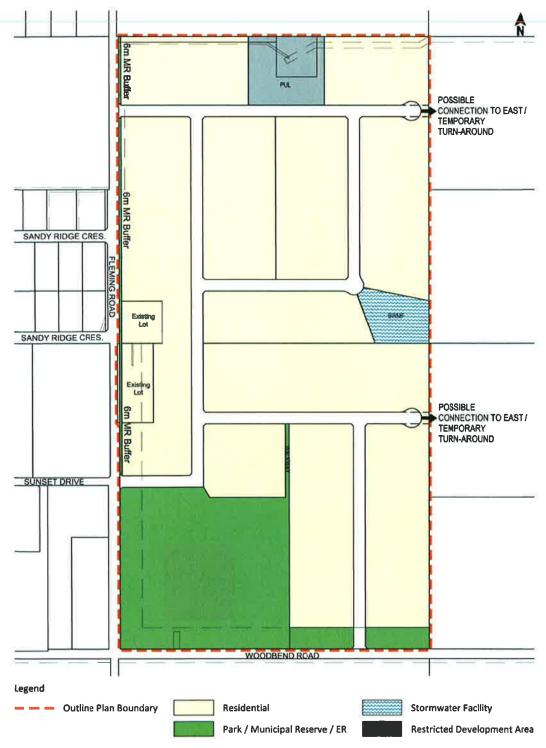
Table 5: Development Statistics

Note: unit count and population statistics are estimates only and are subject to change with the determination of lot sizes within the plan area prior to subdivision approval.

STUDENT GENERATION COUNT									
Public School		Separate School							
Elementary School	28	Elementary School	9						
Junior High School	12	Junior High School	4						
Senior High School	14	Senior High School	2						
<b>Total Student Population</b>	54		15						

Table 6: Population and Student Generation

Figure 4: Woodbend Estates Development Concept



Note: This plan is conceptual only and the exact location and alignment of uses, facilities roadways and services will be determined at the zoning and subdivision stage.

## 5.0 UTILITIES AND SERVICING

### 5.1 Existing Utilities and Services

Servicing for Woodbend Estates will be provided on site for present and future parcels in accordance with Parkland County's standards and practices.

## 5.2 Potable Water Servicing

A preliminary Geotechnical Investigation was conducted by Parkland Geo-Environmental Ltd in August of 2011. The report summarizes the results of the field and laboratory testing program and presents general geotechnical recommendations for site preparation and initial information to support the preparation of an Outline Plan for Woodbend Estates.

According to the number of existing wells currently relying on the groundwater aquifer, it was determined that inadequate underground water is available. Based on this preliminary information and Parkland County policies regarding the use of groundwater, it is understood that the required water source will be cisterns installed for each new residence with trucked water. No additional groundwater is expected to be used in the area. No communal water supply is being contemplated for the development.

Appendix A provides an Addendum letter that clarifies the results of the preliminary Aquifer testing as summarized in the Geotechnical Investigation.

Policy 5.2.1: Water servicing will be provided by individual cisterns with trucked water.

#### 5.3 Sanitary Servicing

On-site percolation tests were conducted at eight borehole locations. The majority of the tested locations have soil conditions suitable for a subsurface effluent disposal system. However, three tested locations had soils that are unsuitable for such use. As a result, the following is recommended:

- On-site percolation testing for each property should be carried out to determine if soil
  absorption rates comply with the Alberta Municipal Affairs 'Alberta Private Sewage System
  Standard of Practice Handbook' 2009. These regulations require 25 mm of soil absorption
  to occur between 5 and 60 minutes.
- Where soils do not meet the accepted percolation criteria, the existing soil can be modified by importing silt, sand and clay.
- Based on the results of the on-site testing, property owners can select a septic tank/field disposal, treatment mound or storage tank/haulage.

Policy 5.3.1: Prior to development, on-site percolation testing shall be conducted on each lot to the satisfaction of Parkland County. Proper treatment of soils shall be undertaken as determined by the results of the percolation testing.

## 5.4 Stormwater Management

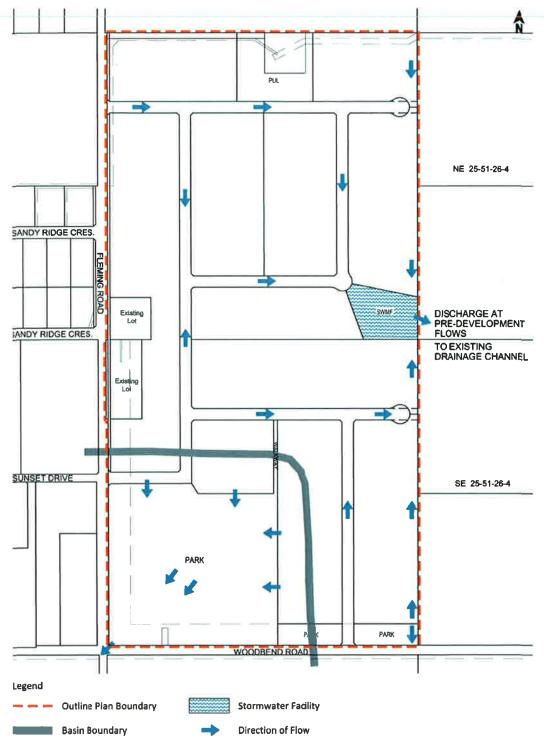
The proposed stormwater management plan for the area shows stormwater generally following existing surface drainage patterns. There are two drainage basins found within the plan area, as shown on Figure 5. The southern basin will generally drain south and west to an existing drainage channel to the southwest of the plan area. The northern basin will generally drain east and south to the proposed location of the Stormwater Management Facility (SWMF). Within the development, runoff will be carried by the roadside ditches or along the backs of the lots (along the east side of the plan area), as shown in Figure 5, to a SWMF located along the eastern boundary of the study area adjacent to the lowest elevation found within the plan area. The proposed stormwater management facility will control flows to 2.42 L/s/ha.

From the stormwater management facility, water will discharge east through NE 25-51-26-4 to the west ditch of Winterburn Road, following the path of the current runoff. It is anticipated that this discharge will either follow the existing drainage path through the quarter section or could be rerouted into the ditch south, and then east, along the quarter lines. In either case, a drainage path will be required, which may be accommodated through an easement or the dedication of a Public Utility Lot, to be determined prior to subdivision. Improving/defining the flow channel is recommended.

Policy 5.4.1: The stormwater management plan for Woodbend Estates shall generally follow the plan described in Figure 5.

Policy 5.4.2: Prior to subdivision approval, the stormwater management plan for Woodbend Estates shall be approved by Parkland County authorities.

Figure 5: Woodbend Estates Stormwater Management Plan



Note: This plan is conceptual only and the exact location and alignment of uses, facilities roadways and services will be determined at the zoning and subdivision stage.

## 6.0 TRANSPORTATION AND ACCESS

### 6.1 General Concept

The overall concept for the area provides for parcel access to be provided primarily from internal local roadways, with a few limited exceptions. There will be no individual lot access from Woodbend Road or Fleming Road with the exception of existing lots that will retain their access from Fleming Road. The transportation concept is shown in Figure 4.

## 6.2 Traffic Impact Assessment Summary

Based on the analysis and assessment of the original design for the plan area, it was determined that traffic anticipated from the proposed subdivision could be accommodated on the existing roadway network, at acceptable levels of service. Noting that there have been changes to the design since this analysis was completed; the following recommendations are being advanced:

- The site access to RR 261 should be constructed to include one inbound and one outbound lane, with a stop sign for westbound traffic.
- The site access to Twp. Rd. 514 should be constructed to include one inbound and one
  outbound lane and should include a stop sign on the north approach.
- The internal roadways connecting the accesses to RR 261 and the accesses to Twp. Rd. 514 should be constructed to a residential local road standard.

In addition to the above, the following items were noted during a review of the site plan:

- Allowance for a residential mail box location has not been identified within the subdivision.
   It is anticipated that an appropriate location will be discussed with Canada Post at the time of subdivision.
- A school bus stop is located on RR 261 approximately 90 m south of the existing intersection
  of Sandy Ridge Crescent South and RR 261. Allowance for pedestrian movements from the
  subdivision to this location may be of benefit. Discussions with Parkland County regarding
  the possibility of locating an additional school bus stop within the Woodbend Estates plan
  area will occur at the time of subdivision.

Policy 6.2.1: The transportation network for Woodbend Estates shall provide two accesses from Fleming Road and one access from Woodbend Road into the plan area, connected by an internal roadway system. The transportation network shall accommodate for future connections to possible development to the east of the plan area as shown in Figure 6.

Policy 6.2.2: The transportation network for Woodbend Estates shall conform to Parkland County transportation standards.

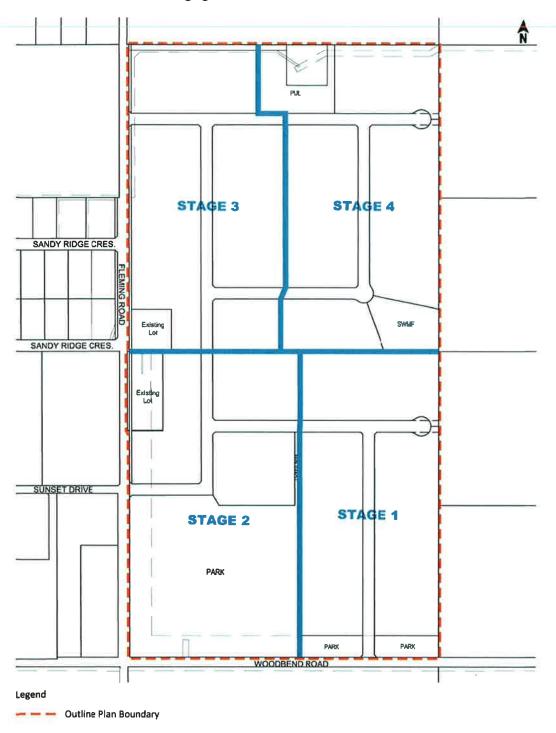
## 7.0 STAGING PLAN

## 7.1 General Concept

Development is expected to commence in the south-eastern portion of the plan area, adjacent to Woodbend Road, with onsite water and sewer facilities constructed within each lot as development occurs. Stormwater management will be constructed as necessary, and may be included as part of the first stage. Details will be determined at the engineering design stage in consultation with Alberta Environment and Parkland County.

Policy 7.1.1: Staging for Woodbend Estates shall follow the general pattern as outlined in Figure 6 starting in the southeast corner of the plan area.

Figure 6: Woodbend Estates Staging Plan



Note: This plan is conceptual only and the exact location and alignment of uses, facilities, roadways and services will be determined at thezoning and subdivision stage.

## 8.0 PUBLIC CONSULTATION SUMMARY

A very important component to any land development project is public input. With the ultimate goal of sustainability within our communities, land use planning must consider public input at an early stage to include the community and resolve any issues or concerns that may arise. Parkland County Procedures policy PD-011-P1 establishes a framework for a consistent approach to provide for public involvement in planning and development decisions in order to result in more informed decisions, greater understanding and acceptance, and more enduring solutions. In light of this, Focus hosted a public information session for the proposed Woodbend Estates Country Residential development on July 18<sup>th</sup>, 2012 at the Woodbend Community Hall in Parkland County. Members of the community and the public at large were invited to come and view the proposed plans, and to discuss any and all ideas or issues they may have.

The public open house occurred from 6PM to 8PM on July 18<sup>th</sup>, 2012 and attracted a variety of visitors. The event was advertised in the Stony Plain Reporter for 2 weeks in advance with a 1/4 page advertisement. A total of 27 guests visited the Woodbend Estates open house, including a majority of the residents who currently reside on or immediately adjacent to the proposed development parcel. Please see the following page for a copy of the advertisement and the attendance list. Overall, the consensus gathered from the open house attendants was divided in opinion. Comment sheets were distributed at the open house, and 20 were gathered at the end of the evening, stating a variety of suggestions and concerns with the proposed development.

Major trends found within the comments addressed traffic concerns around the Sandy Ridge Crescent intersection, servicing of the land, and lot configuration, sizing and density. In regards to the Sandy Ridge Crescent intersection, many of the open house attendees thought that the Woodbend Estates entrance via Fleming Road would pose as a traffic safety problem for the area. Residents expressed concerns about dangerous road conditions on Fleming Road, and the high occurrence of accidents that currently take place on the road. In order to prevent more accidents from taking place, they suggested a reconfiguration of the north-west local Woodbend Estates roadway. In addition, people stated their concerns about the incoming residents and their options for water servicing. Many of the residents in attendance were outright against the potential use of water wells in the area, and stated that this option would negatively affect the current land owners who are currently facing water shortages with their existing wells. Many of the residents also were very concerned about the number of lots that were to be subdivided out, stating that this type of development is very dense and unlike any other found in Parkland County. In addition, comments addressed the fact that this development would be using up very prime agricultural land.

The remaining written and verbal comments and discussion received from the community members who attended were positive in nature and provided encouragement to proceed with the Outline Plan and ASP amendment process, in the hopes that this development will help to improve their existing road conditions and attract more services to the area.

The transportation network was changed as a direct consequence of this public consultation. The entrance to the development off of Fleming Road was originally proposed to be adjacent to the Sandy Ridge Crescent north entrance. This was noted by attendees to be unfavorable, therefore it was determined that a more northerly entrance to the development would be preferred. Additional consultation with current residents revealed a desire to maintain current access to existing lots from Fleming Road. This request was upheld in the development concept.

The concerns regarding water servicing have been addressed with the requirement for trucked water to individual cisterns, and eliminating groundwater well use within the development.

The concern regarding the number of lots being developed within the plan area is immaterial as the development must conform to Parkland County standards, and will not provide for higher density development than is acceptable in any other Country Residential development within the County. The Land Use bylaw prevents more dense development.

## 9.0 APPENDICES

Appendix A: Aquifer Addendum Letter from Parkland GEO, December 12, 2012



Parkland Geo-Environmental Ltd. 189 Pembina Road Sherwood Park, AB, T8H 2W8 www.parklandgeo.com T: 780 416 1755 F: 780 416 1752

> December 12, 2012 Project No. ED1285

Via E-mail Original to remain on file

Focus Corporation 300, 9925-109 Street Edmonton, Alberta T5K 2J8

ATTN: Ms. Lisa Sharun, BA, MEDes, RPP, MCIP

Planner, Land Development

RE: Proposed Woodbend Estates Area Structure plan

W1/2 25-51-26 W4M, Parkland County, Alberta

Desktop Aquifer Study Addendum Letter

Dear Ms. Sharun:

This letter provides background information and elaborates on the desktop aquifer study performed for the proposed Woodbend Estates which was initially presented in the ParklandGEO report dated November 2, 2011 (File ED1285). This is intended to provide additional data and support for the conclusions originally presented.

Hydrogeological information used in this desktop study was obtained from the Alberta Environment (AENV) water well record database, published geological and hydrogeological reports, and several other sources.

## 1.0 SITE DESCRIPTION

The proposed project will consist of the development of two quarter sections into a rural residential subdivision within Parkland County, Alberta. Access to the property was from Range Road 261 to the west of the site, and Township Road 514 to the south of the site.

The quarter sections consisted mostly of relatively flat agricultural land with an oil well lease site towards the north, a residence to the west, and an undeveloped low-lying area in the southwest corner of the site (Photographs 1 to 4). At the time of investigation, NW½-25-51-26-W4M had been harvested and SW½-25-51-26-W4M was an unharvested wheat field. The low-lying area in the southwest encompassed about 10 percent of the developable area. The vegetation in this area consisted primarily of native grasses, thistles, and stands of deciduous trees.

Project No. ED1285 December 12, 2012 Page 2 of 4

The surrounding quarter sections generally consisted of agricultural land and undeveloped treed areas, with existing rural residential subdivisions located to the west and northwest of the property. The nearest major water body is the North Saskatchewan River located approximately 2.75 km to the east of the site.

It is understood that the proposed development will make use of private sewage disposal systems such as septic tanks and disposal fields, as applicable. If feasible, it is proposed to use the local groundwater aquifer for potable water supply.

## 2.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Property is located in the Edmonton Plain region which lies north of the North Saskatchewan River (Bedrock Topography Map of the Edmonton-Calgary Corridor, Government of Alberta). Surficial soils consisting of unconsolidated quaternary deposits extend from surface to approximately 20 to 30 m. These surficial soils consist of fine sands, silts and clay deposits.

The Property is underlain largely by Lake Edmonton silts and clays, which is not expected to be a viable producing aquifer. Areas to the north and west of the Property are expected to be underlain by North Saskatchewan River alluvium consisting of some sands and gravels, which is expected to be the dominant aquifer in the area (Bedrock Topography and Surficial Aquifers of the Edmonton District, Alberta by V.A. Carlson for the Research Council of Alberta, 1967). The early North Saskatchewan River alluvium is located in a pre-glacial buried valley with water bearing sand and gravels located from approximately 40 to 70 m below surface. Although this deposit is estimated to have a capacity of between 25 and 100 igpm, the Subject Property is located on the fringes of this valley and is only estimated to have a capacity of between 5 and 25 igpm (Hydrogeology of the Southwest Segment, Edmonton Area, Alberta by W. Ceroici for the Alberta Research Council, 1979). This converts to yields between 0.19 and 0.38 m³/min for the Property and surrounding areas.

The bedrock in the area is located at an approximate elevation of 670 to 700 mASL, and the cetaceous era Wapiti Formation, which is described as alternating sandstone and mudstone with bentonitic layers and occasional coal beds (Hydrogeology of the Southwest Segment, Edmonton Area, Alberta by W. Ceroici for the Alberta Research Council, 1979).

A review of the local groundwater use was completed using Alberta Environment's groundwater well database. A total of 347 water wells are listed for the Subject Property and within two quarter section of the Property. Of these wells, approximately 66 water well records provided pump test information. Based on these records, safe well yield was calculated for nine wells, with the results showing an average  $Q_{20}$  safe yield of 0.492 m³/min. The selected well records and the yield analysis sheets are included as an attachment.



### 3.0 CURRENT AND PROPOSED GROUNDWATER USE

#### 3.1 Current Use

The Province of Alberta Water Act states that each household requires a diversion of 1,250 m³/year, and that this shall not interfere with other users in the area. This equates to a water usage of 3.42 m³/day for each household, or approximately 0.024 m³/min.

From aerial photographs, it was determined that approximately 195 residences and one golf course were located within two quarter sections of the Property. Based on the average water use per household required by The Water Act, current use in the area is estimated to be approximately 0.464 m³/min, or approximately 670 m³/day.

## 3.2 Proposed Use

The proposed development is to include 103 new lots with an average water use of 3.42 m³/lot/day. Based on the proposed lots, it is estimated that 352 m³/day of additional water demand is proposed through the development of the subdivision. Based on this, the increase in water demand would be approximately 0.245 m³/min.

#### 4.0 DISCUSSION AND RECOMMENDATIONS

If the proposed 103 new residential users were added to the existing water usage in the area, the total water required from the aquifer would be approximately 0.71 m³/min, which is greater than the estimated local aquifer yield of between 0.19 and 0.38 m³/min based on historical hydrogeological reports and the local groundwater well database.

Based on the number of existing wells and users in the area relying on the groundwater aquifer, it is recommended that individual cisterns water supplies or other water supply not relying on the local aquifer be utilized for the proposed development. If individual lots wish to use the existing aquifer, it is recommended that they engage a hydrogeologist to perform a full scale pump test and groundwater availability assessment on each proposed well development in order to determine the ability of the aquifer to sustain water supply to the proposed new residences.



## 5.0 LIMITATIONS AND CLOSURE

This report has been prepared for the exclusive use of **1285827 Alberta Ltd.**. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. PARKLAND GEO-ENVIRONMENTAL LTD., and The ParklandGEO Consulting Group accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. No other warranty, expressed or implied, is made. The General Terms and Conditions of this report are attached and should be considered part of this report.

We trust that this report meets with your current requirements. If there are any questions or comments regarding this information, please contact the undersigned at 780 / 416 - 1755.

Respectfully submitted,

PARKLAND GEO-ENVIRONMENTAL LTD.

APEGA Permit to Practice No. P - 8867

December 12, 2012

Daniel Yost, P. Eng. Geo-Environmental Engineer

Reviewed by:

Michael McCormick, M.Eng., P.Eng. Principal Geo-Environmental Engineer

Attached: Groundwater Wells with Pump Test Information

**Analysis Sheets** 



## **Government Water Well Drilling Report**

## **View in Metric**

The driller supplies the data contained in this report, The Province disclaims responsibility for its accuracy.

The information on this report will be retained in a public database,

GIC Well !D GoA Well Tag No. Date Report Received

1715072

1. Well Iden Owner Nan SOUMAKO	пе				fress 25507 TW	P RD 512A		Town SPRUCE (	GROVE	<i>Provii</i> AB		Measurement in Impo Postal Code T7Y 1A8
Location	1/4 or 16	LSD	SEC 25	<i>TWP</i> 051	RGE 26	W of MER 4	Lot 1	Block 1	<i>Plan</i> 8522152	Additional	Description	
Measured f	rom Bound	ft	from from			GPS Coordinate Latitude 53.4 How Location O	37710	•	(NAD 83) de <u>-113.6931</u>	Hou	vation v Elevation Obta Obtained	
2. Drilling In Method of Bored		1			<b>e of Work</b> v Well					Proposed Well Domestic	l Use	
3. Formation	n Log				Measu	rement in Impe	rial	4. Well Com				Measurement in Impo
Depth from ground level (ft)	Water Bearing			Lithology	Description	n		70.00 ft Borehole		·	h Start Date 2002/06/12	End Date 2002/06/12
12.00		Silty S	Sand						eter (in) 0.00		m (ft) .00	To (ft) 70.00
36.00		Blue	Silt						sing (if applica		Well Casing/Li	ner
42.00		Blue	Clay					Galvanized	Steel e OD ::	24.00 in	Unknown	DD :in
50.00		Silty S	Sand					Wall Thick		0.063 in		ss: in
70.00		Clay					<u>ا</u> الـــــــــــــــــــــــــــــــــــ			70.00 ft		at: ft
											Bottom	at: ft
								Perforation From (		To (ft)	Diameter (in	n) Interval (in)
								Placed fro	al Bentonite	Chips/Tablets	30.00 ft	
									Туре			At (ft)
									OD :			
								42	m (ft) 2.00	4	(ft) 1.00	Slot Size (in) 0.010
										ed To Casing er	Bottom Fittin	age Other
								Pack Type Art			Grain Size C	-

7. Contractor Certification Name of Journeyman responsible for drilling/construction of well

DAVE SUMMERS

Company Name SUMMERS DRILLING LTD.

Certification No 5286Q

## **Government Water Well Drilling Report**

## **View in Metric**

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The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No. Date Report Received 1715072

Well Identification and Location  Dwner Name	Address		Town		Province	Measurement in Ir  Postal Code
SOUMAKO, ROB & CHERYL		TWP RD 512A		E GROVE	AB	T7Y 1A8
ocation 1/4 or LSD SEC 16 25	TWP RG 051 26	4	1 1	852215	Additional Descripti 2	ion
leasured from Boundary of			es in Decimal Degre		2400 Elevation	ft
ft from		_	437710 Long	iituae <u>-113.69</u>	How Elevation _	
ft from		How Location (	Obtained		Not Obtained	
litional Information		Iviap			Not Obtained	Measurement in Ir
		40.00 :-				(Mododromont III II
Distance From Top of Casing to Ground	Level	12.00 in	Is Flow Co.	atrol Installad		
Is Artesian Flow			IS FIOW CO			
Rate ig	ipm			Describe		
Recommended Pump Rate	15	3.00 igpm		Yes	Depth_	ft
Recommended Pump Intake Depth (Froi	m TOC)	60.00 ft	Type SUB @	55 FT	Model	ft
Did you Encounter Saline Water (>400	00 ppm TDS)	Depth	ft	Well Disinfe	ected Upon Completion	
	Gas	Depth .	ft	Georg	hvsical Log Taken	
				,	Submitted to GIC	
A 1 (2)				Sample Collec	ted for Potability	
				Sample Collec	ted for Follability	Result Attached
Additional Comments on Well	FITTING DOT	OM COURTER				
	L, FITTING BOTT	OM : COUPLER				
SCREEN TYPE : LOW CARBON STEEL	L, FITTING BOTT	OM : COUPLER	_	Measureme	nt in Imperial	Taken From Groun
SCREEN TYPE : LOW CARBON STEEL Yield Test				Measureme	nt in Imperial Depth to water leve	Taken From Ground
SCREEN TYPE : LOW CARBON STEEL  Yield Test  Test Date Start Time		atic Water Level	Dra	Measureme	Depth to water leve Elapsed Time	
SCREEN TYPE : LOW CARBON STEEL Yield Test			Dra		Depth to water level Elapsed Time Minutes:Sec	Recovery (ft)
Field Test  Test Date Start Time 2002/06/12  STEEL  STEEL		atic Water Level	Dra		Depth to water level Elapsed Time Minutes:Sec 0:00	Recovery (ft)
SCREEN TYPE : LOW CARBON STEEL  Yield Test  Test Date Start Time 2002/06/12 12:00 AM  Method of Water Removal		atic Water Level	Dra		Depth to water leve Elapsed Time Minutes:Sec 0:00 1:00	Recovery (ft) 60.00 59.50
FOREEN TYPE: LOW CARBON STEEL  /ield Test  Test Date Start Time 2002/06/12 12:00 AM		atic Water Level	Dra		Depth to water leve Elapsed Time Minutes:Sec 0:00 1:00 2:00	Recovery (ft) 60.00 59.50 59.00
Yield Test Test Date Start Time 2002/06/12 12:00 AM  Method of Water Removal Type Bailer	Sta	atic Water Level	Dra		Depth to water leve Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00	Recovery (ft) 60.00 59.50 59.00 58.50
Vield Test  Test Date 2002/06/12  Start Time 12:00 AM  Method of Water Removal Type Removal Rate 60.0	Sta 10 igpm	atic Water Level	Dra		Depth to water leve Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00	Recovery (ft) 60.00 59.50 59.00 58.50 58.00
FOREEN TYPE : LOW CARBON STEEL  Vield Test  Test Date Start Time 2002/06/12 12:00 AM  Wethod of Water Removal  Type Bailer  Removal Rate 60.0	Sta 10 igpm	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00	Recovery (ft) 60.00 59.50 59.00 58.50 58.00 57.50
SCREEN TYPE : LOW CARBON STEEL   Yield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00	Recovery (ft) 60.00 59.50 59.00 58.50 58.00 57.50 57.00
SCREEN TYPE : LOW CARBON STEEL   Yield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50
Yield Test Test Date Start Time 2002/06/12 12:00 AM  Method of Water Removal Type Bailer Removal Rate 60.0	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00
SCREEN TYPE : LOW CARBON STEEL   Yield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75
SCREEN TYPE : LOW CARBON STEEL   Vield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25
Care	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 12:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08
SCREEN TYPE : LOW CARBON STEEL   Yield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 12:00 14:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42
Care	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50
GCREEN TYPE : LOW CARBON STEEL  (ield Test  Test Date Start Time 1002/06/12 12:00 AM  Method of Water Removal Type Bailer  Removal Rate 60.0  Depth Withdrawn From 60.0	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00
GCREEN TYPE : LOW CARBON STEEL  (ield Test  Test Date Start Time 1002/06/12 12:00 AM  Method of Water Removal Type Bailer  Removal Rate 60.0  Depth Withdrawn From 60.0	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33
CREEN TYPE : LOW CARBON STEEL	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 12:00 14:00 16:00 20:00 25:00 30:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67
CREEN TYPE : LOW CARBON STEEL   Color	Sta 00 igpm 10 ft	atic Water Level			Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  35:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00
CREEN TYPE : LOW CARBON STEEL   Color	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  35:00  40:00	Recovery (ft)  60.00 59.50 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67
CREEN TYPE : LOW CARBON STEEL   Color	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  40:00  50:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67
GCREEN TYPE : LOW CARBON STEEL  (ield Test  Test Date Start Time 1002/06/12 12:00 AM  Method of Water Removal Type Bailer  Removal Rate 60.0  Depth Withdrawn From 60.0	Sta 00 igpm 10 ft	atic Water Level	Dra		Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 12:00 14:00 16:00 20:00 25:00 35:00 40:00 50:00 60:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67 50.00 48.67
GCREEN TYPE : LOW CARBON STEEL  (ield Test  Test Date Start Time 1002/06/12 12:00 AM  Method of Water Removal Type Bailer  Removal Rate 60.0  Depth Withdrawn From 60.0	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  35:00  40:00  50:00  60:00  75:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67 50.00 48.67 48.00
Care	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  35:00  40:00  50:00  75:00  90:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67 50.00 48.67 48.00 49.00
SCREEN TYPE : LOW CARBON STEEL   Yield Test	Sta 00 igpm 10 ft	atic Water Level	Dra		Depth to water leve  Elapsed Time Minutes:Sec  0:00  1:00  2:00  3:00  4:00  5:00  6:00  7:00  8:00  9:00  10:00  12:00  14:00  16:00  20:00  25:00  30:00  35:00  40:00  50:00  60:00  75:00	Recovery (ft)  60.00 59.50 59.00 58.50 58.00 57.50 57.00 56.50 56.00 55.75 55.25 54.08 54.42 53.50 53.00 52.33 51.67 51.00 50.67 50.00 48.67 48.00

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well

DAVE SUMMERS Company Name

SUMMERS DRILLING LTD.

Certification No

5286Q

## **Government Water Well Drilling Report**

## View in Metric

of Alberta 
The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy.

GIC Well ID GoA Well Tag No. Date Report Received 1495278

		T	ne information on th	nis report will	be retained in a public	databa	se.					
1. Well Iden Owner Nam FORNARA,	ne		Ad	dress 6, 51514 R	ANGE RD. 261		Town SPRUCE 0	BROVE	Provin AB	ce	Measurem Postal Cod T7Y 1B3	ent in Imperial le
Location	1/4 or SE	LSD SE		RGE 26	W of MER 4	Lot	Block	Plan	Additional #36 FLEM	Description NG PARK		
Measured f	rom Bound	ary of ft from ft from			GPS Coordinates Latitude 53.44 How Location Ob Not Verified	3100	Longitud		Hov	vation v Elevation Ob Obtained		<del>-</del> -s
2. Drilling In Method of Rotary				<b>pe of Worl</b> w Well	k				<i>Proposed Wel</i> Domestic	l Use		
3. Formation Depth from ground level (ft) 17.00 112.00 160.00 161.00	Water Bearing	Brown Cla Gray Clay Gray Mediu Gray Sanc	y um Grained Sand	/ Descriptio	urement in Imper	al	161.00 ft  Borehole  Diame 7  Surface Cas Plastic  Size  Wall Thick  Botto  Perforation  From (  Perforated to  Annular Se	Drilled Fini eter (in) .88 sing (if applic e OD	6.00 in 0.500 in 155.00 ft	2006/10/06 m (ft) .00 Well Casing/ Unknown Size Wall Thickr To Botton Diameter	En 200  To 16  Liner  OD	in ft
							Screen Type Size Fro 15 Attack Top Fi	Type Stainles Of (ft) Stainles Type Type Stainles Type Type Type Type Type Type Type Type	ss Steel 5.00 in To 16 hed To Casing	o (ft)	At (ft)  Slot : 0  tings Plug	Size (in) .100

7. Contractor Certification Name of Journeyman responsible for drilling/construction of well TERRY BERGSTREISER MAR-WAYNE WATER WELL DRILLING SERVICES LTD.

650.00 Pounds

Amount

## **Government Water Well Drilling Report**

## **View in Metric**

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GIC Well ID GoA Well Tag No. Date Report Received 1495278

ORNARA, BERNARD #36, 51514 RANGE RD. 261	Town	Province	Measurement in Imper Postal Code
	SPRUCE GROVE	AB	T7Y 1B3
SE 35 051 26 4	Lot Block Plan	Additional Description #36 FLEMING PARK	
easured from Boundary of	in Decimal Degrees (NAD 83)	10 Elevation	ft
ft from Latitude 53,443			
ft from How Location Obt	ained	How Elevation	Obtained
Not Verified		Not Obtained	
litional Information			Measurement in Imper
Distance From Top of Casing to Ground Level 17.72 in			
Is Artesian Flow	Is Flow Control Installed		
Rateigpm_			
	Pump Installed	Depth	ft
Recommended Pump Intake Depth (From TOC) 144.36 ft	Type Mo	odel	. H.P
Did you Encounter Saline Water (>4000 ppm TDS) Depth		ed Upon Completion	
Gas Depth	ft Geophys	sical Log Taken	
	Su	ubmitted to GIC	
Additional Comments on Well	Sample Collected	for Potability	Result Attached
Additional Symmetric Symposium	220.4.2.2.2.2.2		
/ield Test	Measurement i	n Imperial	Taken From Ground Le
Fest Date Start Time Static Water Level		Depth to water level	
2006/10/06 12:00 AM 66.80 ft	Drawdown (ft)	Elapsed Time Minutes:Sec	Recovery (ft)
	66.80	0:00	111.55
Method of Water Removal		1:00	87.96
Type Air		2:00	78.08
Removal Rate 19.00 igpm		3:00	73.13
		4:00	70.80
Depth Withdrawn From157.48 ft	_	5:00	69.62
		6:00	68.96
f water removal period was < 2 hours, explain why		7:00	68.60
		8:00	68.41
		9:00	68.27
		10:00	68.18
		12:00	68.08
		14:00	68.08
		16:00	68.08
		20:00	68.08
		25:00	68.08
		30:00	68.08
		35:00	68.08
		40:00	68.08
			68.08
		50:00	68.08 68.08
		50:00 60:00	68.08
		50:00 60:00 75:00	68.08 68.08
		50:00 60:00 75:00 90:00	68.08 68.08 68.08
		50:00 60:00 75:00 90:00 105:00	68.08 68.08 68.08 68.08
		50:00 60:00 75:00 90:00	68.08 68.08 68.08

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well TERRY BERGSTREISER

Company Name MAR-WAYNE WATER WELL DRILLING SERVICES LTD. Certification No

2. Drilling Information

**Method of Drilling** 

## **Government Water Well Drilling Report**

## **View in Metric**

GIC Well ID

1495257

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy.

The information on this report will be retained in a public database.

GoA Well Tag No. Date Report Received

Measurement in Imperial 1. Well Identification and Location Province Postal Code Owner Name Address Town SPRUCE GROVE T7Y 1B3 #31-51514 RANGE RD 261 AB LEENTVAAR, HUGO Additional Description Plan RGE W of MER Lot Block 1/4 or LSD SEC **TWP** Location 1891TR 35 051 26 31 3 GPS Coordinates in Decimal Degrees (NAD 83) Measured from Boundary of Longitude <u>-113.72000</u>0 Latitude <u>53.443100</u> Elevation How Elevation Obtained How Location Obtained Not Obtained Not Verified

Rotary New Well 3. Formation Log Measurement in Imperia Depth from ground Water Lithology Description level (ft) Bearing 12.00 Brown Clay 90.00 Gray Silty Clay Gray Till 130.00 Clay & Sand 143.00 157.00 Gray Clay Sand 172.00 173.00 Shale

Type of Work

Domestic				
4. Well Completion	Measurement in Imperial			
Total Depth Drilled Finished Well Depth				
173,00 ft	2006/05/29 2006/05/29			
Borehole				
Diameter (in) From				
7.88 0.00				
1 10000	Unknown			
Size OD :6.00_in	Size OD :in			
	Wall Thickness:in			
Bottom at : 165.00 ft	Top at :ft			
	Bottom at :ft			
Perforations				
From (ft) To (ft)	Diameter (in) Interval (in)			
Annular Seal Bentonite Chips/Tablets Placed from 0.00 ft to Amount Other Seals				
Type	At (ft)			
Screen Type Stainless Steel Size OD: 5.00 in From (ft) To (	ft) Slot Size (in)			
From (ft) To ( 165.00 170.				
Attachment Attached To Casing				
Top Fittings Coupler	Bottom Fittings Plug			
Pack				
Type Artificial	Grain Size 0.275			
Amount 400.00 Pounds				
Amount 400.00 Pounds				

Proposed Well Use

7. Contractor Certification Name of Journeyman responsible for drilling/construction of well TERRY BERGSTREISER

MAR-WAYNE WATER WELL DRILLING SERVICES LTD.

Certification No 41955A

## **Government Water Well Drilling Report**

## **View in Metric**

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy.
The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No. Date Report Received

1495257

Owner Nam	Well Identification and Location  Owner Name Address  LEENTVAAR, HUGO #31-51514				RANGE RD 261 Town SPRUCE GR			Province AB	Measurement in Imperia Postal Code T7Y 1B3	
Location	1/4 or LSD SE	SEC 35	<i>TWP</i> 051	RGE 26	W of MER 4	Lot 31	3	1891TR	Additional Description	
Measured fr		from from	_		GPS Coordinat Latitude 53. How Location C Not Verified	443100		s (NAD 83) ude <u>-113.72000</u>	Elevation How Elevation Not Obtained	
Additional In	formation									Measurement in Imperia
	rom Top of Casin Flow Rate					ls	Flow Contr			
Recommer	ded Pump Rate				20.00 igpm	Pump	Installed _		Depth	ft
Recommer	ided Pump Intake	e Depth (Fro	om TOC)		137.79 ft	Туре		M	odel	н.Р
Addition: FILTER PA	al Comments on	Well		S) as	Depth _ Depth _		<u>ft</u>	Geophy S	ubmitted to GIC	Result Attached
5. Yield Test	ATION FLEMING	G PARK					N	leasurement	in Imperial  Depth to water level	Taken From Ground Leve
Test Date 2006/05/29		Start Time 12:00 AM		Statio	Water Level 72.18 ft		Drawe	down (ft)	Elapsed Time Minutes:Sec	Recovery (ft)
F	Water Removal Type Aii Removal Rate hdrawn From	20.				_			0:00 1:00 2:00 3:00 4:00 5:00	111.55 91.57 78.77 77.46 76.05 75.53
If water ren	moval period was	< 2 hours,	explain why	,					6:00 7:00 8:00 9:00 10:00 12:00	75.43 75.36 75.36 75.33 75.33 75.30
6. Water Div	verted for Drillin	ng		Am	ount Taken ig				Diversion Date & Time	

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well

TERRY BERGSTREISER

MAR-WAYNE WATER WELL DRILLING SERVICES LTD.

Certification No

## **Government Water Well Drilling Report**

#### **View in Metric**

of Alberta

The driller supplies the data contained in this report, The Province disclaims responsibility for its accuracy.

The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No.

296997

Date Report Received 2001/08/14

<ol> <li>Well Iden Owner Nan OSWALD,</li> </ol>	ne	and Location	Ad	ldress 08 8 ST, NI	SKU	Town		Provinc	re f	<mark>easurement in Imperia</mark> Postal Code Г9E 7Z2
Location	1/4 or SE	LSD SE	C TWP 051	RGE 26	W of MER L 4 3	ot Block 2	Plan	Additional D	escription	
Measured I	from Bound	ft from			GPS Coordinates in Latitude 53.4430 How Location Obtain Not Verified	92 Longitu	s (NAD 83) de <u>-113.71</u>	How	ation Elevation Obtain Obtained	
2. Drilling In Method of Rotary				<b>pe of Work</b> w Well	ſ			Proposed Well Domestic	Use	
3. Formation  Depth from ground	Water				urement in Imperial			nished Well Depth		easurement in Imperia End Date 2001/06/21
level (ft) 19.00	Bearing	Brown Clay		Description	1		eter (in)	From		To (ft) 196.00
69.00		Gray Silty Cl				Surface Cas	).00 sing (if ann)	0.0	iu Well Casing/Line	
122.00		Gray Sandy	•			Plastic	ang (n appi	icabie)	Wen Gasing/Enn	GI
154.00		Clay & Sand						6.00 in		0.00 in
190.00			Grained Sand				iness:		Wall Thickness	
195.00		Sand				Botto	om at :	190.00 ft	Тор а	
196.00		Gravel				Perforation	10		Bottom a	0.00 ft
						From (		To (ft)	Diameter (in)	Interval (in)
						Perforated in	by			
						Placed fr	om unt	ite Chips/Tablets 0.00 ft to	122.00 ft	
							Type			At (ft)
						Screen Typ		ss Steel		
						Fro	m (ft) 90.00	To (		Slot Size (in) 0.010
								ched To Casing		
						Top Fi	ttings Cour	oler	Bottom Fittings	s Plug
						Pack	achad Sand	ı	Grain Size 27	75

7	Contractor	Certification

Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER

Company Name

MAR-WAYNE WATER WELL DRILLING SERVICES LTD.

Certification No

Amount

Copy of Well report provided to owner Date approval holder signed

900.00 Pounds

# of Alberta

## **Government Water Well Drilling Report**

**View in Metric** 

GIC Well ID GoA Well Tag No. Date Report Received

296997

f Alberta	accuracy.		ained in this report. T I be relained in a pub		laims resp	oonsibility for its	GoA Well Tag Date Report R	No. ecceived 2001/08/14
. Well Identification and Lo Owner Name OSWALD, SHAWN		Address 2308 8 ST, N			own		Province	Measurement in Imperia Postal Code T9E 7Z2
Location 1/4 or LSD SE	SEC TW 35 051		W of MER 4	Lot 32	Block	Plan	Additional Description	
	from		GPS Coordinat Latitude 53. How Location ( Not Verified	443092		(NAD 83) de <u>-113.71967</u>	Elevation  How Elevation  Not Obtained	ftObtained
dditional Information								Measurement in Imperia
Distance From Top of Casin Is Artesian Flow Rate				Is Flo	w Contro			
Recommended Pump Rate			20.00 igpm	Pump Inst	alled Ye	s ====		ft
								H.P75
Additional Comments on DRILLER REPORTS DISTA		OF CASING 1	O GROUND LEV	/EL: 35 CMS. F	LEMING	nple Collected	for Potability	Result Attached
	Start Time 12:00 AM	Statio	: Water Level 67.00 ft		Drawd	own (ft)	Elapsed Time Minutes:Sec	Recovery (ft)
Method of Water Removal Type Ail Removal Rate Depth Withdrawn From		-			0:00 1:00 2:00 3:00 4:00 5:00	91.90 81.04 71.72 69.42 68.44 68.18		
If water removal period was	< 2 hours, explair	why	×				6:00 7:00 8:00 9:00 10:00 12:00 14:00	68.04 67.91 67.91 67.91 67.88 67.85 67.85
6. Water Diverted for Drillin Water Source	g	Amo	ount Taken ig				Diversion Date & Time	

_				
7. (	Contra	ctor	Certific	ation

Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER

MAR-WAYNE WATER WELL DRILLING SERVICES LTD.

Certification No

Copy of Well report provided to owner Date approval holder signed

Page: 2 / 2

## **Government Water Well Drilling Report**

#### **View in Metric**

of Alberta 
The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy.
The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No. Date Report Received 1998/05/28

289029

1. Well Iden Owner Nam HAARSMA,	ne	and Loc	ation		ress 1 199 ST, I	EDMONTON		Town		Pro	ovince		urement in Imperia al Code 6E8
Location	1/4 or NE	LSD	SEC 25	<i>TWP</i> 051	RGE 26	W of MER 4	Lot	Block	Plan	Additio	nal Description		
Measured f	rom Bound	ary of ft fr ft fr		_		GPS Coordinate Latitude 53.4 How Location C Not Verified	1358 <u>4</u> 7	Longitud	(NAD 83) /e <u>-113.69</u>		Elevation  How Elevation (  Not Obtained		ft
2. Drilling In Method of Rotary			-		e of Work v Well					Proposed I Domestic	Vell Use		
3. Formation  Depth from ground level (ft)	Water Bearing			Lithology	Measu  Description	rement in Impe	erial	170.00 ft Borehole		inished Well C	Depth Start Da 1998/04 From (ft)	ate	urement in Imperia End Date 1998/04/21 To (ft)
18.00		Yellow	Sandy Clay						.00		0.00		170.00
104.00		Blue Sa	indy Clay					Surface Cas	ing (if app	olicable)	Well Casii	ng/Liner	
162.00		Sand						Plastic	00	6.00 in	c	ize OD :	0.00 in
170.00		Gray S	ihale					Wall Thick				ckness:	
								1	m at a	158.00 ft		Top at : _ ttom at :	0.00 ft
								Perforation From (		To (ft)	Diamet	ter (in)	Interval (in)
								Placed fr	al Bento om		102.00		(ft)
								Fro 15 Attach Top Fi	e OD : m (ft) i8.00 nment Atta ttings Con	5.00 in ached To Casi	To (ft) 163.00 ing Bottom	Fittings <u>P</u>	Slot Size (in) 0.010

7. Contractor Certification Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER Company Name D&D WATER WELL DRILLING & SERVICING LTD.

# of Alberta

## **Government Water Well Drilling Report**

**View in Metric** 

GIC Well ID

289029

The driller supplies the data contained in this report, The Province disclaims responsibility for its GoA Well Tag No.

1 Well Identi			mation on th	is report will be	e retained in a put	lic database				Date Report Re	eceived	1998/05/28
Owner Name HAARSMA,		cation		lress 1 199 ST, E	DMONTON		Town			Province		u <mark>rement in Imperia</mark> Il Code IE8
Location	1/4 or LSD NE	SEC 25	<i>TWP</i> 051	RGE 26	W of MER 4	Lot	Block	Plan	Add	itional Description		
Measured fro		from from	_		GPS Coordinat Latitude <u>53.</u> How Location ( Not Verified	435847	_		24	Elevation How Elevation C		ft
Additional Inf	ormation										Measu	rement in Imperia
Is Artesian	om Top of Casing Flow Rate				D:	Is		l Installed Describe				
	ded Pump Rate		_		5.00 igpm	Pump	Installed			Depth		ft
Recommen	ded Pump Intake	Depth (Fro	m TOC)		140.00 ft	Туре		M	odel		H.P	
Additiona	l Comments on V			as			ft	Geophy S	sical Lo ubmitted	to GIC		
	EPORTS DISTAI	NCE FROM	TOP OF C	CASING TO	GROUND LEV	EL: 30 CM		npre Conected	i for Pol	ability	Result At	tacned
	EPORTS DISTAI	NCE FROM	TOP OF (	CASING TO	GROUND LEV	EL: 30 CM		easurement	in Impe	erial		
	S	tart Time 2:00 AM	TOP OF C	Static W	GROUND LEV /ater Level 89,00 ft	EL: 30 CM	Me		in Impe Depi	erial th to water level Elapsed Time Minutes:Sec	Taken F	From Ground Level
5. Yield Test  Test Date 1998/04/21	S	tart Time	I TOP OF (	Static W	ater Level	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec 0:00	Taken F	From Ground Leve ecovery (ft) 116.57
5. Yield Test  Test Date 1998/04/21	S 12 Water Removal	tart Time 2:00 AM		Static W	ater Level 89,00 ft	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec	Taken F	From Ground Leve
5. Yield Test  Test Date 1998/04/21  Method of	S 12 Water Removal Type <u>Air</u>	tart Time 2:00 AM		Static W	ater Level 89,00 ft	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00	Taken F	ecovery (ft)  116.57  98.00  92.52  90.68
5. Yield Test  Test Date 1998/04/21  Method of I	S 12 <b>Water Removal</b> Type <u>Air</u> emoval Rate	tart Time 2:00 AM	igpm	Static W	ater Level 89,00 ft	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00	Taken F	ecovery (ft)  116.57  98.00  92.52  90.68  89.99
5. Yield Test  Test Date 1998/04/21  Method of I	S 12 Water Removal Type <u>Air</u>	tart Time 2:00 AM	igpm	Static W	ater Level 89,00 ft	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00	Taken F	ecovery (ft)  116.57  98.00  92.52  90.68
5. Yield Test Test Date 1998/04/21 Method of I Re Depth With	S 12 <b>Water Removal</b> Type <u>Air</u> emoval Rate	tart Time 2:00 AM 163.0	igpm 00 ft	Static W	ater Level 89,00 ft	EL: 30 CM	Me	easurement	in Impe Depi	erial th to water level Elapsed Time Minutes:Sec 0:00 1:00 2:00 3:00 4:00 6:00	Taken F	ecovery (ft)  116.57  98.00  92.52  90.68  89.99  89.57

<ol><li>Contractor Certifi</li></ol>	cation
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Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER

Company Name

D&D WATER WELL DRILLING & SERVICING LTD.

Certification No

## **Government Water Well Drilling Report**

#### **View in Metric**

GIC Well ID

of Alberta 
The driller supplies the data contained in this report, The Province disclaims responsibility for its accuracy,

286934 GoA Well Tag No. Date Report Received 1997/03/20

1. Well Iden Owner Nam FINDLAY, E	пе		n Ad	dress	261, SPRUCE G		Town		Prov	ince	Measurement in Postal Code T7Y 1B3	n Imperia
Location	1/4 or SE	LSD SEG	C TWP 051	RGE 26	W of MER 4	Lot 2	Block	Plan	Additiona	l Description		
Measured from Boundary of GPS Coordinates  the from Latitude 53.443  ft from How Location Obt.  Not Verified							Longituo	(NAD 83) le <u>-113.71</u> 9	Н	evation ow Elevation C ot Obtained		
2. Drilling In: Method of Rotary			<b>Т</b> уј Ne	p <b>e of Work</b> w Well	1				Proposed We Domestic	ell Use		
3. Formation	n Log			Measi	urement in Impe	erial	4. Well Comp			0	Measurement in	
Depth from ground level (ft)	Water Bearing		Lithology	Description	n		150.00 ft Borehole		nished Well De	1997/02	/13 1997/02/	
11.00		Yellow Clay		·			Diame 0	eter (in) .00	Fr	om (π) 0.00	To (ft) 150.00	
79.00		Blue Sandy	Clay				Surface Cas	ing (if appli	icable)	Well Casin	g/Liner	
89.00		Sand					Plastic	00 8	0.00 1-	Ci	00	in
111.00		Blue Sandy	Clay					-	6.00 in 0.395 in		ze OD : 0.00 kness : 0.000	
124.00		Fine Graine	d Sand						137.00 ft		Top at : 0.00	
127.00		Blue Sandy	Clay								tom at : 0.00	ft
142.00		Coarse Grai	ned Sand				Perforation					
146.00		Blue Clay					From (	ft)	To (ft)	Diamete	er (in) Interva	I (IN)
150.00		Gray Shale				Ш	Perforated b	)V				
							Annular Se Placed fro	al Benton	ite Chips/Table	127.00 f		
								Type			At (ft)	
							Screen Typ Size		5.00 in			
							13	m (ft) 7.00		To (ft) 142.00	Slot Size (i 0.012	n)
							ı		pler		Fittings Plug	
							Pack					
							Type <u>Wa</u>	ashed Sano 1400.0	1 0 Pounds	Grain Si:	Ze	

7. Contractor Certification Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER

D&D WATER WELL DRILLING & SERVICING LTD.

Certification No

## of Alberta

## **Government Water Well Drilling Report**

#### **View in Metric**

The driller supplies the data contained in this report. The Province disclaims responsibility for its

GIC Well ID GoA Well Tag No. 286934

Date Report Received 1997/03/20 accuracy.

The information on this report will be retained in a public database.

Measurement in Imperia 1. Well Identification and Location Postal Code Province Address Owner Name 3 51514 RNG 261, SPRUCE GROVE T7Y 1B3 FINDLAY, ED Additional Description TWP RGE W of MER 1/4 or LSD SEC Location 35 051 26 GPS Coordinates in Decimal Degrees (NAD 83) Measured from Boundary of Longitude -113.719670 Elevation Latitude 53.443092 How Elevation Obtained How Location Obtained ft from Not Obtained Not Verified Measurement in Imperial Additional Information Distance From Top of Casing to Ground Level Is Artesian Flow Is Flow Control Installed Describe Rate 5.00 igpm Pump Installed ft Recommended Pump Rate HPRecommended Pump Intake Depth (From TOC) 90.00 ft Model Well Disinfected Upon Completion Did you Encounter Saline Water (>4000 ppm TDS) Geophysical Log Taken Depth Submitted to GIC \_\_\_\_\_ Sample Collected for Potability \_\_\_\_ Result Attached Additional Comments on Well DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 30 CM, Measurement in Imperial Taken From Ground Level 5. Yield Test Depth to water level Test Date Start Time Static Water Level Elapsed Time Recovery (ft) Drawdown (ft) 1997/02/13 12:00 AM 63.00 ft Minutes:Sec 0:00 105.15 90.65 1:00 Method of Water Removal 81.30 2:00 Type Air 74.64 3:00 Removal Rate\_ 70.01 4:00 Depth Withdrawn From \_ 5:00 67.19 6:00 65.49 64.47 7:00 If water removal period was < 2 hours, explain why 63.91 8:00 9:00 63.58 10:00 63.42 6. Water Diverted for Drilling Diversion Date & Time Amount Taken Water Source lg

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well

UNKNOWN NA DRILLER

Company Name

D&D WATER WELL DRILLING & SERVICING LTD.

Certification No

## **Government Water Well Drilling Report**

#### **View in Metric**

GIC Well ID GoA Well Tag No. Date Report Received

1715074

of Alberta

2. Drilling Information

Method of Drilling

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy.
The information on this report will be retained in a public database.

Type of Work

Measurement in Imperial 1. Well Identification and Location Postal Code Address Province Owner Name WOLOSHYN, PETE 51413 - RGE RD 262 SPRUCE GROVE AB T7Y 1B4 Additional Description 1/4 or LSD SEC RGE W of MER Block Lot Location 051 5661RS 26 26 GPS Coordinates in Decimal Degrees (NAD 83) Measured from Boundary of Latitude <u>53.428600</u> Longitude -113.720000 Elevation How Elevation Obtained How Location Obtained ft from Not Obtained Not Verified

New Well Rotary 3. Formation Log Measurement in Imperia Depth from around Water Lithology Description level (ft) Bearing 12.00 Silt Clay & Silt 86.00 140.00 Sand 167.00 Coarse Grained Sand

Domestic		
4. Well Completion	Mea	surement in Imperial
Total Depth Drilled Finished Well Dep 167.00 ft	oth Start Date 2002/03/22	End Date 2002/03/23
	2002/03/22	2002/03/23
Borehole	(61)	To (ft)
	om (ft) 0.00	To (ft) 167.00
Surface Casing (if applicable) Plastic	Well Casing/Liner Unknown	
Size OD :6.00 in		in
Wall Thickness: 0.390 in		
Bottom at: 162.00 ft		ft
	Bottom at :	ft
Perforations		
From (ft) To (ft)	Diameter (in)	Interval (in)
Annular Seal Bentonite Chips/Table Placed from 0.00 ft to Amount	150.00 ft	
Other Seals		
Туре	A	t (ft)
Screen Type Stainless Steel		
Size OD : 4.00 in		
	Го (ft) .67.00	Slot Size (in) 0.012
Attachment Attached To Casing		
Top Fittings Coupler		Plug
Pack		
Type Artificial	Grain Size COA	RSE
Amount 3000.00 Pounds	_	

Proposed Well Use

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well

DAVE SUMMERS Company Name

SUMMERS DRILLING LTD.

Certification No

# of Alberta

## **Government Water Well Drilling Report**

#### **View in Metric**

The driller supplies the data contained in this report, The Province disclaims responsibility for its accuracy.
The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No. Date Report Received 1715074

1. Well Identi  Owner Name  WOLOSHYN		cation		ress 13 - RGE	RD 262		Town SPRUCE G	GROVE	Province AB	Measurement in Imperial Postal Code T7Y 1B4
Location	1/4 or LSD SE	SEC 26	<i>TWP</i> 051	RGE 26	W of MER 4	2	Block	Plan 5661RS	Additional Description	
Measured fro		from from			GPS Coordinal Latitude 53. How Location ( Not Verified	428600			Elevation  How Elevation  Not Obtained	
Additional Inf	ormation									Measurement in Imperia
Is Artesian	om Top of Casin Flow Rate					Is		_		
Pocommon	dod Pump Rate				10.00 japm	Pump	Installed Yes	:	Depth	ft
Recommen	ded Pump Intake	Depth (Fr	om TOC)		120 <sub>-</sub> 00 ft	Туре	SUB @ 120'	Mi	odel	H.P
Additiona TESTED @		Well		as				Si aple Collected	for Potabilityin Imperial	Result Attached Taken From Ground Leve
Test Date 2002/03/23		Start Time 12:00 AM		Static	: Water Level 26.00 ft		Drawdo	wn (ft)	Depth to water level Elapsed Time Minutes:Sec	Recovery (ft)
R	<b>Water Removal</b> Type <u>Air</u> emoval Rate ndrawn From	50	.00 igpm			-			0:00 1:00 2:00 3:00 4:00 5:00	120.00 76.00 56.00 47.00 36.00 32.00
If water rem	noval period was	< 2 hours,	explain why	′					6:00 7:00	27.00 26.00
6. Water Div Water Source	erted for Drillin	g		Amo	ount Taken ig				Diversion Date & Time	

7. Contractor Certification

Name of Journeyman responsible for drilling/construction of well

DAVE SUMMERS

Company Name SUMMERS DRILLING LTD. Certification No



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

Client: 1285827 Alberta Ltd.

Location: Near Devon, AB

Slug Test: Well 1495257

Test Well: Well 3

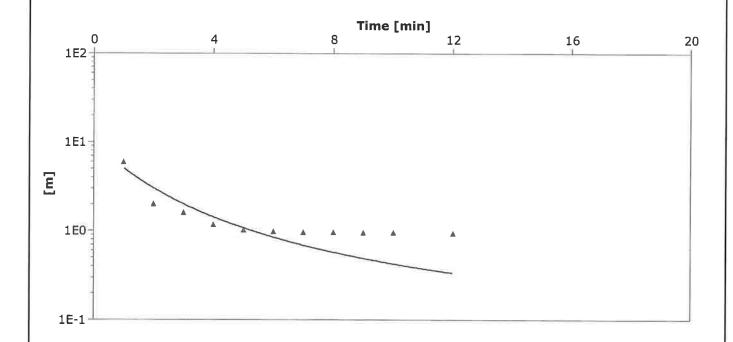
Test Conducted by:

Analysis Performed by:

New analysis 1

Analysis Date: 8/11/2011

Aquifer Thickness: 4.58 m



Calculation after Cooper-Bredehoeft-Papadopulos										
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient							
	[m²/d]	[m/d]								
Well 3	8.36 × 10 <sup>0</sup>	1.83 × 10 <sup>0</sup>	2.64 × 10 <sup>-2</sup>							



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

Client: 1285827 Alberta Ltd.

Location: Near Devon, AB

Slug Test: Well 1495278

Test Well: Well 4

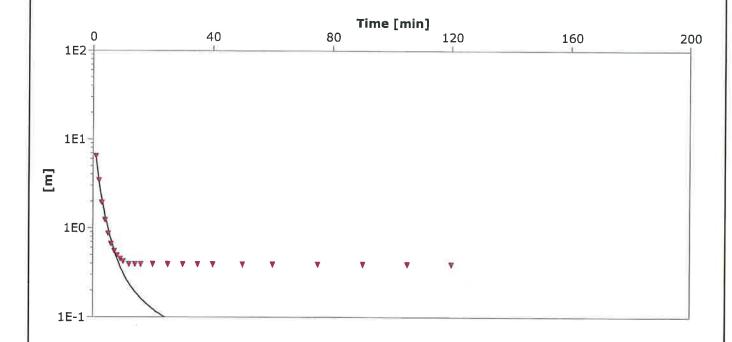
Test Date: 8/11/2011

Analysis Performed by:

New analysis 1

Analysis Date: 8/11/2011

Aquifer Thickness: 14.63 m



Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient	
	[m²/d]	[m/d]		
Well 4	9.53 × 10 <sup>0</sup>	6.51 × 10 <sup>-1</sup>	5.64 × 10 <sup>-4</sup>	



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

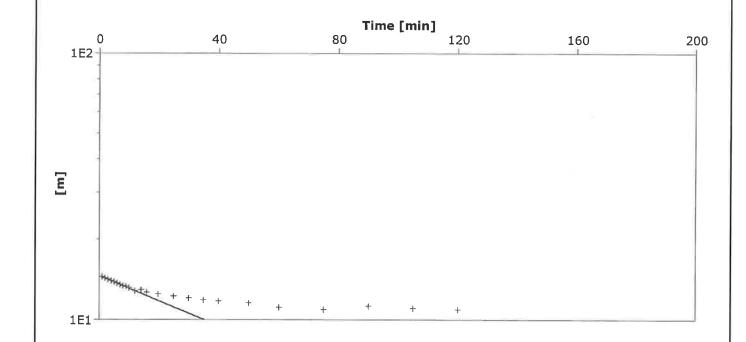
Client: 1285827 Alberta Ltd.

 Location: Near Devon, AB
 Slug Test: Well 1715072
 Test Well: Well 5

 Test Conducted by:
 Test Date: 8/11/2011

 Analysis Performed by:
 New analysis 1
 Analysis Date: 8/11/2011

Aquifer Thickness: 2.44 m



Calculation after Cooper-Bredehoeft-Papadopulos							
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient				
	[m²/d]	[m/d]					
Well 5	2.44 × 10 <sup>1</sup>	9.98 × 10 <sup>0</sup>	3.43 × 10 <sup>-29</sup>				



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

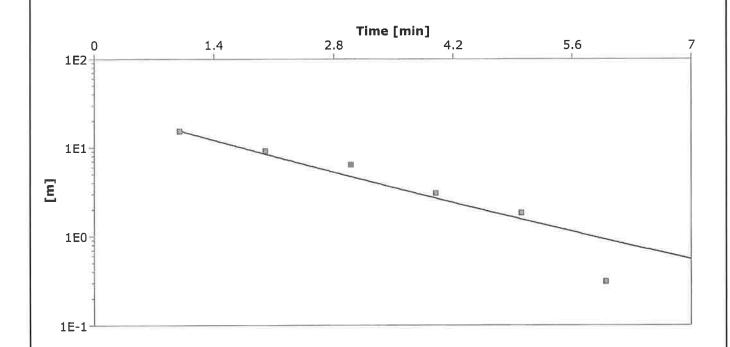
Client: 1285827 Alberta Ltd.

Location: Near Devon, AB Slug Test: Well 1715074 Test Well: Well 6

Test Conducted by: Test Date: 8/11/2011

Analysis Performed by: New analysis 1 Analysis Date: 8/11/2011

Aquifer Thickness: 24.69 m



Calculation after Cooper-	Bredehoeft-Papadopulos		111	
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient	
	[m²/d]	[m/d]		
Well 6	1.09 × 10 <sup>2</sup>	4.41 × 10 <sup>0</sup>	1.00 × 10 <sup>-35</sup>	



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

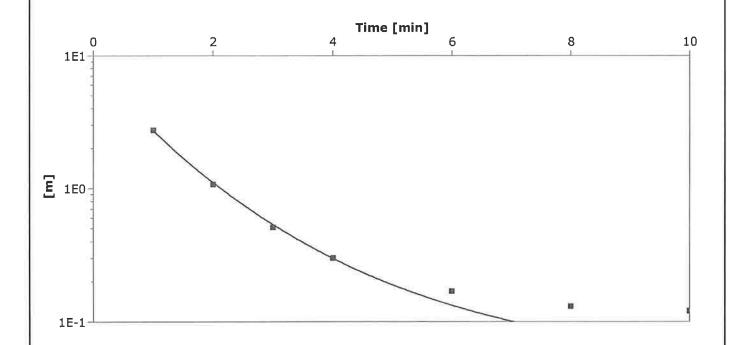
Client: 1285827 Alberta Ltd.

Location: Near Devon, AB Slug Test: well 289029 Test Well: Well 1

Test Conducted by: Test Date: 8/11/2011

Analysis Performed by: New analysis 1 Analysis Date: 8/11/2011

Aquifer Thickness: 17.68 m



Calculation after Cooper-Bre	edehoeft-Papadopulos			
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient	
	[m²/d]	[m/d]		
Well 1	3.53 × 10 <sup>1</sup>	1.99 × 10 <sup>0</sup>	3.67 × 10 <sup>-6</sup>	



Slug Test Analysis Report

Project: Focus ASP

Number: ED1285

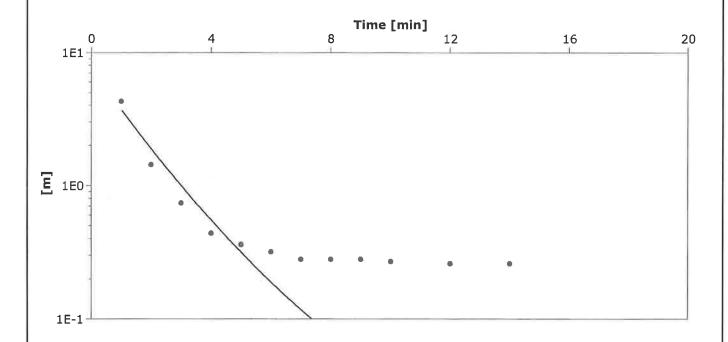
Client: 1285827 Alberta Ltd.

 Location: Near Devon, AB
 Slug Test: Well 296997
 Test Well: Well 2

 Test Conducted by:
 Test Date: 8/11/2011

 Analysis Performed by:
 New analysis 1
 Analysis Date: 8/11/2011

Aquifer Thickness: 12.80 m



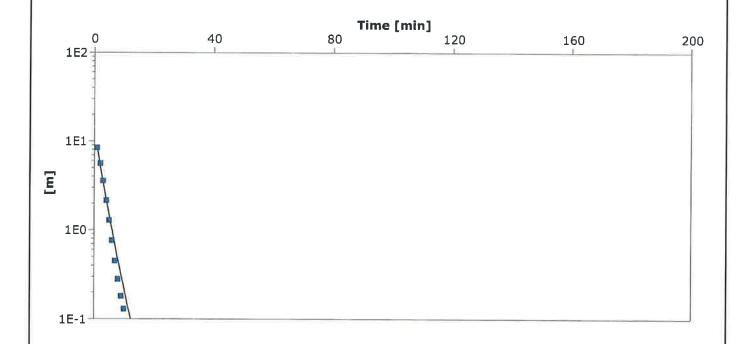
Calculation after Cooper-Bredehoeft-Papadopulos							
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient				
	[m²/d]	[m/d]					
Well 2	6.35 × 10 <sup>1</sup>	4.96 × 10 <sup>0</sup>	7.07 × 10 <sup>-18</sup>				



Slug Test Analysis Report	
Project:	
Number:	
Client:	

Analysis Performed by: New analysis 1		Analysis Date: 8/11/2011	
Test Conducted by:		Test Date: 8/11/2011	
Location:	Slug Test: Well 286934	Test Well: Well 1	

Aquifer Thickness: 5.48 m



Calculation after Cooper-	Bredehoeft-Papadopulos			
Observation Well	Transmissivity	Hydraulic Conductivity	Well-bore storage coefficient	
	[m²/d]	[m/d]		
Well 1	7.76 × 10 <sup>1</sup>	1.42 × 10 <sup>1</sup>	1.00 × 10 <sup>-35</sup>	

## THE PARKLANDGEO CONSULTING GROUP GENERAL TERMS, CONDITIONS AND LIMITATIONS GEOTECHNICAL AND ENVIRONMENTAL CONSULTING

The use of this attached report is subject to acceptance of the following general terms and conditions.

- 1. STANDARD OF CARE In the performance of professional services, ParklandGEO will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same or similar localities. No other warranty expressed or implied is made or intended by this agreement or by furnishing oral or written reports of the findings made. ParklandGEO is to be liable only for damage directly caused by the negligence of ParklandGEO.
- 2. INTERPRETATION OF THE REPORT The CLIENT recognizes that subsurface conditions will vary from those encountered at the location where borings, surveys, or explorations are made and that the data, interpretations and recommendation of ParklandGEO are based solely on the information available to him. Classification and identification of soils, rocks, geological units, contaminated materials and contaminant quantities will be based on commonly accepted practices in geotechnical or environmental consulting practice in this area. ParklandGEO will not be responsible for the interpretation by others of the information developed.
- 3. SITE INFORMATION The CLIENT agrees to fully cooperate with ParklandGEO and provide all information with respect to the past, present and proposed conditions and use of the Site whether specifically requested or not. The CLIENT acknowledges that in order for ParklandGEO to properly advise and assist the CLIENT in respect of the investigation of the Site, ParklandGEO is relying upon full disclosure by the CLIENT of all matters pertinent to an investigation of the Site.
  - Where specifically stated in the scope of work, ParklandGEO will perform a review of the historical information obtained or provided by the Client to assist in the investigation of the Site unless and except to the extent that such a review is limited or excluded from the scope of work.
- COMPLETE REPORT The Report is of a summary nature and is not intended to stand alone without reference to the instructions given to ParklandGEO by the CLIENT, communications between ParklandGEO and the CLIENT, and to any other reports, writings or documents prepared by ParklandGEO for the CLIENT relative to the specific Site, all of which constitute the Report. The word "Report" shall refer to any and all of the documents referred to herein. In order to properly understand the suggestions, recommendations and opinions expressed by ParklandGEO, reference must be made to the whole of the Report. ParklandGEO cannot be responsible for use of any part or portions of the report without reference to the whole report. The CLIENT agrees to the following statement:

"This report has been prepared for the exclusive use of the named CLIENT. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ParklandGEO accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report."

The CLIENT agrees that in the event that any such report is released to a third party, such disclaimer shall not be obliterated or altered in any manner. The CLIENT further agrees that all such reports shall be used solely for the purposes of the CLIENT and shall not be released or used by others without the prior written permission of ParklandGEO.

- 5. LIMITATIONS ON SCOPE OF INVESTIGATION AND WARRANTY DISCLAIMER There is no warranty, expressed or implied, by ParklandGEO that:
  - a) the investigation shall uncover all potential geo-hazards, contaminants or environmental liabilities on the Site; or
  - b) the Site will be entirely free of all geo-hazards or contaminants as a result of any investigation or cleanup work undertaken on the Site, since it is not possible, even with exhaustive sampling, testing and analysis, to document all potential geo-hazards or contaminants on the Site.

#### The CLIENT acknowledges that:

a) the investigation findings are based solely on the information generated as a result of the specific scope of the investigation authorized by the CLIENT;

## THE PARKLANDGEO CONSULTING GROUP GENERAL TERMS, CONDITIONS AND LIMITATIONS GEOTECHNICAL AND ENVIRONMENTAL CONSULTING

- b) unless specifically stated in the agreed Scope of Work, the investigation will not, nor is it intended to assess or detect potential contaminants or environmental liabilities on the Site;
- any assessment regarding geological conditions on the Site is based on the interpretation of conditions determined at specific sampling locations and depths and that conditions may vary between sampling locations, hence there can be no assurance that undetected geological conditions, including soils or groundwater are not located on the Site;
- any assessment is also dependent on and limited by the accuracy of the analytical data generated by the sample analyses;
- e) any assessment is also limited by the scientific possibility of determining the presence of unsuitable geological conditions for which scientific analyses have been conducted; and
- the laboratory testing program and analytical parameters selected are limited to those outlined in the CLIENT's authorized scope of investigation; and
- there are risks associated with the discovery of hazardous materials in and upon the lands and premises which may inadvertently discovered as part of the investigation. The CLIENT acknowledges that it may have a responsibility in law to inform the owner of any affected property of the existence or suspected existence of hazardous materials and in some cases the discovery of hazardous conditions and materials will require that certain regulatory bodies be informed. The CLIENT further acknowledges that any such discovery may result in the fair market value of the lands and premises and of any other lands and premises adjacent thereto to be adversely affected in a material respect.
- 6. CONTROL OF WORK SITE AND JOBSITE SAFETY ParklandGEO is only responsible for the activities of its employees on the jobsite. The presence of ParklandGEO personnel on the Site shall not be construed in any way to relieve the CLIENT or any contractors on Site from their responsibilities for Site safety. The CLIENT undertakes to inform ParklandGEO of all hazardous conditions, or possible hazardous conditions which are known to him.
- 7. COST ESTIMATES Estimates of remediation or construction costs can only be based on the specific information generated and the technical limitations of the investigation authorized by the CLIENT. Accordingly, estimated costs for construction or remediation are based on the known site conditions, which can vary as new information is discovered during construction. As some construction activities are an iterative exercise, ParklandGEO shall therefore not be liable for the accuracy of any estimates of remediation or construction costs provided.
- 8. LIMITATION OF LIABILITY The CLIENT hereby agrees that to the fullest extent permitted by the law ParklandGEO's total liability to CLIENT for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in anyway relating to the Project, the Site, or this agreement from any cause or causes including but not limited to ParklandGEO 's negligence, errors, omissions, strict liability, breach of contract, or breach of warranty shall not exceed the total amount paid by the CLIENT for the services to ParklandGEO under this contract or \$50,000, whichever is lessor, or as otherwise agreed to in writing.
- 9. NO SPECIAL OR CONSEQUENTIAL DAMAGES The CLIENT and ParklandGEO agree that to the fullest extent permitted by law ParklandGEO shall not be liable to the CLIENT for any special, indirect or consequential damages whatsoever, whether caused by ParklandGEO's negligence, errors, omissions, strict liability, breach of contract, breach of warranty or other cause of causes whatsoever.
- 10. INDEMNIFICATION To the fullest extent permitted by law, the CLIENT agrees to defend, indemnify and hold ParklandGEO, its directors, officers, employees, agents and subcontractors, harmless from and against any and all claims, defence costs, including legal fees on a full indemnity basis, damages, and other liabilities arising out of or in any way related to ParklandGEO's reports or recommendations concerning this Agreement, ParklandGEO's work and presence on the project property, or the presence, release, or threatened release of hazardous substances or pollutants on or from the Site; provided that the CLIENT shall not indemnify ParklandGEO against liability for damages to the extent caused by the negligence or intentional misconduct of ParklandGEO, its agents or subcontractors.

#### Appendix B: Public Consultation Information Package



Focus Corporation
Suite 300, 9925-109 Street

Edmonton, AB

T5K 2J8

780.466.6555

June 28, 2012

Dear Resident,

On behalf of a private developer, Focus Corporation is currently preparing an Outline Plan for a new development to be constructed in the Woodbend-Graminia community of Parkland County. The proposed development will be called Woodbend Estates, and will be located in the north-west corner of the intersection of Fleming Road and Woodbend Road.

The intent of this Outline Plan is to provide a mix of Country Residential lots that complement the area, while retaining its rural character. Included in this plan will be a large park site and a greened buffer strip to separate the residents from the roadways. More detail about the development will be made available at the Public Consultation.

Resident feedback is a very important part of the planning process. As you reside within a close proximity to the newly proposed development, Focus would like to invite you to be a part of this process. Throughout the evening of **Wednesday**, **July 18**<sup>th</sup>, **2012**, Focus will be hosting a **drop-in** Public Consultation for members of the public to review the proposed concept plan for Woodbend Estates, and to provide constructive feedback about the project. This meeting will be held from **6:00PM-8:00PM** at the **Woodbend-Graminia Community Hall**. No specific formal presentation is planned for the Public Consultation, but we will be available throughout the evening to answer questions or respond to comments for those that attend. The following flyer includes the address and a map of the community hall location.

If you are not able to attend this meeting and would like to reply by email or phone, please do so by contacting myself at (780)466.6555 or ashley.parks@focus.ca.

Sincerely,

#### **FOCUS CORPORATION**

Ashley Parks – BA, MUP Planner

Suite 300, 9925-109 Street, Edmonton AB, T5k 2J8 Main: 780.466.6555 Fax: 780.491.1397

# OPEN HOUSE WOODBEND ESTATES OUTLINE PLAN

Date: Wednesday, July 18th, 2012

Time: Drop-In between 6:00pm - 8:00pm

Location: Woodbend-Graminia Community Hall

26002 Township Road 514—Parkland County, AB

proposed Concept Plan. Representatives from the planning and engineering consultants will be available to answer questions and This Open House will allow the public, including adjacent and affected landowners, to share ideas and provide comments on the engage with the participants in informal discussion on a one-to-one basis.

For more information, please contact:

Ashley Parks, Planner

Focus Corporation Phone: 780.466.6555 Email: ashley.parks@focus.ca

Chuck McNutt, Planner

Focus Corporation

Email: chuck.mcnutt@focus.ca

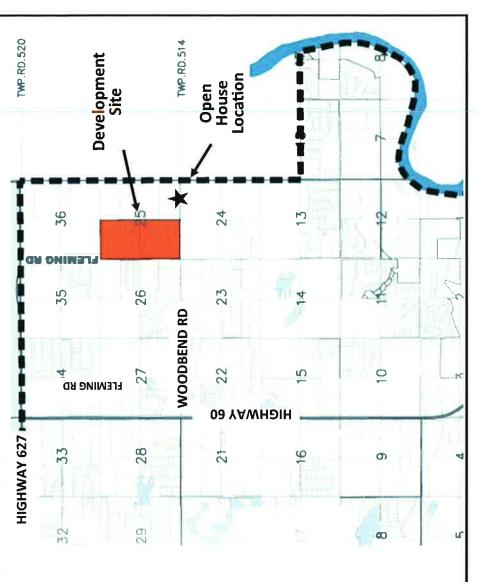
Phone: 780.423.8252

Christina Kortmeyer

Phone: 780.968.8443

**Parkland County** 

Email: ckortmeyer@parklandcounty.com



#### OPEN HOUSE WOODBEND-GRAMINIA ESTATES OUTLINE PLAN

Date: Wednesday, July 18th, 2012

Time: 6:00pm - 8:00pm

Location: Woodbend-Graminia Community Hall

26002 Township Road 514—Parkland County, AB

The Open House will allow the public, including adjacent and affected landowners, to share ideas and provide comments on the proposed Concept Plan. Representatives from the planning and engineering consultants will be available to answer questions and engage with the participants in informal discussion



#### **Comment Sheet**

D	ate: July 18 <sup>th</sup> , 2011	Time: 6:00 – 8:00 PM	Meeting Location:	/oodb	nd Com	mun	ity Hall	l
		Name (Optional):	(montaneous)					
				Agre	е		Disag	gree
1.	I was given suitable	notice of the meeting da	te, time and location.	5	4	3	2	1
2.	The information wa	s made available in a clea	r and concise manner	5	4	3	2	1
3.	I was able to expres	s my concerns adequatel	y.	5	4	3	2	1
4.	I am generally in su	pport of the proposed am	nendment.	5	4	3	2	1
5.		s illustrated, is a first look nts on this plan?						
6.	Are there any plann	ing considerations which	you would like addres	sed?				
7.	Are there any chang	ges to the proposed conc	ept plan which you wo	uld like	to see?	1		

8. Do you currently reside within or outside of the proposed Plan area?

Within the proposed Plan area.

9. Do you have any other comments or suggestions?

Less reserve land.

#### Comment Sheet

Date: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location			end Com	muni	ty Hal	ı
	Name (Optional):	t				
		Agre	ee		Disa	gree
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1
2.	The information was made available in a clear and concise manner	5	4	3	2	1
3.	I was able to express my concerns adequately.	5	4	3	2	1
4.	I am generally in support of the proposed amendment.	5	4 (	3)	2	1
5.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?  KIND OF HIGH DENSITY WITH LIND					

IN AN ALREAPY WET AREA.

6. Are there any planning considerations which you would like addressed?

FILL THE "PARK AREA" WITH DIGGINSS FROM BASEMENTS TO MAKE FT USEABLE

7. Are there any changes to the proposed concept plan which you would like to see?

SOUTH EXIT WILL EVENTUALLY ENDUP ON WINTER BURN ROAD THE CITY DOES NOT MAINTAIN THIS ROAD WELL MAYBE NORTH EXIT COULD BE FURTHER WORTH

8. Do you currently reside within or outside of the proposed Plan area?

2,3 KM TO THE SOUTH

9. Do you have any other comments or suggestions?

	Comment Sheet						
	Date: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: W	oodben	d Co	mmunit	y Hal	I	
	Name (Optional):	8					
		Agree			Disa	gree	
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1	
2.	The information was made available in a clear and concise manner	5	4	3	2	1	
3.	I was able to express my concerns adequately.	(5)	4	3	2	1	
4.	I am generally in support of the proposed amendment.	5	4	(3)	2	1	
7.	The concept plan, as illustrated, is a first look at how the area may any general comments on this plan?  Seems like too wany lots so close too the plan seem like it is not set for residental setting. Also concerned and park locations.  Are there any planning considerations which you would like address to that harnes don't are not forced for any charter access. No well a secure and retired any changes to the proposed concept plan which you would ferrent access from west fleming and park of sondy to sondy the so close.  Do you currently reside within or outside of the proposed Plan are within the proposed plan. Existing (6)	sed? er a  fixe  uld like t  read  ridag  propp	S-UNC C S S Loss to see	num  num  luse  cist  to n  ee?  As	sc togem of	make of los wars wher only	(No
,	Do you have any other comments or suggestions?  Anchitecture control Requirements. > ce and boxilding poches. JESS LOTS  A nice estates Sign for both ent	1			SIT	220	
	Thank-you for allowing us to give	e in	De	Jt .	ال.		

#### Comment Sheet

	1					
Da	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: W	oodbe/	nd Co	mmunit	у На	II
	Name (Optional):					
		Agre	e		Disa	gree
1.	I was given suitable notice of the meeting date, time and location.	5	4	(3)	2	1
2.	The information was made available in a clear and concise manner	5	4	(3)	2	1
3.	I was able to express my concerns adequately.	5	<b>(</b>	3	2	1
4.	I am generally in support of the proposed amendment.	5	4	3	2	1
1.	The concept plan, as illustrated, is a first look at how the area may any general comments on this plan? I do belive that the sity by the degran Shown is and south the hur planed	+ the	- 1	en pula	tion	
6.	Are there any planning considerations which you would like address	sed?				
	Enstance thys, rember of homes, also	Co	nsta	ctron	0-	
1	le farm had					
7.	Are there any changes to the proposed concept plan which you wo	uld like	to se	e?		
	Yes					
8.	Do you currently reside within or outside of the proposed Plan are	a?				
	Yes					
9.	Do you have any other comments or suggestions?					

Hower and Sevage Needs to be addressed for Sestents

that will live ther too the lesislasts that all
really do. The current Sand Can not bold or with stand that much

Tradic

Dat	e: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: W	oodbe	nd Cor	nmunit	y Hal	1
	Name (Optional):					
		Agre	e		Disa	gree
1. 1	was given suitable notice of the meeting date, time and location.	(5)	4	3	2	1
2. T	he information was made available in a clear and concise manner	5	4	3	2	1
3. 1	was able to express my concerns adequately.			(3)		
4. 1	am generally in support of the proposed amendment.	5	4	(3)	2	1
ā	The concept plan, as illustrated, is a first look at how the area may be invited to the second secon	7 / /				
6. /	Study oh sugree with road RN 261. Please velocite.	sed? سی	ecer	L		
7. /	Are there any changes to the proposed concept plan which you won	uld like	e to se	e?		
8.	Do you currently reside within or outside of the proposed Plan area	?				
	Problem with constent toble.					
	Wells shall be not allowed	•				

	Comment Sneet									
Dat	te: July 18 <sup>th</sup> , 2011	Time: 6:00 - 8	:00 PM M	eeting Location: W	oodbeno	d Co	mmunit	у На	II	
	Name (Optional):									
					Agree			Disa	gree	
1. I	was given suitable	notice of the m	eeting date, t	time and location.	(5)	4	3	2	1	
2. 1	The information was	s made available	e in a clear ar	nd concise manner	(5)	4	3	2	1	
3. 1	was able to expres	s my concerns a	dequately.		5	4	(3)	2	1	
4.	am generally in sup	pport of the pro	posed amend	dment.	5	4	3	2	1	
ć	The concept plan, as any general comme	nts on this plan	first look at? I dis a	how the area may l	be develo	opeo	d. Do yo	u ha	ve .	
	6. Are there any planning considerations which you would like addressed?  — The access an Flaming Road Should at Most be mored  North Ao a 4-way stop knowed not be mored  — Water is a hose concern! As long as people cannot Tap into an already overtoaded water Supply—  7. Are there any changes to the proposed concept plan which you would like to see?  Yes, the fact that felf the Traffic will be trivelling on Flowing Road  where all the traffic from minimum 3 subdivisions drives & also some year large farm equipment moves on that road which has already proven hazarrhous in some cases—also the road is in poor repair, has no large road is in poor repair, has no some cases—also the road is in poor repair, has no large farm expected within or outside of the proposed Plan area?  I am across Fleming Road.									
-	Do you have any oth  The area  Ruch - Perkil  grice  mixing farm  me friction  preciete fa	is prime	faim / Should had bould eres) & " incomin seylees"	land and A				der		

D	Pate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Wo	oodben	d Com	munit	y Hall	<b>-</b>
	Name (Optional):			L		
		Agree			Disag	ree
1.	I was given suitable notice of the meeting date, time and location.	(E)	4	3	2	1
2.	The information was made available in a clear and concise manner	(5)	4	3	2	1
3,	I was able to express my concerns adequately.	(5)	4	3	2	1
4,,	I am generally in support of the proposed amendment.	(5)	4	3	2	1
5.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?	e deve	oped.	Do yo	u hav	е
6.	High was a figh grafe road of the standard of		OV	20a		
7.	Are there any changes to the proposed concept plan which you wou	ald like	to see	?		
8.	Do you currently reside within or outside of the proposed Plan area	?		v		£
9.	,		/	1.	4	( <sub>1</sub> .
	Would Be a good Developm	Kner	-1	41	A	P
	Orea small lots giving per	gele	a	C	og	N)

D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: We	odben	d Com	mun	ity Hal	l Ş
	Name (Optional):	Agran			Disa	graa
		Agree			Disa	
1.	I was given suitable notice of the meeting date, time and location.	(5)	4	3	2	1
2.	The information was made available in a clear and concise manner	(5)	4	3	2	1
3.	I was able to express my concerns adequately.	5	4	3	2	1
4.	I am generally in support of the proposed amendment.	5	4	3	2	1
5. 6.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?  Please move Hemmana Re The hill is very dangero  Are there any planning considerations which you would like address	DOC US				
7.	A the access Rd.  Are there any changes to the proposed concept plan which you would	ld like t	o see'	?		
8.	Do you currently reside within or outside of the proposed Plan area	_				
9.	Do you have any other comments or suggestions?	$\omega^{!}$				

## Comment Sheet

D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Wo	odben	d Con	nmui	nity Hall		
	Name (Optional):						
		Agree			Disag	ree	
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	(2)	1	
2.	The information was made available in a clear and concise manner	5	4	3	(2)	1	
3,	I was able to express my concerns adequately.	5	4	3	(2)	1	
4.	I am generally in support of the proposed amendment.	5	4	3	2	1	
5.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?  NOT URRY CREATIUE	e devel	oped	. Do	you have	2	
6.	Are there any planning considerations which you would like address  South Collactiva Sauce  Low Passine Gray Water of		() (Re	5.	KRV m	1/61	£.
7.	Are there any changes to the proposed concept plan which you would be the concept plan which you would						
8.	Do you currently reside within or outside of the proposed Plan area	?					

9. Do you have any other comments or suggestions?

#### Comment Sheet

Date: July 18<sup>th</sup>, 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall

Name (Optional):

		Agree		Disagree		
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1
2.	The information was made available in a clear and concise manner	5	4	3	Ø	1
3.	I was able to express my concerns adequately.	5	4	3	0	1
4.	I am generally in support of the proposed amendment.	5	4	3	2	<b>(1</b> )

5. The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan?

Excessive fraffic in 15e; Light Polution, loss of Good Agricultural

Land

6. Are there any planning considerations which you would like addressed?

Where is the county?

7. Are there any changes to the proposed concept plan which you would like to see?

more to a different address

8. Do you currently reside within or outside of the proposed Plan area?

9. Do you have any other comments or suggestions?

this isn't the City.

Da	ty Hall	
	Disagr	ee
		1
	2	
3.	2	1
ļ.	2	<b>①</b>
Ď.	ou have ナ,	ì.
5. 7.		
8.		
9.		
9.		

#### Comment Sheet

	Comment Sheet									
D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Woo	dber	ıd Comi	munit	y Hal	I				
	Name (Optional):	_								
Agree Disag										
L.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1				
2.	The information was made available in a clear and concise manner,	5	4	3	2					
3,	The information was made available in a clear and concise manner, which have used a clear presentation with lives able to express my concerns adequately.	ξα <sup>τ</sup> 5	Meet 4	339.	2	1				
4	I am generally in support of the proposed amendment.	5	4	3	2	1				
5. 6.	The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan?  People in the area live there because they do not want q lot of traffic and neighbours. That is why no small lots exist there presently.  Are there any planning considerations which you would like addressed?  Are there any planning considerations which you would like addressed?  That are during development theary equipment, tracks, etc) schools - where will everyone to to school?									
7.	Are there any changes to the proposed concept plan which you would too many lots in a small area - not given to influence on increase in traffic.	d like RN	to see? Sugh	1 11	10U	ght				
8.	Do you currently reside within or outside of the proposed Plan area?									
	within a mile of edge									

9. Do you have any other comments or suggestions?
was not notified of meeting - found out through friends of family. But still believe lam close enough that this affects me greatly. I travel on Fleming Rd daily for work affects me greatly. I travel on Fleming Rd daily for work.

Clive just south of woodbend Rd of Fleming Rd.

#### Comment Sheet

Date: July 18<sup>th</sup>, 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall

Name (Optional)

Agree Disagree

1. I was given suitable notice of the meeting date, time and location. 

The information was made available in a clear and concise manner 

Woodbend Community Hall

Agree Disagree

1. I was given suitable notice of the meeting date, time and location. 

1. I was given suitable notice of the meeting date, time and location. 

1. I was able to express my concerns adequately. 

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- 5. The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan?
- 6. Are there any planning considerations which you would like addressed?

4. I am generally in support of the proposed amendment.

Fleming Road upgrado-traffic will be Tripled

7. Are there any changes to the proposed concept plan which you would like to see?

not bearly.

8. Do you currently reside within or outside of the proposed Plan area?

hive in Fleming Park

9. Do you have any other comments or suggestions?

no.

	Comment Sheet										
D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Wo	odben	d Cor	nmuni	ty Hal	I					
	Name (Optional):										
		Agree			Disa	gree					
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1					
2.	The information was made available in a clear and concise manner	5	4	(3)	2	1					
3.	I was able to express my concerns adequately.			3							
4.	I am generally in support of the proposed amendment.	5	4	3	2	1					
5.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?  1 THINK IT SHOULD REMAIN AC										
6.	Are there any planning considerations which you would like address	ed?		-021	15	.DI					

- 6. Are there any planning considerations which you would like addressed?

  FLEMING ROAD IS NARROW THAS A DANGEROUS DITCH

  ACCESS SHOULD COME FROM WINTERBURN ROAD,
- 7. Are there any changes to the proposed concept plan which you would like to see?
- 8. Do you currently reside within or outside of the proposed Plan area?
- 9. Do you have any other comments or suggestions?

  THEY SHOULD BRING IN WATER FROM
  LINE

  E L SMITH
- MUST NOT HAVE WELLS IT WOOLD USE TUPEDO

#### Comment Sheet

Date: July 18<sup>th</sup>, 2011 Time: 6:00 - 8:00 PM Meeting Location: Woodbend Community Hall Name (Optional): \_ Agree Disagree 1. I was given suitable notice of the meeting date, time and location. 1 2. The information was made available in a clear and concise manner 3. I was able to express my concerns adequately. 4. I am generally in support of the proposed amendment. 5. The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan? 6. Are there any planning considerations which you would like addressed? FLEMING KOAD WIGRADED 7. Are there any changes to the proposed concept plan which you would like to see? 8. Do you currently reside within or outside of the proposed Plan area? WITH IN (FLEMING PARK)

9. Do you have any other comments or suggestions?

#### Comment Sheet

Date: July 18<sup>th</sup>, 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall

Name (Optional):

Agree Disagree

1. I was given suitable notice of the meeting date, time and location. 5 4 3 2 1

2. The information was made available in a clear and concise manner 5 4 3 2 1

3. I was able to express my concerns adequately. 5 4 3 2 1

4. I am generally in support of the proposed amendment. 5 4 3 2 1

- 5. The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan?
- 6. Are there any planning considerations which you would like addressed?
- 7. Are there any changes to the proposed concept plan which you would like to see?

  We would like to see the access

  road anto Fleming Road moved north.

  This would heep traffic from continuing

  8. Do you currently reside within or outside of the proposed Plan area?

  Yes. Outside in Sandy Ridge.
  - 9. Do you have any other comments or suggestions?

## **Comment Sheet**

Date: July 18<sup>th</sup>, 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall

	Name (Optional):					
		Agree			Disag	ree
1.	I was given suitable notice of the meeting date, time and location.	5	4	3	2	1
2.	The information was made available in a clear and concise manner	5	4	3	2	1
3.	I was able to express my concerns adequately.	5	4	3	2	1
4.	I am generally in support of the proposed amendment.	5	4	3	(2)	1
<ul><li>5.</li><li>6.</li></ul>	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?  TO DENK A POPULATION FOR THE AREA.  Are there any planning considerations which you would like address.		oped	l. Do yo	ou hav	e
7.	Are there any changes to the proposed concept plan which you would be a supplied of the proposed concept plan which you would be a supplied to the supplied to	ıld like t	o se	e?		
8.	Do you currently reside within or outside of the proposed Plan area	?				
9.	Do you have any other comments or suggestions?  TRAFFIC WILL NOO TO CHERAKE BOTH FROM	ninll	+6	lok	BN	Ros

## **Comment Sheet**

D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Wo	odbe	nd Com	munit	у На	fl.				
	Name (Optional):									
		Agre	e		Disagree					
1.	I was given suitable notice of the meeting date, time and location.	5	(4)	3	2	1				
2.	The information was made available in a clear and concise manner	5	4 (	3	2	1				
3.	I was able to express my concerns adequately.	5	4	3	2	1				
4.	I am generally in support of the proposed amendment.	5	4	3	2	1				
5. U	5. The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan? I don't like the wells concept, or the + intersection at Landy Ridge states									
	Are there any planning considerations which you would like address	ed?								
7.	Are there any changes to the proposed concept plan which you wou	ıld lik	e to seeî	?						
8.	Do you currently reside within or outside of the proposed Plan area	?								

9. Do you have any other comments or suggestions?

Later

D	ate: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall									
		Name (Optional):		-		7				
				Agree			Disa	gree		
1.	I was given suitable	notice of the meeting da	te, time and location.	5	4	3	2	1		
2.	The information wa	s made available in a cle	ar and concise manner	(5)	4	3	2	1		
3.	I was able to expres	ss my concerns adequate	ly.	5	4	3	2	1		
4.	I am generally in su	pport of the proposed ar	nendment.	5	4	3	2	1		
5	The concept plan, as illustrated, is a first look at how the area may be developed. Do you have any general comments on this plan?  We prefer for this (and to remain as gricultual (and).									
6.	6. Are there any planning considerations which you would like addressed?  Prefer land to remain agricultural land.									
7,	Are there any chan	ges to the proposed con-	cept plan which you wo	uld like t	o see	?				
	Weld pr	efer the pla	n to be terr	nina	Ked	1				
8.	Do you currently re	eside within or outside of Jittuin the p	the proposed Plan area	i? ovea	. ,					
9.	Do you have any o	ther comments or sugges	stions?							
	Please	keep us info								
		780 5	045102./2	6106	Two	o R	d	514		

Date: July 18 <sup>th</sup> , 2011 Time: 6:00 – 8:00 PM Meeting Location: Woodbend Community Hall						
	Name (Optional):		Ę			
		Agree	9		Disagr	re
1.	I was given suitable notice of the meeting date, time and location.	(5)	4	3	2	1
2.	The information was made available in a clear and concise manner	5	(4)	3		
3.	I was able to express my concerns adequately.	5	(4)			
4	I am generally in support of the proposed amendment.	5	4	3	(2)	-
5.	The concept plan, as illustrated, is a first look at how the area may be any general comments on this plan?	e deve	eloped.	Doy	ou have	ž
6.	Are there any planning considerations which you would like address (sas line) water table?	ed?				
7,,	Are there any changes to the proposed concept plan which you would proper by him.	ıld like	to see	?		
8.	Do you currently reside within or outside of the proposed Plan area	?				
9,		<b>Σ</b> ζ	60	C	use	-