

BY-LAW NUMBER 2009/18

BY-LAW NO. 2009/18 is a by-law of the County of Wetaskiwin No. 10 in the Province of Alberta, to authorize the adoption of an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of the area known as Ruby Hills NW 32-46-24-W4M in accordance with Section 633 of the Municipal Government Act, Chapter M-26.1, Revised Statutes of Alberta 2000, and amendments thereto.

WHEREAS: at the requirements of County Council, as per Policy 6606, an Area Structure Plan has been prepared for NW 32-46-24-W4M.

AND WHEREAS: the proposed Area Structure Plan has been widely circulated and discussed within the County pursuant to Section 230, 606(1), and 633(1) of the Municipal Government Act, 2000, Chapter M-26.1, and amendments thereto.

NOW THEREFORE: the County of Wetaskiwin No. 10, duly assembled, hereby enacts as follows:


- (a) The document attached to this By-law as "Appendix A", together with accompanying maps, is hereby adopted as the *"Ruby Hills NW 32-46-24-W4M"*.

2. This by-law comes into effect on the date of third reading.

READ: A First time this 9th day of April A.D., 2009

READ: A Second time this 9th day of April A.D., 2009

READ: A Third time and finally passed this 9th day of April A.D., 2009



REEVE



SECRETARY-TREASURER

**RUBY HILLS COUNTRY ESTATES
COUNTY OF WETASKIWIN No 10
AREA STRUCTURE PLAN**

Revision 2 – April 1, 2009



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**RUBY HILLS COUNTRY ESTATES
COUNTY OF WETASKIWIN No 10
AREA STRUCTURE PLAN**

Revision 2 – April 1, 2009

Prepared by
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PROJECT No 08-001

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	
1. INTRODUCTION	
2. CONCERNS AND COMMENTS OVER REVISION 0 OF THE AREA STRUCTURE PLAN	
2.1. County of Wetaskiwin concerns/comments	
2.2. West Central Planning Agency concerns/comments	
2.3. Alberta Environmental concerns/comments	
2.4. Wetaskiwin Community Health Center concerns/comments	
2.5. Energy Resources and Conservation Board concerns/comments	
2.6. Alberta Transportation concerns/comments	
3. PROPOSED DEVELOPMENT	
3.1. EXISTING SITE FEATURES	
3.2. AMMENDMENT TO THE COUNTRY RESIDENTIAL DISTRICT ZONING BY-LAW	
3.3. TENTATIVE SUBDIVISION ALYOUT	
3.4. GEOTECHNICAL INVESTIGATIONS	
3.5. WATER SUPPLY SYSTEM	
3.6. SEWAGE DISPOSAL SYSTEM	
3.7. ROADS	
3.8. FIRE PROTECTION	
3.9. STORMWATER MANAGEMENT PLAN	
3.10. TRAFIC IMPACT STUDY	
3.11. ARCHAEOLOGICAL AND HISTORICAL ASSESSMENT	
3.12. ENVIRONMENTAL AND MUNICIPAL RESERVES	
3.13. RESTRICTIVE COVENANTS	
3.14. PUBLIC INPUT	
APPENDIX - A	SUPPORTING DOCUMENTS
APPENDIX - C	GEOTECHNICAL INVESTIGATIONS
APPENDIX - D	GROUNDWATER INVESTIGATIONS
APPENDIX - E	STORMWATER MANAGEMENT PLAN
APPENDIX - F	BIGSTONE CREKK FLOODPLAIN DELINEATION
APPENDIX - G	TRAFFIC IMPACT STUDY

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

1. INTRODUCTION

The present document is an Area Structure Plan (ASP) for the proposed development of Ruby Hills Country Estates located in the County of Wetaskiwin No 10. The site is located in W 32-46-24-W4M, Plan 042394, Block 2, Lot 1 and SE 32-46-24-W4M except Plan 0728287

This revision 2 of the Area Structure Plan is a revision of the previous revision 1. The current revision entertains the concerns and comments presented for Rev 0 of ASP by the following authorities:

County of Wetaskiwin No 10;

West Central Planning Agency;

Alberta Environment;

Alberta Transportation;

Energy Resources Conservation Board; and

Wetaskiwin Community Health Center

The comments and concerns of these authorities are included in Appendix A of the document.

The Area Structure Plan is a broad area plan that specifies the development layout and technical considerations for the subject development site in the immediate and longer term future. The ASP will consider the effects of that development on surrounding lands and the relationship of the proposed development with any existing adjacent and known proposed and/or approved development in the area.

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

2. CONCERNS AND COMMENTS OVER REVISION 0 OF THE AREA STRUCTURE PLAN

Revision 0 of the Area Structure Plan was presented to the various government agencies for their concerns /comments. These concerns/comments are included in Appendix A. The following tables list the concerns/comments and their solutions.

2.1. County of Wetaskiwin concerns/comments

Concerns/Comments	Solution
1. Protect Ganske Subdivision from noise and dust.	A berm-screen will be constructed along Ruby Hills Road between the proposed subdivision and Ganske subdivision.
2. Increase lot dimension ratio length/width	The ratio was increased
3. Show lot setbacks	Lot setbacks are shown on drawings
4. Lot size should be sufficient to support on-site sewage disposal system	The lots will have sufficient areas to support on-site sewage disposal system.
5. Stormwater facilities (utility R/W and	The stormwater facilities will be located

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

retention ponds) should be located outside the Environmental and Municipal Reserves	outside the Environmental and Municipal Reserves.
6. Widen the Range Road 244 at the site entrance	The Range Road 244 will be widened at the subdivision entrance at the detail design phase.
7. Minimize trees removal specifically along the Bigstone Creek	<p>The area along Bigstone Creek is set aside as Environmental and Municipal Reserves and all trees will be conserved.</p> <p>A covenant will be included to remove only the necessary trees within lots for only building purposes.</p>
8. Provide fire truck access and dry hydrant to pond containing the fire protection reserve	The fire protection reserve will be included in Pond A, located at the entrance to the site with easy access. The pond will be equipped with dry hydrant.

2.2. West Central Planning Agency concerns/comments

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

Concerns/Comments	Solution
1. Extend road to Ganske road as an emergency exit.	The Ruby Hills road will be extended to Ganske Road as an emergency exit for the Ruby Hills subdivision.
2. Reserve enough land between the ravine and the lots for walking trail and County Maintenance crew's uses.	The area along Bigstone Creek is set aside as Environmental and Municipal Reserves. There will be enough land for walking trail and County maintenance crews.
3. Extend internal road south to quarter section line for possible future connections to future development.	The road will be extended.
4. Eliminate Y intersection with Range Road 244 and Ruby Hills Road. Use 6 m corners cuts	The Rage Road 244 and Ruby Hills Road intersection will be provided with 6 m cuts.

2.3. Alberta Environment concerns/comments

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

Concerns/Comments	Solution
1. Permanent stormwater facilities should be constructed above the 1/100 year floodplain level	The permanent stormwater facilities will be located above the 1/100 year floodplain level.
2. AENV recommends that the 1/100 year flood plain be mapped	The 1/100 year floodplain is mapped.

2.4. Wetaskiwin Community Health Center concerns/comments

Concerns/Comments	Solution
1. Individual water well shall be located, constructed and protected as per applicable codes	The water well will be located, constructed and protected as per codes by the future lot's owner.
2. On-site sewage disposal system shall be engineered, constructed and maintained as per applicable codes	The on-site sewage disposal system will be engineered, constructed and maintained as per applicable codes by the

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

	future lot's owner.
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2.5. Energy Resources and Conservation Board concerns/comments

Concerns/Comments	Solution
1. Provide 100 m setback from gas well	100 m setback is provided

2.6. Alberta Transportation

Concerns/Comments	Solution
1. Traffic Impact Assessment is required	A Traffic Impact Assessment was prepared.

3. PROPOSED DEVELOPMENT

3.1. EXISTING SITE FEATURES

The proposed Ruby Hills Country Estates is located in the County of Wetaskiwin No 10; in W 32-46-24-W4M, Plan 042394, Block 2, Lot 2 (80 acres) and SE ¼ 32-46-24-W4M except Plan 0728287 (123 acres) as shown in Figure 08-001-01. The proposed development is located south of Township Road 470, west of Range Road 244, and east of Bigstone Creek.

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

3.2. AMMENDMENT TO THE COUNTRY RESIDENTIAL DISTRICT ZONING BY-LAW

The regulation requiring no more than 24 lots per quarter section (used in revision 0 of the Area Structure Plan) is no longer in place. The Country Residential Zoning has been updated by an Amended By-Law 2008/08. The By-Law covers the following:

1. Parcel Size – Maximum 2.02 ha/5 acres; Minimum 0.40 ha/1 acre
2. Setbacks – Front yard: 8m; Side yard 5 m; Rear yard 10m.
3. Site suitability for water supply and sewage disposal system are required.
4. Density restriction shall be at the discretion of Council based on factors including tests listed in article 3.
5. The admissible number of lots should be at the discretion of the Council and limited to the availability of water supply and sewage disposal system

3.3. TENTATIVE SUBDIVISION LAYOUT

The proposed tentative subdivision layout is shown in Drawings 08-001-02. It takes into consideration the concerns/comments received for revision 0 as well as the amendment to the Country Residential District Bylaw.

The number of lots is limited the availability of groundwater supply: 71 lots. The areas of theses lots as listed below:

Lot No	AREA	
	Hectare	Acre
1	0.86	2.13
2	0.73	1.80

Lot No	AREA	
	Hectare	Acre
38	0.49	1.46
39	0.59	1.46

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

3	0.99	2.45
4	1.08	2.67
5	0.43	1.06
6	0.43	1.06
7	0.7	1.73
8	0.82	2.03
9	0.81	2.00
10	0.65	1.61
11	0.76	1.88
12	0.78	1.93
13	0.87	2.15
14	0.50	1.23
15	0.58	1.43
16	0.48	1.19
17	0.56	1.38
18	0.89	2.20
19	0.56	1.38
20	0.59	1.46
21	0.47	1.16
22	0.49	1.21
23	0.56	1.38
24	0.69	1.70
25	0.69	1.70
26	0.96	2.37
27	0.80	1.98
28	0.68	1.68
29	0.82	2.03
30	0.74	1.83
31	0.85	2.10

40	0.49	1.21
41	0.43	1.06
42	0.46	1.10
43	0.52	1.28
44	0.52	1.28
45	0.52	1.28
46	0.52	1.28
47	1.10	2.72
48	1.12	2.77
49	1.08	2.67
50	1.27	3.14
51	1.18	2.92
52	1.05	2.59
53	0.84	2.07
54	1.38	3.41
55	1.09	2.69
56	0.65	1.61
57	0.65	1.61
58	0.62	1.53
59	1.13	2.79
60	0.88	2.17
61	1.07	2.64
62	1.22	3.01
63	1.30	3.21
64	1.20	2.96
65	0.92	2.27
66	0.93	2.30
67	0.94	2.32
68	2.21	3.00

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

32	0.83	2.05
33	0.83	2.05
34	0.67	1.66
35	0.82	2.03
36	0.44	1.08
37	0.49	1.21

69	1.13	2.79
70	0.59	1.46
71	0.54	1.31
Utility A	0.25	0.61
Utility B	0.24	0.59
Utility C	0.13	0.32

The lots entitled 'Utility A', 'Utility B' and 'Utility C'; are lots provided for stormwater detention ponds.

The tentative subdivision layout took into consideration all the concerns/comments received. It contains the following revisions:

1. A berm-screen will be constructed along the Ruby Hills Road between Ruby Hills subdivision and Ganske subdivision;
2. The lots length/width ratios were increased in order to produce a feasible building site respecting the setbacks requirements. We showed the setbacks envelope for each lot. The building site envelope for each lot meets the regulatory requirements for the construction of a water well and on-site sewage disposal system and a potential second drain-field if needed.
3. The Stormwater retention ponds are located above the flood the 1/100 floodplain level.
4. The Ruby Hills Road will be extended to Ganske Subdivision for emergency use.

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

5. All lots are located outside the 1/100 year floodplain zone.

The gas well (ID 00/08-32-046-24W4/0), located in lot No 5, is licensed to A1FL0 Rockyview Energy. It was drilled on 19 September 2004 and was plugged and abandoned on 3 May, 2005 (EUB completion summary report – Appendix “A”). The pipeline right of way as cancelled on January, 2007 (Cancellation letter (Appendix “A”). The well site plan is included in Appendix “A”.

3.4. GEOTECHNICAL INVESTIGATIONS

A geotechnical site investigation was carried out by Shelby Engineering Ltd on February 2008. A copy of the report is included in Appendix ‘C’.

The subsurface conditions were examined through field investigations undertaken on November 16 to November 19, 2008 by drilling 20 test holes at the locations shown in Drawings No 08-001-03 (Appendix III’ of the report)

The general stratigraphy encountered at the test-hole locations was comprised of an organic layer of topsoil underlain by interbedded clay, silt and/or sand over clay till. The extent and consistency of the various soil strata evidenced at test hole locations will vary between test-holes and in areas of the site that have not been explored.

The soil conditions encountered across the site varied considerably from moderate permeable clay till to highly pervious sand. The study recommends that the site for waste disposal system will have to be determined on a lot specific basis.

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

3.5. WATER SUPPLY SYSTEM

A Ground Water Availability study was undertaken by Hydrogeological Consultants. A copy of the report (dated March 2008) is included in Appendix 'D'. An amendment to the report (dated September 2008) is also included in the same Appendix.

The groundwater supply is available from an upper bedrock aquifer in the Upper Horseshoe Canyon Formation. The use of the groundwater is not expected to adversely affect any existing nearby water well users or the aquifer.

The study shows that there is sufficient underground water to supply the 71 lots with a daily flow of 3.4 m³/d/lot without adversely affect any existing nearby water well users or the aquifer.

The analysis of the water shows that the pH, turbidity, color and the concentrations of TDS, sodium, fluoride and iron in the groundwater exceed the Aesthetic Concentration recommended by the GCDWQ. The water quality of groundwater data base from existing 48 water wells is similar to that of the newly drilled test holes and are classified as sodium+potassium+bicarbonate-type waters. This type of water is not harmful for health.

3.6. SEWAGE DISPOSAL SYSTEM

A field investigation was undertaken by Shelby Engineering Ltd on November 16, and 19 to investigate the sub-surface conditions for the roadway design and sub-surface soil nature to investigate the feasibility use of on-site sewage treatment / disposal system. A copy of the investigation report is included in Appendix C.

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

Alberta Environment guidelines require moderately permeable soils with soil percolation rates between 2.0 min/cm and 23.6 min/cm and low water table for the efficient operation of disposal fields. A low water table is defined as one where the water table is more than 1.8 meters below existing grade during the frost free season until the end of August and below 2.4 meters for the remainder of the year.

An elevated or high groundwater condition has been evidenced throughout the south east of the development. Soil conditions encountered across the varied considerably from moderately permeable clay till to highly pervious sand. Therefore the feasibility of an on-site wastewater treatment/disposal system such as septic tanks and treatment mounds should be determined on a lot specific basis.

Where ground conditions are not suitable for a conventional disposal field a mound treatment may be used. A key requirement to building a successful mound is the use of a high quality, clean sand in the sand layer and the proper soil for the berms and cover of the mound.

The roadway construction for the south east area of the site requires that existing ground be elevated for both the roadway and adjacent lots. This increases the separation between the groundwater and the ground final grade which makes the on-site wastewater treatment/disposal feasible.

3.7. ROADS

The internal roadway will be rural cross section as shown in Drawing No 08-001-05 (Appendix III) that will be constructed in accordance with the standards and requirements of the County. The roadway will have a 20 meters right of way and 7.3 meter

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

wide gravel road. An additional 5 meter easement utility right of way will be provided at all front lots. The proposed roadway will be designed and constructed as per County of Wetaskiwin Standards.

3.8. FIRE PROTECTION

An adequate water volume for fire protection will be provided in the stormwater detention Pond 'A'.

Water volume per lot: $15.14 \text{ m}^3/\text{lot}$ (4,000 gallons per lot).

Water Volume provided: $71 \times 15.14 = 1,075 \text{ m}^3$.

The stormwater detention Pond 'A' will have access facility for fire truck and a dry fire hydrant.

Refer to the Stormwater Management Plan report for further details.

3.9. STORMWATER MANAGEMENT PLAN

A copy of the Stormwater Management Plan report is included in Appendix 'E'. A copy of the report was sent to Alberta Environment (Mr. Andrew Patton, Red Deer Telephone (403) 340 7052).

The preparation of the Stormwater Management Plan required the delineation of the Bigstone Creek Floodplain. The computer modeling was carried out by SAMENG INC. A copy of the report is included in Appendix 'F'.

3.10. TRAFFIC IMPACT STUDY

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

A Traffic Impact Assessment study was carried out by the firm Bunt & Associates. A copy of the report is included in Appendix 'G'. A copy of the report was sent to Alberta Transportation for their comments and reviews. Alberta Transportation accepted the report and the recommendation outlined in the report. A copy of the acceptance letter is included in Appendix 'G'.

The study objective is to assess the traffic impacts of the proposed subdivision on the following adjacent roadway network:

1. Highway 2A & Township Road 470 intersection;
2. Township Road 470 & Range Road 244 intersection;
3. Township Road 470 & Range Road 243; and
4. Range Road 244 between Township Road 470 and Ruby Hills Road (entrance to the proposed subdivision).

The adjacent roadway networks were evaluated for the present conditions and for the future time horizons: 2012 (corresponding to the subdivision s year of build-up) and 2029 (corresponding to 20 years after the commencement of the subdivision).

Upon full occupancy of the proposed subdivision, it is anticipated that the daily traffic count on Range Road 244 in the vicinity of the proposed subdivision will increase from 90 vpd (vehicle per day) to between 500 and 600 vpd in 2012. The study recommends either a dust abatement program or the paving of Range Road 244 between the Twp Road 470 and the entrance to the proposed development.

The followings are the study recommended upgrades for the adjacent roadway network:

1. The upgrade of Highway 2A & Township Road 470 intersection from type III to Type IV;
2. The illumination of the Highway 2A & Township Road 570 intersection; and
3. The pavement of Range Road 244 between the Township Road 470 and Ruby Hills Road (entrance to Ruby Hills Subdivision).

Although the recommended upgrades in article 1) and 2) are required because of the combination of the natural traffic growth and the development of the proposed subdivision, we should expect that the upgrades cost be shared between Alberta Transportation and the Developer. However, because Alberta Transportation has no plan to do an upgrade in the near future the total cost of the upgrades will be paid by the Developer.

Because the future developers along the two (2) quarter section will benefit from the pavement of Range Road 244, the Developer of Ruby Hills proposes to pay the total cost of the pavement with endeavor to assist in the cost from the future developer of adjacent quarter sections benefiting from the paved Range Road.

3.11. ARCHAEOLOGICAL AND HISTORICAL ASSESSMENT

Alberta Culture and Community Spirit confirmed by a letter dated September 4, 2008 that a Historic Resources Impact Assessment is not required for the site.

3.12. ENVIRONMENTAL AND MUNICIPAL RESERVES

The area of the developed area (the total area of the 71 lots) is 56.53 hectares (138 acres).

RUBBY HILLS COUNTRY ESTATES

County of Wetaskiwin No 10

Area Structure Plan

Revision 1 – December 30, 2008

The provision required for Environmental Reserve is 5.65 hectares (13.8 acres) (10% of the developed area).

The provision required for the Municipal Reserve is 5.09 hectares $((56.53 - 5.653) \times 0.10)$

The total provision for the Environmental & Municipal Reserve is 10.74 hectares.

The shoreline area of 17.98 hectares is set aside as an Environmental and Municipal Reserve. This area is the 1/100 year floodplain zone of Bigstone Creek.

3.13. RESTRICTIVE COVENANTS

A copy of 'The Restrictive Covenants as to the use of Land' that was prepared for revision 0 is included in Appendix A. Additional restrictive covenants will be added concerning the pavement of the road and the tree removal.

3.14. PUBLIC INPUT

The developer held a public consultation and invited the neighbours of the proposed development to obtain their comments and inputs for the proposed Ruby Hills Country Subdivision. The list of attendants and their comments are included in Appendix 'A'.

All the concerns of the public consultation attendants were addressed in the Area Structure Plan.