

## **BY-LAW NUMBER 2008/20**

BY-LAW NO. 2008/20 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 Charaden Meadows 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, an Area Structure Plan has been prepared for NE 24-47-28-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 "*Charaden Meadows, NE 24-47-28-W4M*".
2. This by-law comes into effect on the date of third reading.

READ: A First time this 10<sup>th</sup> day of April A.D., 2008.

READ: A Second time this 10<sup>th</sup> day of April A.D., 2008.

READ: A Third time and finally passed this 10<sup>th</sup> day of April A.D., 2008.

  
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REEVE

  
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SECRETARY-TREASURER

**Area Structure Plan for  
Charaden Meadows**

By-Law 2008/20  
Appendix A

NE 24-47-28-W4

**County of Wetaskiwin**

Owners:

**Denis and Chari Laveck**

Site 9 Box 15  
RR2 Thorsby, Alberta T0C 2P0

## **Introduction**

Denis and Chari Laveck own approximately 145 acres in NE 24-47-28-4 near Mulhurst in the County of Wetaskiwin, and they wish to subdivide the land into 32 lots, to be zoned Country Residential. The development will be known as Charaden Meadows. As part of the rezoning application, and as required by the County, they have prepared this area structure plan (ASP) which describes the location of the land, its physical characteristics, neighbouring land uses, proposed layout, and required infrastructure.

## **Location**

Map 1 shows that the subject land lies just outside the Pigeon Lake drainage basin, but close enough to Mulhurst Bay and Wizard Lake to be attractive to people who are seeking a recreational retreat. An added attraction is that Highway 616 is only half a mile to the west.

## **Constraints on development**

The County of Wetaskiwin operates sewage treatment and storage lagoons on NW 13-47-28-W4, and may in future expand the lagoons into NE 13. This is 800 metres from the south boundary of the Laveck land. Provincial regulations require a 300 metre setback between lagoons and residential parcels, so the lagoons do not limit development on the subject property.

The treated effluent from the lagoons is released into a roadside ditch on the west side of RR 280. Provincial regulations do not require any setback between this ditch and residences.

There is a cattle operation on SE 26-47-28-W4 with less than 300 head. This operation is more than a half a mile away and it is not a feed lot.

There are several inactive landfills in the Mulhurst area, plus an active transfer station in NW 7-47-27-4, but all are a considerable distance away, and do not restrict development of the Laveck land.

The closest airports are Edmonton International and Wetaskiwin Regional, but they are far enough away that flight operations will not limit development in the Mulhurst area. Under Transport Canada regulations, this is uncontrolled air space.

A former owner of the subject land at one time constructed a private runway on the property, and this can still be seen on air photographs, but it has not been used for many years.

There is a lot of oil and gas activity in the area, with numerous pipelines converging on the Bonnie Glen gas plant in SW 17-47-27-4, three km to the south-east of the Laveck property. Some of these lines carry sour gas. However, the AEUB has confirmed that there are no sour installations on the Laveck land, or close enough to restrict development (AEUB report to the County of Wetaskiwin received 4 October 2007). There are no pipelines crossing the property.

AEUB records held by West Central Planning Agency show that there are no abandoned oil or gas wells on the property. There is an abandoned well at the junction of Highway 616 and undeveloped TR 474, and this will have to be dealt with during construction of the township road.

The whole area is underlain by coal, and the seam was worked in the past where it outcropped at Wizard Lake, but AEUB coal mine records in the possession of WCPA show no workings south of TR 480, two miles north of the Laveck land.

The summer villages of Argentia Beach and Silver Beach are about three km away, and the Leduc County boundary is about four km away, and the proposed development will have no direct impact on them.

### **Use of surrounding lands**

The land to the north (SW 20-47-27-4 and SE and SW 25-47-28-4) is mostly tree covered, and is used as summer pasture. Because TR 474 is not built, and RR 280 is not built north of TR 474, the renters access the land from further north.

The quarter to the west (NW 24-47-28-4) is tree covered adjacent to the Laveck land. The cleared parts are used for hay and as a golf driving range.

The quarter to the south-west (SW 24) is also mostly tree covered, with about 40 acres in grass at the north end.

The quarter to the south (SE 24) is a mixture of trees and hay land.

The two quarters east of RR 280 (SE and SW 19-47-27-4) are in agricultural use.

The only multi-lot residential subdivision within a mile of the Laveck property is the Staroba development in NE 23-47-28-4, Plan 072 8317.

## **Present use of the Laveck land**

A fifteen acre parcel has been subdivided from NE 24. This is owned by a third party and contains a mobile home and some outbuildings.

The Laveck property contains the owners' home and yard site, accessed from RR 280. Most of the remainder of the land carries a light tree cover, primarily poplar and birch, with willow in the lower areas. This is illustrated in a recent air photo reproduced here as Map 2.

As noted above, the former airstrip is disused and is growing back into natural vegetation.

There is no oil or gas activity on the property.

To the best of the owners' knowledge, the land has never been used for any activity which might have contaminated the soil or groundwater, or caused any hazardous condition.

## **Soil quality**

The entire quarter is rated 3s by the Canada Land inventory. The County's detailed assessment sheets show the cleared land rated at 37% and the tree covered land rated at 12%. The soil is grey wooded, with a clay base, and with large number of stones. This makes cultivation difficult.

The County normally tries to preserve land assessed at more than 30% for agriculture (MDP, section 6.2), but exceptions are frequently made in areas of high demand around lakes.

The soil on the subject quarter is comparable with that at Pigeon Lake Haven (one mile west), Lakeland Estates (one mile south-west) and the recently approved Staroba subdivision (half a mile west).

## **Historical and archaeological resources**

The provincial department responsible for historical and archaeological resource management has ruled that, because the land has previously been disturbed, there is low potential to encounter historical resources, so no historical resource impact assessment is required on the property. Their letter is attached.

## **Site characteristics**

UMA Engineering was commissioned to prepare a contour map of the property from recent air photography. Their report was in the form of a 3D Autocad file. This has been converted to paper and is shown on Map 3. It shows that the land is highest at the south

end, falling towards the north at a gradient of about 3%. This provides good surface drainage, but is gentle enough that roads can be built directly up and down the slope without exceeding the County's maximum allowable gradients.

Despite the good surface drainage, there is evidence of a high water table in many areas. Details are given in the report by Parkland Geo, their project RD 1619, dated October 2005, which has been given to the County under separate cover. High water tables can create difficulties for buildings and sewer systems. Alberta Environment recommends that a residential lot should ideally contain a building site two metres or more above the standing water table, but they recognize that 1.5 metres is sufficient if no basements are installed. Many of the proposed lots fail that test.

The developers intend to deal with this in three ways.

*Dewatering:* Experience in many rural subdivisions has shown that the construction of roads and ditches will often lower the water table significantly. The developers therefore intend to drill new test holes after the roads and ditches have been built. They invite the County to make this a condition of subdivision approval. Lots then found to have a water table below two metres can be marketed with no restrictions.

*Development agreement:* Lots with a water table between 1.5 and two metres below ground will be caveated, through a development agreement, to warn buyers that they may not be able to build a basement. This has been done in several County of Wetaskiwin subdivisions.

*Filling:* If tests show that some lots still have water tables closer than 1.5 metres to the surface, the developers will fill the land, under the supervision of a professional engineer, to create a building site with an elevation at least 1.5 metres above water table. Again, this has been done in several County of Wetaskiwin subdivisions, most recently in RW/06/24 at Westeros.

## **Proposed design**

Charaden Meadows will have 32 privately owned lots, as shown on Map 4. The range of lot sizes is as follows:

One to two acres	25 lots
Three to five acres	4 lots
Ten acres	2 lots
27 acres (Laveck home)	1 lot

All lots will be served by an internal road system built on a 30 metre right of way to allow for deeper ditches if that is necessary to lower the water table. These roads allow for future connections to the quarters to the south and west.

At present, the only road built to the property is RR 280. It is not acceptable to have a single road access to a multi-lot residential subdivision, so the developers will construct TR 474 from their land to Highway 616. By their letter of 5 September 2007 (Lee Bowman to David Blades), Alberta Infrastructure and Transportation "offer no objections in principle" subject to preparation of a traffic impact assessment (TIA) and the construction of highway improvements. In response to this request, the developers

engaged EXH Engineering Services to prepare a TIA. EXH's report recommends a "Type IIc" intersection, and says that right hand turning lanes are not required for the projected volume of traffic.

The developers will therefore construct the following at their own expense and to the standards of the road authorities.

1. *A Type IIc intersection where TR 474 meets Highway 616.* This intersection will be paved.
2. *TR 474 from Highway 616 to the north entrance to the subdivision.* This will have a gravel top, but will be designed and built so that it can be paved later, if further development in the area justifies the higher standard. The road will be built on the existing 20 metre right of way. It should be widened to 30 metres if and when the adjacent quarters are subdivided.
- 3, *All internal roads and approaches.* The roads will be on 30 metre right of way to allow room for utilities, and again will be built with a gravel top capable of taking pavement at a later date.

The developers will also pay \$2,000 per lot as a contribution to the improvement of off-site roads. This is required for all County of Wetaskiwin multi-lot subdivisions.

Because it is closer to pavement, TR 474 is seen as the primary access to Charaden Meadows. RR 280 is not intended to be the main access to the subdivision. It should also be noted that widening RR 280 will be difficult because of the outfall ditch on the west side of the road in Plan 892 1455. However, if the County does require that RR 280 be upgraded, the developers request the \$2,000 per lot levy be credited against the cost of upgrading.

### **Future cost recovery from third parties**

It is possible that once TR 474 is built, owners of other land will use it to access other future residential subdivisions. It is requested that the County insert a clause in the subdivision agreement under which they will "endeavour to assist" the Lavecks to recover part of their sunk cost from other developers who benefit from their investment.

### **Municipal Reserves**

People who live on large rural lots do not need active-use parks and play space in the same way that people on smaller lots need them. The owner of an acre-plus lot can build his own tennis court or putting green. For that reason, no central park is proposed in Charaden Meadows. Instead, land will be provided for walking trails. There will be a five metre strip of municipal reserve along the west and south sides of the subdivision, between some lots, and around the existing 15 acre lot to act as a trail and buffer strip. The remainder of the 10% MR will be two large blocks, about 75 metres in width, along the entire north side of the property. This is the lowest part of the quarter, so it probably acts as a groundwater recharge area, and that function will be supported by retaining the tree cover.

## **Controls on Building Quality and Land Use**

Country Residential zoning allows a number of non-residential land uses (such as home businesses), and a wide range of building styles and quality. The developers note that this has given rise to problems in some other subdivisions. They will therefore register restrictive covenants on the titles of all lots, setting out standards for building size, quality, and maintenance, limiting livestock, forbidding the use of the land or buildings for commercial uses, and setting requiring proper maintenance of buildings and land.

Because the County will not be a party to these covenants, it will not be expected or required to enforce them; that will be done by individual lot owners through civil action.

## **Water Supply**

Each of the proposed lots will have an individual well. A report on the aquifer has been prepared by Jim Touw, P. Geol., of HCL Hydrogeological Consultants Ltd (their file 07-203.00). It confirms that there is sufficient groundwater to supply the proposed lots without depleting the supply to the existing users in the area. A copy of the consultant's report has been forwarded to the County under separate cover.

## **Sewage Treatment**

The proposed development is only half a mile away from the Mulhurst lagoon, so at first sight it might seem reasonable to ask that the proposed lots be connected to the Mulhurst sewer system instead of using individual sewage systems. However, there are strong arguments against requiring such hook-ups.

First, the County's policy is to require municipal sewer service or sealed pump-out tanks only for lots of less than one acre, and on land in hamlets, or which drains into Pigeon or Buck Lakes. The proposed lots are well over an acre in size, and the land drains away from Pigeon Lake, so the policy does not apply to them.

Second, it is not economically possible to provide sewer service to the lots. A gathering system would require almost 2,000 metres of pipe on site, plus a force main along 2,800 metres of road, to reach the lagoon site. At present prices of \$400 per linear metre, the line alone would cost just under two million dollars, plus the cost of the pumps. That cost cannot be supported by just 32 lots.

If it is granted that individual systems are the only economic way of dealing with waste water, there are three ways this can be done.

The simplest is to install buried field systems. Provincial regulations allow this on lots of 1,850 square metres (about half an acre) or more, and the proposed lots are at least three times that minimum.

If the water table is too close to the ground, field systems will not work properly, but in such conditions the *Alberta Private Sewer Systems Standard of Practice* allows above-ground evaporation mounds. An extract from the manual is attached. Some site work on this alternative has been undertaken by Parkland Geo, and their report has been

submitted to the County under separate cover. Evaporation mounds have been used in Strathcona County and other places for many years.

The third option is to install sealed holding tanks, and have the waste water trucked to the Mulhurst lagoons for treatment and disposal. Any lots having effluent hauled to Mulhurst will be subject to an off-site levy of \$2,034 when a development permit is issued for that lot.

In future, after Charaden Meadows is developed, it is possible that other land in the area will be subdivided into small lots. Sufficient density of development might justify a piped sewer system, and that system might involve a line passing close to or even through Charaden Meadows. In that case lots in Charaden Meadows might connect to the system. Holding tanks should therefore be located between the house and the road to facilitate connection. This should be caveated on the titles of the lots by the County at the time of subdivision.

### **Storm Water Management**

Storm water will be diverted into roadside ditches, thence northwards across TR 474, and from there it will follow the same course as at present.

Alberta Environment requires that the intensity of storm water flows leaving a site be no higher after development than before. Because of the size of the lots in Charaden Meadows, most of the land will remain in grass and trees, so storm water runoff is not expected to be significantly higher after the development, and a detention pond will probably not be necessary. However, an engineering analysis will be submitted with the subdivision application, and if required, a pond will be constructed. The most likely location is shown on Map 4. It is on a municipal reserve parcel, but the use of reserve can be justified by the recreational value of a landscaped water feature.

### **Fire Protection**

The County of Wetaskiwin requires a supply of water for fire fighting in all multi-lot residential subdivisions. Where there is no municipal water system, fire ponds are constructed at the developers' expense.

The location proposed for the fire pond is a public utility lot adjacent to the internal road, close to the north boundary of the property, where the water table is close to the surface and the pond can also receive inflow from roadside ditches. The 3.4 acre size shown on the map will be increased if necessary to give the capacity required by the fire chief. Fencing, hard surface access, a dry hydrant, and other features required by the fire chief will be provided at the developers' expense.

The developers are prepared to dedicate the PUL in a different location if required by the fire chief.



## **Request for Zoning**

The developers request that the entire property be zoned Country Residential, with the exception of the 27 acres containing the Laveck home site, which will stay zoned Agricultural so that a small herd of bison can be kept.

## **Public Participation Process**

The owners have discussed their plans with the neighbours for more than two years. They mailed or hand delivered a copy of this document to all adjacent landowners and renters. The concerns raised by these people, and the developers' responses to those concerns, are attached.

The developers' efforts will be supplemented by the normal County advertising process.

## **Maps**

- 1 Location and off-site constraints on development
- 2 Recent air photograph
- 3 Contours and gradients
- 4 Proposed subdivision design

## **Attachments**

Current title to the property.

Letter dated 20 August 2007 from Alberta Tourism, Parks, Recreation and Culture, stating that no historical resource impact assessment is required.

Extract from the *Alberta Private Sewer Systems Standard of Practice* concerning above-ground evaporation mounds.

Summary of comments and concerns raised by local residents.

## **Supporting documents submitted under separate cover**

Geotechnical report on subsurface conditions by Parkland Geo

Traffic impact assessment by EXH Engineering

Groundwater supply tests and evaluation by HCL Hydrogeological Consultants Ltd

## **Charadon Meadows Area Structure Plan**

### **Comments by neighbours**

<b>Issue</b>	<b>Response</b>
Increased traffic	<p>Very little traffic is expected to use RR 280, for two reasons.</p> <p>First, it is only half a mile from Charaden to Highway 616 along TR 474, compared to a mile and a half to the highway along RR 280, and people will usually use the shortest route.</p> <p>Second, the developers are proposing a locked gate to prevent people from the subdivision driving on to RR 280. Emergency services (fire, ambulance, and public works) will have keys to open the gate in an emergency, but otherwise it will remain closed.</p>
The locked gate won't work	<p>Experience at Buck Lake shows that locked gates do work. The locks on the gates between Maywood and Evergreen Estates, and between Buck Lake Estates and Heritage Estates, have not been vandalized.</p>
Don't want close neighbours	<p>Twenty-nine of the 32 lots will be at least a quarter of a mile back from RR 280, in the trees, and will be invisible from the road and from neighbours' houses.</p>
Loss of farm land	<p>The quality of the soil on this quarter is similar to several other quarters in the district which council has approved for subdivision, most recently Staroba in NE 23-47-28-4, half a mile west.</p>
Effect on farm operations	<p>Again, most lots will be a good distance away from any farm operation, with a solid tree buffer.</p>
Can farmers still keep livestock?	<p>Provincial law gives farmers the right to continue their operations (Agricultural Operations Practices Act, section 2).</p>

Water supplies

Tests by a hydrogeological engineer have shown that there is sufficient groundwater to supply the development without depleting existing wells in the area. The County has been given those tests.

Snowmobiles and quads:  
trespass and damage to crops

The developers are prepared to build a page wire fence between their property and the property of the concerned neighbour.

Will RR 280 be built north of TR 474?

That is outside the scope of the ASP, and will be a council decision.

Do restrictive covenants work?

Yes, they do. If they didn't, developers would not bother to register them on title.

Does the County enforce covenants?

No, the landowners enforce against each other.

If we sell, will our buyers be protected?

Protection afforded to present owners (covenants, bylaws, etc) will continue to apply to future owners.

Will this limit the number of  
approaches I can have on my quarter?

That is up to the County.