



**TECHNICAL REVIEW COMMITTEE**

**A TECHNICAL REVIEW REPORT**  
**PREPARED FOR**

**THE RURAL MUNICIPALITY**  
**OF**  
**ROCKWOOD**

**LIFEWIND FARM LTD.**  
**SE ¼ 17-13-2 EPM**

**TRC 12 – 046**

**August 24, 2018**

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## A. INTRODUCTION – THE TEAM

The Technical Review Committee (TRC) is supported by the following department personnel:

- Agriculture (Ag); Livestock Environment, Nutrient Management and Business Development Specialists, Agricultural Engineer, and Veterinarians
  - Municipal Relations (MR); Community Planners
  - Infrastructure (MI); Development Review Technologists, Engineering and Operations Division; Development Review Officers, Water Management and Structures Division
  - Sustainable Development (SD); Technical Review Officer, Environmental Engineer, Environment Officer, Habitat Mitigation Biologist, Regional Wildlife Manager, Groundwater Specialist and Resource Planner
- and
- Any other specialist or department that may have an interest, which may be consulted during the process.

The Technical Review Coordinator, (Senior Planner, MR) chairs the committee.

## THE REPORT (TRC Process Box 17)

### Prime Purpose of TRC Reports

To provide objective, highly credible, technically-based assessments that:

- a) Enable municipal councils to make informed Conditional Use Permit decisions;
- b) Create a common stakeholder understanding of a livestock proposal, potential impacts and related regulatory requirements and safeguards;
- c) Provide a vehicle/forum that enables the sharing of public concerns and proponent responses;
- d) Offer recommendations to both municipal councils and proponents; and
- e) Represents the fulfillment of the TRC's role as per 116(1)(b)(i) of The Planning Act – to determine, based on available information, that the

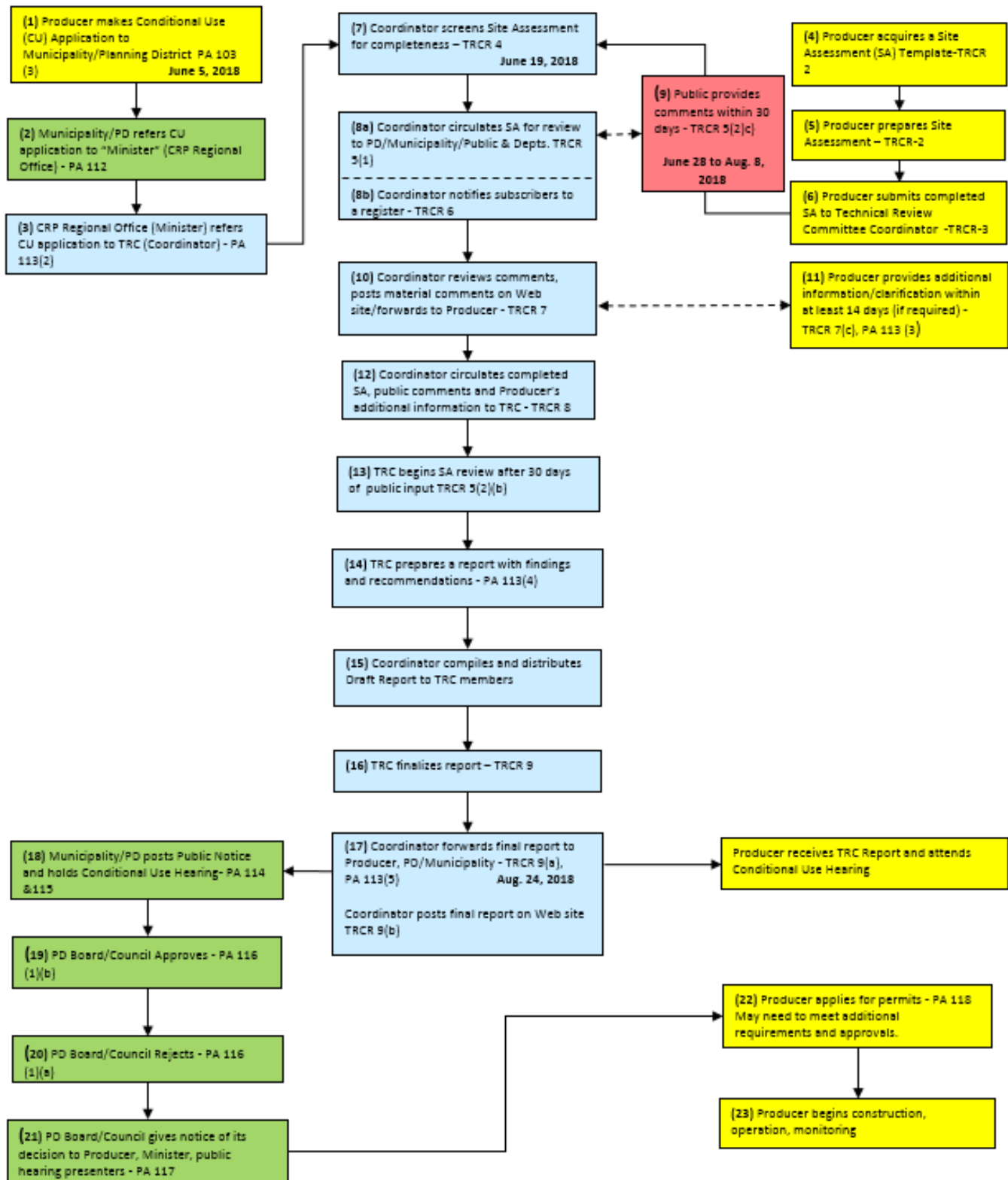
proposed operation will not create a risk to health, safety or the environment, or that any risk can be minimized through the use of appropriate practices, measures and safeguards

Should the Municipal Council provide conditional approval of the proposal, the project proponent may be required to obtain various permits and licenses from the Province to address in greater detail environmental aspects of the proposal.

## **THE PROCESS**

TRC Process Chart with actual pertinent dates and brief overview:

## The Technical Review Process: TRC-12-046 – Lifewind Farm Ltd.



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## B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

To view a detailed description, go to

[www.gov.mb.ca/ia/programs/livestock/public\\_registries.html](http://www.gov.mb.ca/ia/programs/livestock/public_registries.html)

**Applicant:** Lifewind Farm Ltd.

**Site Location:** Approximately 2 miles (3.2 km) west of the community of Stony Mountain on road 74, 2 ½ miles (4 km) west of PTH 7 at SE ¼ 17-13-3 EPM.

(Refer to maps below.)

**Proposal:** To expand a current dairy operation from 140 animals (280 AU) to 360 animals (720 AU) within an animal confinement facility.

This will involve the following:

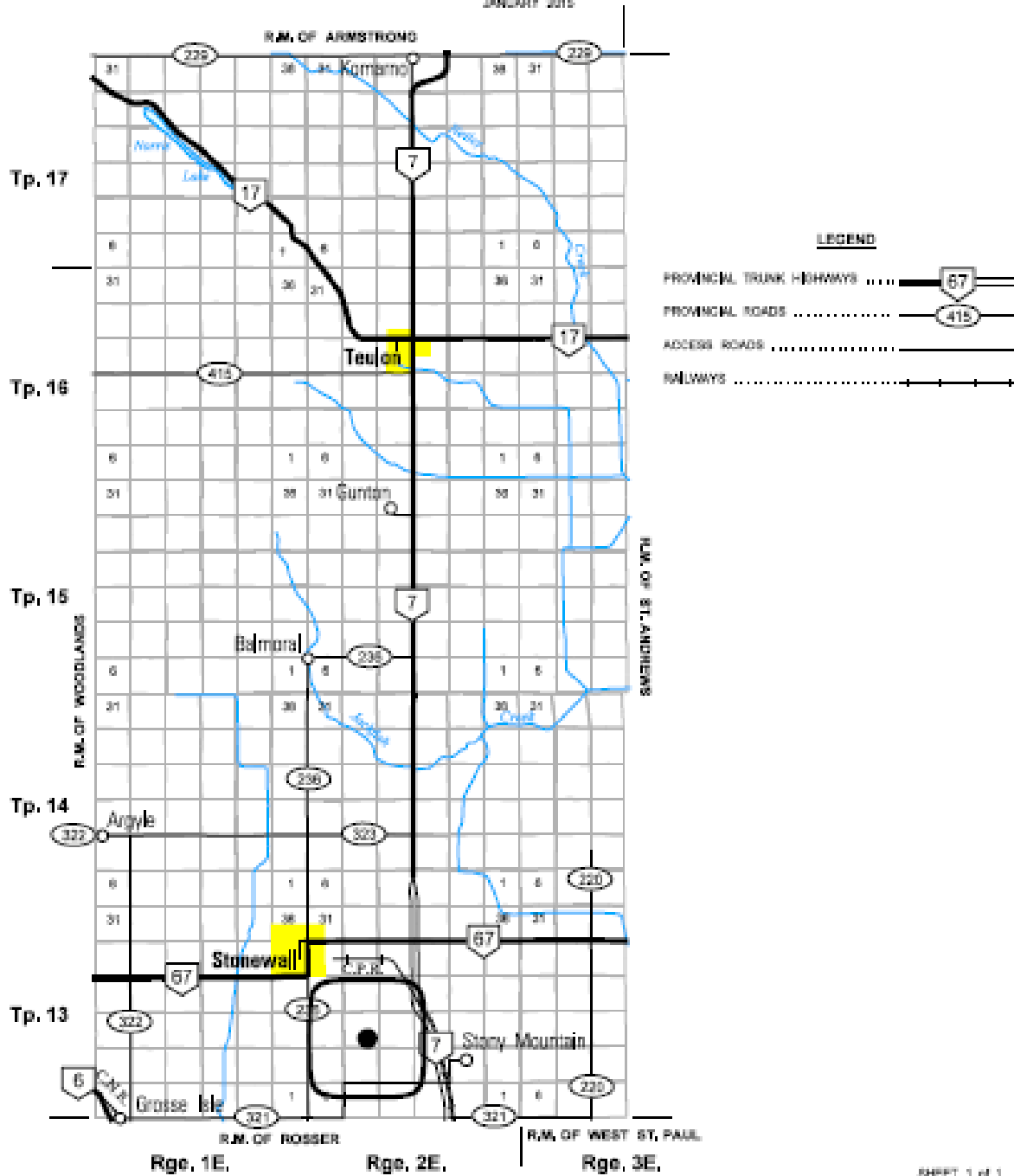
- Construction of a new barn with robotic milking
- Existing barn to be renovated to house heifers produced by the operation
- All livestock to be housed indoors
- Construction of a manure storage structure (with between 400 and 500 day holding capacity)
- Consuming 11,640 imperial gallons of water per day (existing well with a new well proposed)
- Composting mortalities (no permanent site exists on site)
- Using the truck haul route as shown below

# R.M. OF ROCKWOOD

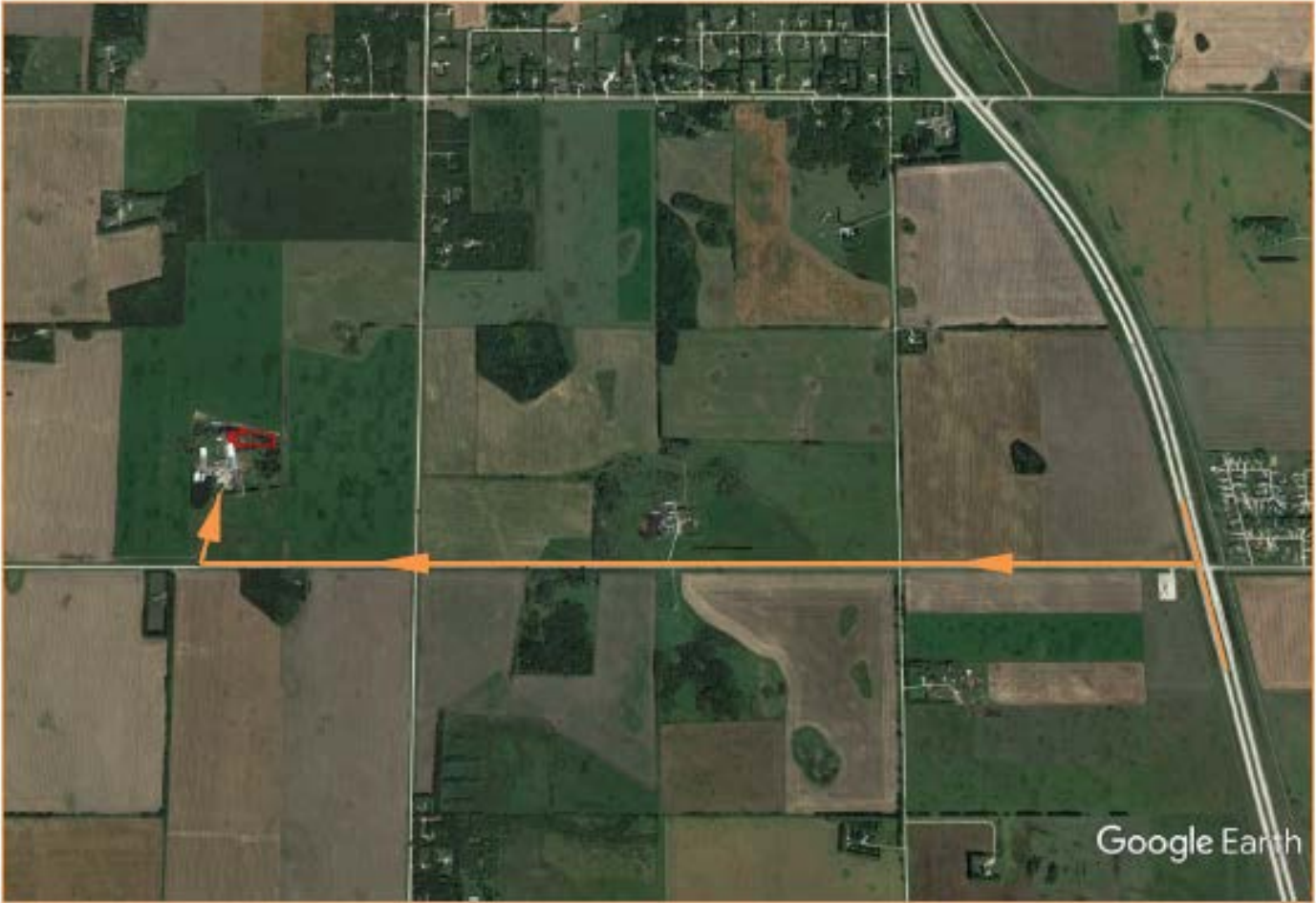


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SCALE IN KILOMETRES

PROVINCE OF MANITOBA  
INFRASTRUCTURE  
HIGHWAY PLANNING AND DESIGN BRANCH  
GEOGRAPHIC & RECORDS MANAGEMENT SECTION  
WINNIPEG  
JANUARY 2015



SHEET 1 of 1



Lifewind Farms Truck Route

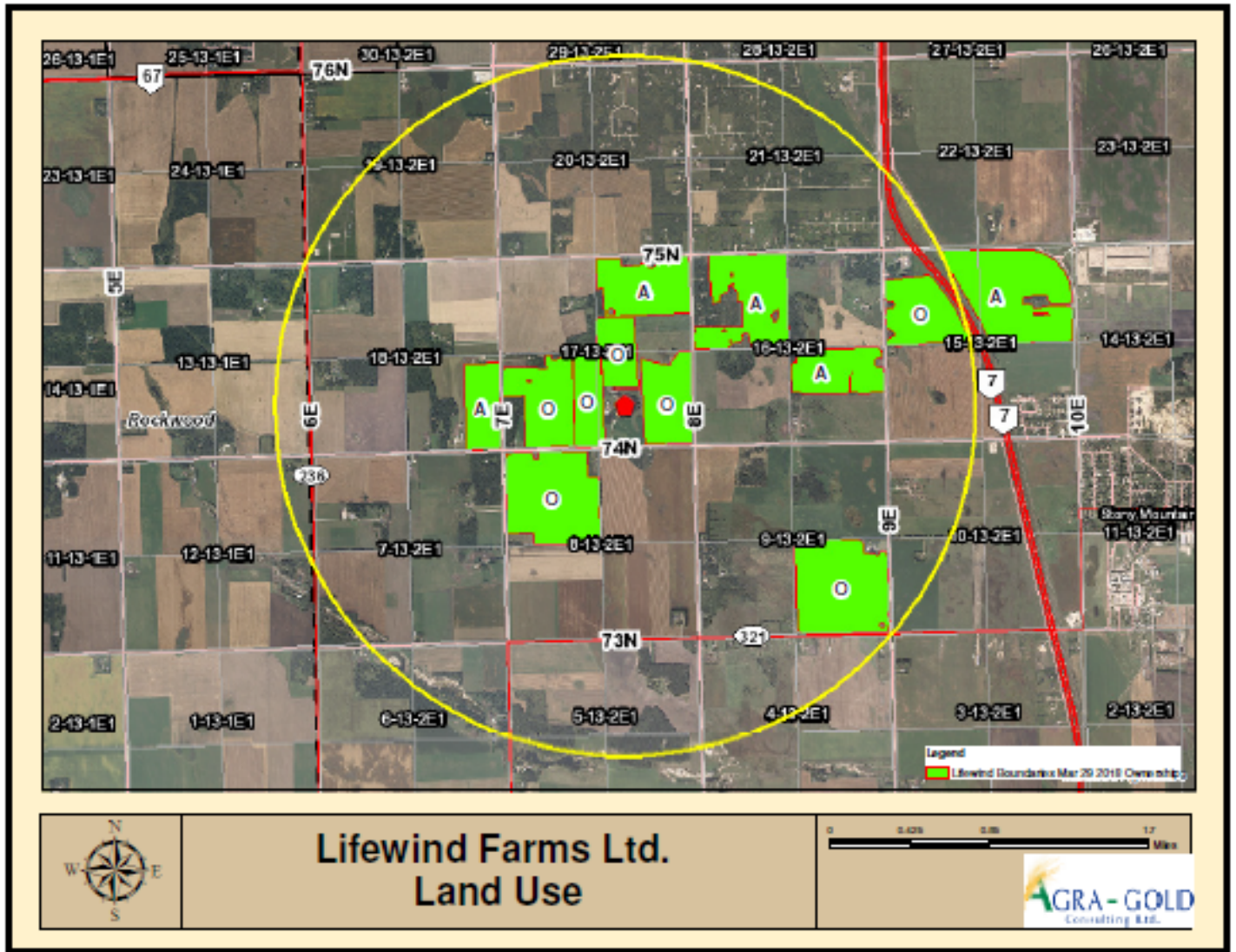


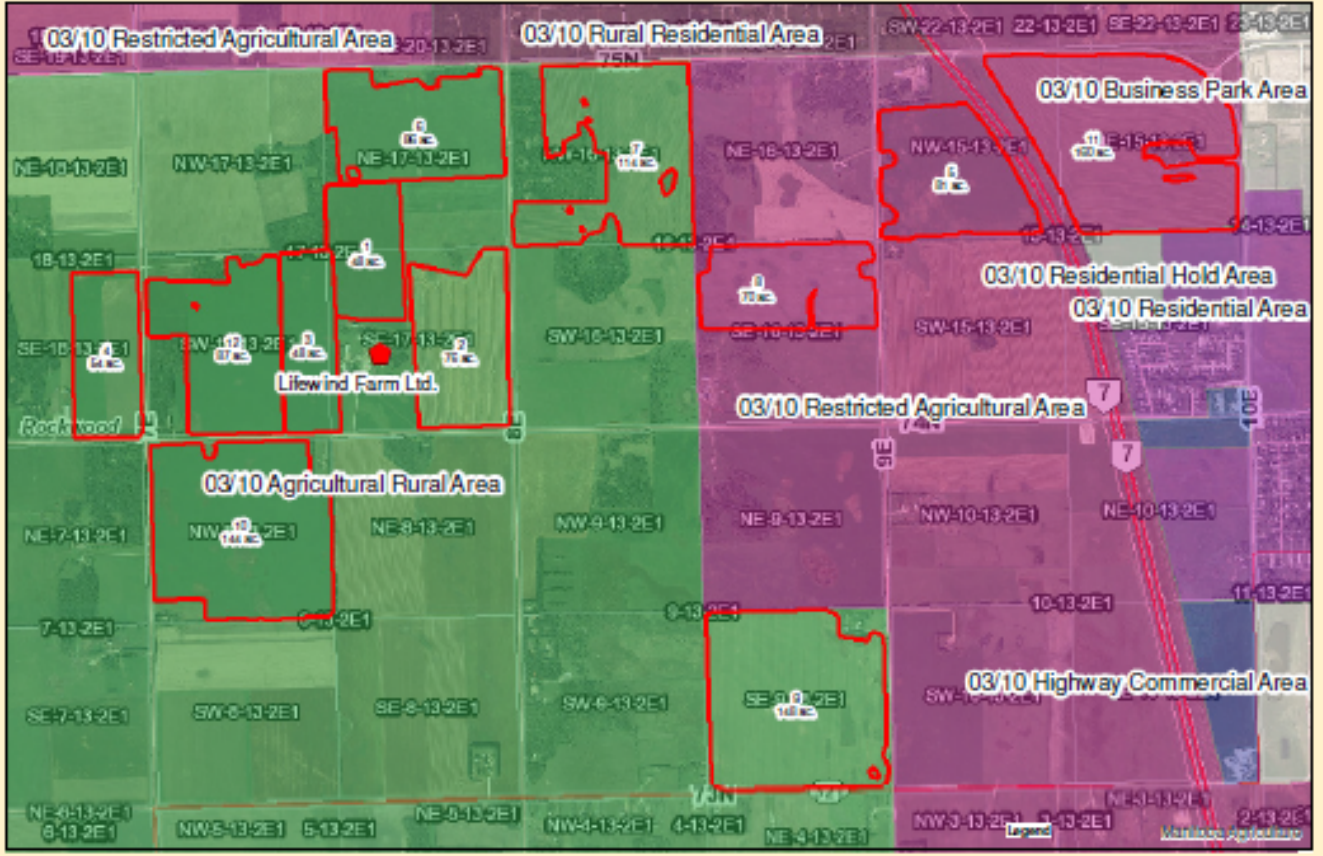
## Lifewind Dairy Site Location



# Lifewind Dairy Site Plan

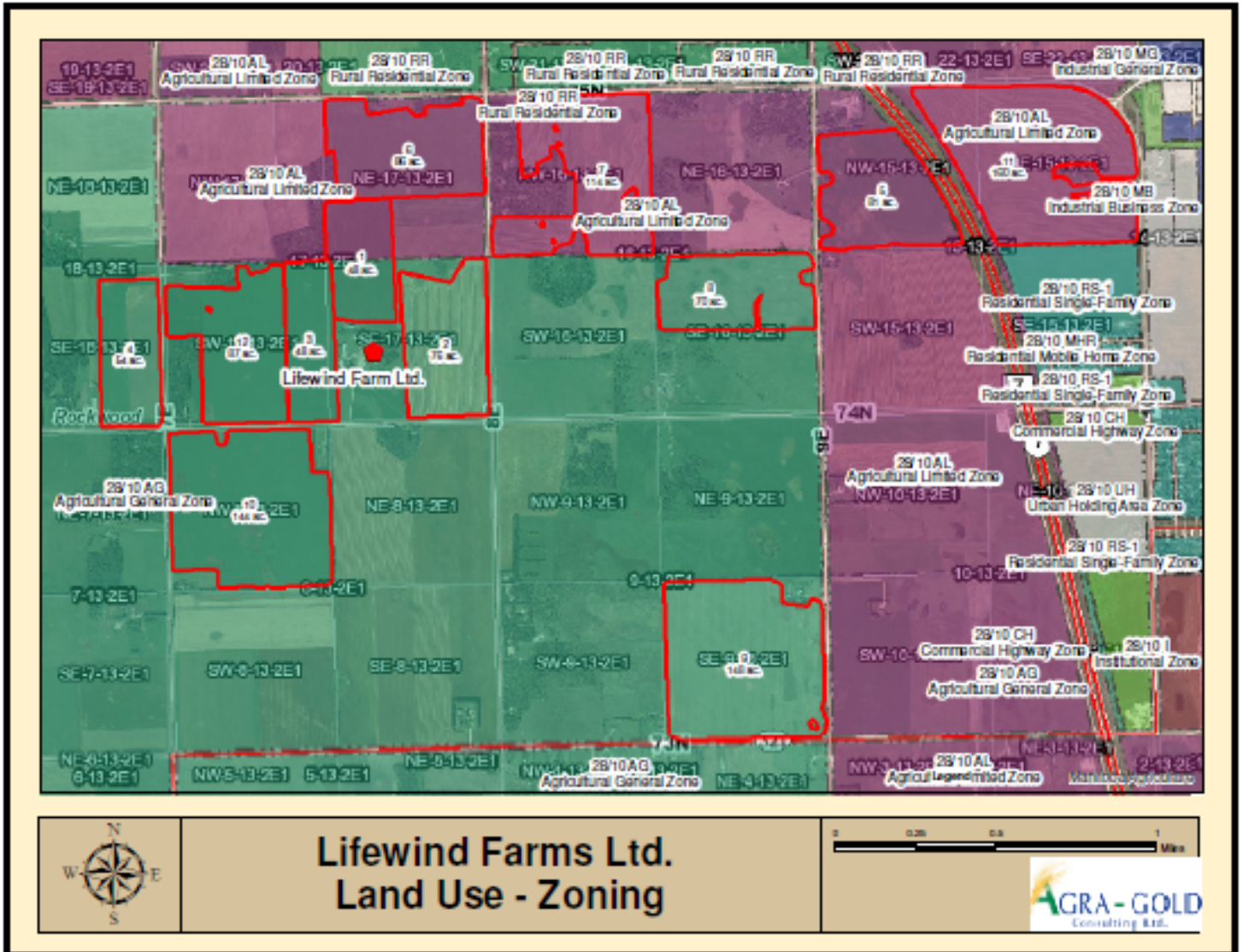






**Lifewind Farms Ltd.  
Land Use - Development Plan**







**Lifewind Farms Ltd.  
Spread Acres**



## C. SITE ASSESSMENT OVERVIEW

Assessment Overview Table

Provincial Technical Overview of TRC 12-046 - Lifewind Farm Ltd.:			
Items Provided by Project Proponent	Con- firmed	Related Existing Provincial Safeguards	Dept
1. Submitted complete Site Assessment	X	The proposal is consistent with the Provincial requirements for a livestock operation.	MR
2. Clearly defined the project as an Animal Confinement Facility	X	Any barn is in excess of 6,458 sq. ft. each will require a building permit from the Office of the Fire Commissioner.	MR
3. Proposed Project Site Physical Suitability	X	Detailed soil survey indicates that the proposed dairy operation is located on prime agricultural land (agriculture capability Class 2). The proposed expansion includes plans to construct a new earthen manure storage structure for the liquid manure and field storage for the solid manure. Manitoba Sustainable Development should be contacted regarding the regulatory requirements for constructing a manure storage facility.	Ag
4. Proposed Project Site Flood Risk Potential	X	Water Management, Planning and Standards is not aware of any major, overland flood risk at this location.	MI
5. Identified 11,640 imperial gallons of water per day required for proposed operation	X	The site assessment indicates that the required water will be provided by a current well and a proposed well. <b>A Water Rights Licence is necessary due to the volume needed and a permit is required prior to drilling another well.</b> The proponents must apply either through the website at <a href="http://www.gov.mb.ca/sd/waterstewardship/licensing/wlb/obtaining.html">http://www.gov.mb.ca/sd/waterstewardship/licensing/wlb/obtaining.html</a> or by contacting us at Box 16 - 200 Saulteaux Crescent, Winnipeg MB, R3J 3W3; (204) 945-3983, or toll free at 1-800-214-6497.	SD

**Provincial Technical Overview of TRC 12-046 - Lifewind Farm Ltd.:**

<b>Items Provided by Project Proponent</b>	<b>Con- firmed</b>	<b>Related Existing Provincial Safeguards</b>	<b>Dept</b>
6. Proposed measures to meet storage and application regulations for manure	X	<p>Any applicable permit or annual submissions under the Livestock Manure and Mortalities Management Regulation would be processed by Environmental Approvals Branch of Sustainable Development.</p> <p>Lifewind Farm Ltd. must submit annual Manure Management Plans (MMP), as prescribed under the Livestock Manure and Mortalities Management Regulation. The MMP process is administered through the Environmental Approvals Branch of Sustainable Development. Details on the requirements for manure management plans, including future soil sampling and analysis requirements, are available at <a href="http://www.gov.mb.ca/sd/envprograms/livestock">www.gov.mb.ca/sd/envprograms/livestock</a>.</p>	SD
7. Proposed Project Site with suitable mortalities disposal methods (composting)	X	<p>Information on disposal is provided in section 9 of the site assessment, which requires Lifewind Farm Ltd. to select from 4 acceptable methods of disposal. More specific information is included in the Livestock Manure and Mortalities Management Regulation and at <a href="http://www.gov.mb.ca/sd/envprograms/livestock">http://www.gov.mb.ca/sd/envprograms/livestock</a>.</p>	SD
8. Proposed Project Site with acceptable odour control measures	X	<p>The proponent has indicated that there is an existing shelterbelt and that manure will be injected or applied and incorporated within 48 hours of application. Injection or immediate incorporation will reduce odour from land application. As well, a crust typically forms on the surface of stored dairy manure that greatly reduces odour from the manure storage.</p> <p>Should odour become a problem for neighbouring residents, there is a complaints process under <i>The Farm Practices Protection Act</i>. A person who is disturbed by any odour, noise, dust, smoke or other disturbance resulting from an agricultural operation may make a complaint, in writing, to the Manitoba Farm Industry Board. The Act is intended to provide for a quicker, less expensive and more effective way than lawsuits to resolve nuisance complaints about farm practices. It may create an understanding of the nature and circumstances of an agricultural operation, as well as bring about changes to the mutual benefit of all concerned, without the confrontation and the expense of the courts</p>	Ag
9. Proposed Project Site that meets development plan and zoning by-law	X	<p>The proposed project site is appropriately designated as an Agricultural Rural Area in the South Interlake Planning District's Development Plan By-law No. 03/10.</p> <p>The proposed project area is appropriately zoned as an "AG" Agricultural General Zone in the RM of Rockwood Zoning By-</p>	MR

**Provincial Technical Overview of TRC 12-046 - Lifewind Farm Ltd.:**

<b>Items Provided by Project Proponent</b>	<b>Con- firmed</b>	<b>Related Existing Provincial Safeguards</b>	<b>Dept</b>
requirements		<p>law No. 17/09. However, <b>variances to vary the minimum separation distances are required</b> for the following features:</p> <ul style="list-style-type: none"> <li>- Distance from residence/dwelling to earthen manure storage facility from the minimum 1,886 ft to ± 1,400 ft.</li> <li>- Distance from a designated area (RR Area) to the earthen manure storage facility from the minimum 7,546 ft to ± 4,200 ft.</li> </ul> <p>Distance from a designated area (RR Area) to the animal confinement facility from the minimum 5,020 ft to ± 4,400 ft.</p>	
10. Proposed Project Site that is a sufficient distance from native prairie, Wildlife Managements Areas and Crown Land.	X	Distances to these features is provided in section 10.5 of the site assessment. Where the distances exceed 1 mile, the department generally has no objection.	SD
11. Proposed Spreadfields that are sufficient, and suitable for manure spreading	X	<p>Lifewind Farm has exceeded the Provincial land requirement for 360 mature dairy cows and associated livestock in the RM of Rockwood. A detailed explanation of the land assessment can be found in the appendix.</p> <p>All of the manure will be applied as a fertilizer for crop production. As the operation is greater than 300 AU, a manure management plan must be submitted to Manitoba Sustainable Development. If the services of a manure management planner are used, the planner must be a Professional Agrologist or Certified Crop advisor and must have successfully completed training in manure management planning delivered by the Assiniboine Community College.</p> <p>The proponent has indicated that a commercial manure applicator will be used to apply the manure. Commercial manure applicators must be trained and licenced in Manitoba. The training is delivered by the Assiniboine Community College and licencing is through Manitoba Agriculture.</p>	Ag
12. Proposed Spreadfields with sufficient minimum setbacks on from natural features (water sources etc.)	X	The proponent is required to demonstrate minimum setback distances listed in section 10.6 of the site assessment, which Lifewind Farm Ltd. has. Section 8.7 required Lifewind Farm Ltd. to indicate if all setbacks have been observed and excluded from land base calculations.	SD



**Provincial Technical Overview of TRC 12-046 - Lifewind Farm Ltd.:**

<b>Items Provided by Project Proponent</b>	<b>Con- firmed</b>	<b>Related Existing Provincial Safeguards</b>	<b>Dept</b>
13. Proposed Spreadfields that have been secured by spread agreements	X	The proposal indicates that the land available for manure application is owned, leased and under agreement.	Ag
14. Proposed Spreadfields that meet development plan and zoning by-law requirements	X	The proposed spreadfields are appropriately designated and zoned. However, it is noted spreadfields 5 and 11 (N ½ of 15-13-02-E) are located within the “Rockwood Sensitive Area” (as shown on the South Interlake Planning District’s Development Plan - Map 3) which establishes restrictions on the drilling, maintenance and abandonment of wells that must be observed, if applicable to the proposed project.	MR
15. Proposed trucking routes and access points that do not impact Provincial Roads or Provincial Trunk Highways	X	<p>The proposed truck route will utilize a Government Road Allowance which connects onto PTH 7 with an existing access connection. We don’t anticipate a substantial increase in usage onto PTH 7.</p> <p>Please be advised that any structures placed within the controlled areas of PR 236 &amp; PR 321 (125 feet from the edge of the right-of-way) require a permit from our office. The contact is Sheena del Rosario at (204) 945-3457 or <a href="mailto:Sheena.DelRosario@gov.mb.ca">Sheena.DelRosario@gov.mb.ca</a>. Any structures placed within the controlled area of PTH 7 (125 feet from the edge of the right-of-way) requires a permit from the Highway Traffic Board. Please phone (204) 945-8921 for information regarding such permits.</p> <p>The placements of temporary drag lines or any other temporary machinery/equipment for manure application within the right-of-way of PTH 7, PR 236 and PR 321 requires permission from our regional office in Portage. Please contact the Regional Planning Technologist (Denise Stairs) at (204) 871-2239 or <a href="mailto:Denise.Stairs@gov.mb.ca">Denise.Stairs@gov.mb.ca</a>. In addition, please notify the Regional Planning Technologist for the placement of temporary draglines or other temporary equipment for manure application within the controlled areas of PTH 7, PR 236 &amp; PR 321 (125 feet from the edge of the right-of-way).</p>	MI
16. Proposed trucking routes – local roads	X	The Municipality may impose, through a development agreement, conditions regarding the maintenance and /or construction of local roads, as provided for in The Planning Act.	MR
17. Declared Provincial	X	This proposal will not affect any Provincial Waterways.	MI

Provincial Technical Overview of TRC 12-046 - Lifewind Farm Ltd.:			
Items Provided by Project Proponent	Con- firmed	Related Existing Provincial Safeguards	Dept
Waterways			

Provincial Departments:

- Ag – Agriculture
- MR –Municipal Relations
- MI – Infrastructure
- SD – Sustainable Development

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## D. PUBLIC COMMENTS & DISPOSITIONS

Public Comment Summary	
<b>1.</b> Peter Hildebrand PO Box, Stonewall, MB	<b>Supports:</b>  I received a letter giving notice of the above application. I am in favour of it; I believe it to be in the best interests of the community.
<b>2.</b> Lyle Harris	<b>Supports:</b>  Definitely in favour of this expansion
<b>3.</b> Henry and Gertrude Neufeld PO Box, Stonewall, MB	<b>Opposed:</b>  <ul style="list-style-type: none"> <li>- We are definitely concerned over the proposed expansion of the dairy;</li> <li>- This farmer has shown poor judgement in the spreading of manure in the past;</li> <li>- It should be illegal to spread fresh manure containing afterbirth and dead carcasses; the stench is unpleasant. This practice could cause Mad Cow Disease, and also problems with contamination of our well water.</li> <li>- We are completely opposed to the expansion.</li> </ul>

<p><b>4.</b> Irene Pawlow Ron Bay</p>	<p><b>Concerns:</b></p> <p>I received a notice concerning the proposed expansion. We have a few concerns that we would like considered.</p> <ol style="list-style-type: none"> <li>1. The effect on ground water and the potential for contamination of the aquifer.</li> <li>2. The odour that may occur with having the same amount of land but more than double the animals.</li> <li>3. The effects of the health of the animals using the same amount of land and increasing the population.</li> </ol> <p>Unfortunately, I do not possess adequate knowledge to determine if this increase in size will have an effect on our concerns. I ask that the decision be made while assuring the above concerns are addressed</p>
<p><b>5.</b> Jeanine Woods DVM, MS, DACT and Mrs. Margaret Woods</p>	<p><b>Opposed:</b></p> <p>My mother, Margaret F. Woods of 73-051 Road 8E Sturgeon Road, Stony Mountain (mailing address Box 12, Group 238, RR 2 Winnipeg R3C 2E6 and myself, Dr. Jeanine Woods are adamantly OPPOSED to the proposed request to expand the dairy operation from 280 to 720 animal units.</p>
<p><b>6.</b> Randy and Heather Gushulak</p>	<p><b>Opposed:</b></p> <p>We live in the rural municipality of Rockwood and are opposed to the above mentioned expansion. The proposal will be more than doubling the current existing operation which presents concerns of possible contamination of the ground water as well as a foul smell. Should these issues present themselves, it could negatively affect the resale value of our property.</p>
<p><b>7.</b> Nestor and Debbie Molina</p>	<p><b>Opposed:</b></p> <p>-We oppose the Lifewind Dairy Ltd. expansion from 140(280) to 360(720) animals.</p> <p>-While near neighbours of the dairy were sent your one page, abbreviated notification of Lifewind's request, we were concerned that it contained no information upon which recipients could develop an informed opinion without doing all of the legwork to educate themselves on the possible ramifications of this expansion. Since the expansion will also affect the residents of the Town of Stony Mountain (their water supply), they should also have received the notification. Additionally, it was the one and only notification that was sent out though I believe that this request has been in the works for at least six months.</p> <p>- We did some research and found that thorough studies have been conducted by Yale University and others on dairy expansions in both New Jersey and Wisconsin. Both of these states have seen small farms amalgamated and others bought outright by large corporate "super farms". Some of the statistics that have been compiled are alarming. Without our own effort, we would not know that one dairy cow:</p> <ol style="list-style-type: none"> <li>1) drinks 35 gallons of water per day;</li> <li>2) requires 15 gallons of water for the milking process; and</li> <li>3) produces 120 lbs. of manure daily.</li> </ol>

This raises red flags on two fronts, the first being the amount of water consumed by a herd of 360 milking cows. At 55 gallons per cow per day the amount of water required would be just slightly less than 20,000 gallons per day. This does not take into account the water required to sustain an equal number of calves from birth to sale. That water would come directly from the same aquifer that supplies water to the Town of Stony Mountain as well as residences and small farms near Lifewind Dairy. We are concerned that with the digging of deeper wells to supply their water needs, Lifewind may very well drain our own well.

Recently the residents of the Town of Stony Mountain were encouraged to accept a proposal that would change the source of their water from a local well to a network deriving water from the Assiniboine River. The argument presented in support of this proposal was that the Stony Mountain pumping station would likely run short of water in the not to distant future. Since that proposal was rejected by the residents, another mega farm (Canada Sheep and Lamb) has been granted approval to quadruple the number of their ewes to 8,000. They also support 100 rams and 4,558 lambs. It is our understanding that they will be tapping into the same aquifer that Stony Mountain residents were warned would not support their water usage. How can an already declining aquifer support the numbers of animals on these mega farms?

The second red flag is the many problems presented by the increase in the amount of manure to be handled. Typically, the manure would be stored in a lagoon until it can be spread on surrounding land but lagoons are notorious for developing leaks. The karst (limestone) soil of the Rockwood Municipality would allow lagoon breaches to pollute surrounding wells including the wells of the Town of Stony Mountain which are approximately two miles over land from Lifewind Dairy. The USDA estimates that the manure from one cow equals as much nitrogen as sewage from 25-50 people as well as nitrates and pathogens like E-coli and other coliforms. The RM of Rockwood is sufficiently concerned with sewage handling that, for more than 25 years, in areas of development (for instance along Sturgeon Rd. north of Road 75N), each new dwelling must have two septic fields to ensure that there is no seepage of sewage into the aquifer. How much greater is the risk of well contamination from the manure of 720 cattle?

The RM of Rockwood has been eagerly encouraging development of small holdings of five acres or less in the areas around and between Stony Mountain and Stonewall. To also encourage the establishment of mega farms in the same area is ridiculous. Along with mega farms comes manure, unpleasant odours which in times of manure spreading can become insufferable, disease-spreading and nuisance flies, and the risk of contaminated or defunct wells.

With the expansion approval of one sheep farm or one dairy, a precedent is set which will encourage other mega farms to move into this area. With the location of mega farms comes the lowering of property values surrounding those farms. We don't want our property value to evaporate before our eyes nor do we wish to live with the discomfort and risks that accompany expanded farms. If the governing bodies truly want input and don't just want to tick off the box to indicate they've consulted all stakeholders, then this

	expansion needs further consideration and a process to educate everyone who may be affected.
<p><b>8.</b> Tracey Berg Oak Lane RM Rockwood</p>	<p><b>Concerns:</b></p> <p>I have a few concerns. My first concern is regarding the spread of manure and potential contamination of well water. In 2010 we had a boil water in effect for most of the summer due to coliform and E. coli contamination. That year the soil was saturated from fall, winter and spring moisture due to excessive rain and snowfall. The boil water advisory effected our subdivision Oakwood Estates and surrounding areas. My concern is if there are any unsealed wells in the drainage areas near where the manure will be spread. I would also like to know if there have been measurements of the overburden layers where the spreading will take place as well as drainage areas.</p> <p>If we have an excessively wet spring, summer or fall how long can the manure be stored, or are there alternate areas where it can be spread if they cannot spread in this area.</p> <p>My last and perhaps most important concern is the amount of water required for the expansion. I have been reassured that we have an abundance of potable water in our aquifer, but it is still a concern. It is my understanding that if the level of water drops below a certain level there is a risk of saline contamination.</p>

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## E. CONCLUSIONS & RECOMMENDATIONS

### Overall Conclusion

The information contained in the Site Assessment submitted by the proponent generally meets Provincial requirements. In addition, based on available information it has been determined that the proposed operation will not create a risk to health, safety or the environment, or that any risk can be minimized through the use of appropriate practices, measures and safeguards.

### Recommended Actions to Council

- As per Section 114(1) of The Planning Act, Council must set a date for a Conditional Use hearing.
- As per Section 114(2) of The Planning Act, at least 14 days before the date of the hearing, Council must:
  - a) send notice of the hearing to
    - (1) the applicant,
    - (2) the minister, (c/o the Selkirk Community & Regional Planning Office)
    - (3) all adjacent planning districts and municipalities, and

- (4) every owner of property located within three kilometres of the site of the proposed livestock operation, even if the property is located outside the boundaries of the planning district or municipality;
  - b) publish the notice of hearing in one issue of a newspaper with a general circulation in the planning district or municipality; and
  - c) post a copy of the notice of hearing on the affected property in accordance with Section 170 of The Planning Act.
- The project site will require variances to vary: 1) the minimum separation distance between the earthen manure storage facility and the nearest residence (to the south of the site) from 1886 ft. to 1400 ft.; 2) the minimum separation distance between the earthen manure storage to the nearest non-agricultural designated area (Rural Residential Designated area to the northeast of the site) from 7546 ft. to 4200 ft. ; and 3) re the minimum separation distance between the animal confinement facility (barn) to the nearest non-agricultural designated area (Rural Residential Designated area to the northeast of the site) from 5020 ft. to 4200 ft.
- As per Section 169(4)(b) of The Planning Act, a copy of the notice of hearing to vary the separation distance involving a livestock operation must be sent to every owner of property located within the separation distance that is proposed to be varied.
- Note: That as per Section 174(1) of The Planning Act, Council can hold all required hearings together in a single combined hearing. It is recommended that during the course of this public hearing, Council first deal with the matter of the rezoning, then the conditional use order followed by the variation order(s).
- As per Section 174(2) of The Planning Act the notice of hearing for each matter to be considered at a combined hearing may be combined into a single notice of hearing.
- Council should specify the type(s) of operation, legal land location, number of animals in each livestock category and total animal units in its Conditional Use Order.
- As per Section 117 of The Planning Act, Council must send a copy of its (Conditional Use Order) to
  - a) the applicant;
  - b) the minister (c/o the Selkirk Community & Regional Planning Office); and
  - c) every person who made representation at the hearing.

Council is welcome to contact Manitoba Sustainable Development's Environmental Approvals Branch as well as regional Environmental Compliance and Enforcement staff to discuss environmental compliance issues, if applicable, with respect to the Livestock Manure and Mortalities Management Regulation (M.R. 42/98).

## Recommended Actions to Proponent

- That a Variance be applied for prior to the Conditional Use Hearing to vary the separation distance from 5,280 feet to 5,000 feet between the earthen manure storage structure to the nearest house to the north (SE 9-7-2E). This will enable Council the option of holding a combined Conditional Use and Variation Hearing.
- That the proponent request the municipality hold a combined hearing, if desirable.
- That any additional measures identified through subsequent Provincial and Federal licensing or permitting in order to minimize any identified risks to health, safety and the environment be undertaken.

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## F. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Department	Title	Telephone
Don Malinowski Chair	Municipal Relations	Senior Planner Community & Regional Planning Branch	945-8353
Petra Loro	Agriculture	Livestock Environment Specialist Agri-Resource Branch	945-3869
Tracey Braun	Sustainable Development	Acting Assistant Deputy Minister (Environmental Approvals Branch)	945-6658
Jeff DiNella	Infrastructure	Senior Development Review Technologist Highway Planning and Design Branch	945-2664

## APPENDICES

**Appendix A**  
**Manitoba Agriculture**  
**Lifewind Farm Ltd**  
**Land Assessment**  
**August 2018**

In areas of lower livestock intensity such as the RM of Rockwood, it is currently the Province of Manitoba's policy to require sufficient suitable land for all of the nitrogen and half of the phosphorus generated by the livestock. This policy assumes that more land is available and could be brought into the Lifewind Farm manure management plan to balance phosphorus with crop removal, should it be necessary in the future.

In order to determine the land requirements for Lifewind Farm, nitrogen and phosphorus excretion by 360 mature cows and their associated livestock is compared to nitrogen utilization and phosphorus removal by the proposed crops to be grown. The calculation takes into consideration typical, modern feeding practices for dairy production and realistic, long-term crop yields from the Manitoba Agricultural Services Corporation (MASC) for the RM of Rockwood.

Land suitability is determined using soil testing for phosphorus and soil survey to establish the agriculture capability. All of the lands with soil tests were below 60 ppm Olsen P, as required to be considered suitable. Detailed soil survey is available to determine the agriculture capability of the land. The agriculture capability of the land included in the proposal includes Class 2 to 5. The limitations include salinity (N), density (D), stoniness (P), droughtiness (M) and wetness (W). Class 1 to 5 soils are considered suitable for manure application.

Lifewind Farm is required to demonstrate that they have access to at least 798 acres of suitable land for manure application. Lifewind Farm has exceeded the Provincial land requirement with the 1116 suitable acres for manure application provided.

**Appendix B**  
**Manitoba Sustainable Development**

**Staff in the Water Science and Watershed Management Branch have reviewed the site assessment for Lifewind Dairy in the RM of Rockwood and have the following comments:**

- Proper nutrient management applications that avoid excess loss of nutrients to surface waters are needed on lands receiving manure in southern Manitoba because long-term trend analysis of total phosphorus and total nitrogen has shown significant increases in these nutrients in the Assiniboine and Red rivers (Jones and Armstrong 2002).



- The proponent plans to inject liquid manure and broadcast the solid manure and incorporate within 48 hours. Injection of manure at appropriate rates poses lower environmental risk than other manure application methods. Application of liquid and solid manure to alfalfa or perennial grass fields cannot be incorporated or injected due to the perennial nature of the crop. In order to reduce the risk of runoff losses, application should not occur to saturated, frozen or snow covered soils or when heavy rainfall is expected within 24 hours. Surface applications of manure are most susceptible to runoff losses of nutrients when runoff events occur within the first week or two after application. Applications to frozen soil or to soil shortly before the soil freezes are therefore much more likely to result in nutrient losses during spring snowmelt – ideally fall surface applications should occur well ahead of the soil freezing.
- Manure tends to have an excess of phosphorus (P) compared to nitrogen (N) and as a result, for most crops, application at N-based rates causes a buildup of soil P. Practices which minimize N losses from the manure improve the N:P ratio in the manure and help reduce P buildup when manure is applied at N-based rates.
- The proponent has acknowledged the setback areas for all water features have been observed and excluded from land base calculations. Setbacks should be clearly communicated to and observed by those involved in manure application to minimize the risk of nutrients entering surface waters.
- Manitoba has included phosphorus as a nutrient by which fertilizer application through manure, synthetic fertilizer, and municipal waste sludge to agricultural lands may be limited. To remain environmentally sustainable over a long-term planning horizon of 25 years or more, the proponent must be able to balance phosphorus inputs from applied manure and other nutrient sources such as commercial fertilizers with crop removal rates to avoid further build-up in soils. Consequently, sufficient land base must be available such that manure can be applied at no more than 1 times crop P removal rates. For long-term planning purposes, the proponent needs to have sufficient land available to ensure that manure can be applied at 1 times crop P removal. The proponent acknowledges that 1,532 acres may be required for the long term environmental sustainability of the operation with current crop choices and yield potential. The proponent has identified sufficient land (1,116 acres) to apply at 2 times crop P removal (766 acres required to apply at 2x crop P removal with current crop choices and yield potentials) and to meet crop N requirements (798 acres) which meets regulatory requirements. It is important to rotate manure application across all spread fields so as to prevent excessive P buildup when applying at 2x crop P removal rates
- If there are unused water wells on the site or spread fields these shall be properly sealed. A sealed well report must be filed with the Groundwater Management Section of Sustainable Development for each well sealed. Information on well sealing and the sealed well report are available from Sustainable Development (204-945-6959) or: [http://www.gov.mb.ca/sd/waterstewardship/water\\_quality/wells\\_groundwater/index.html](http://www.gov.mb.ca/sd/waterstewardship/water_quality/wells_groundwater/index.html). All but the most basic wells should be sealed by a well drilling professional. A list of currently licensed well drilling professionals can also be accessed from the above web

page. All groundwater features, including water wells, should be given as a minimum, the amount of buffer during manure application as outlined in the regulations.

## **Appendix C**

### **Applicant's Response to Public Comments**

To: Livestock Technical Review Committee

Re: Public Response – Lifewind Farm expansion, R.M. of Rockwood

August 15, 2018

I would like to acknowledge and thank area residents for their letters of support and also the concerns raised regarding our proposed Lifewind Farm expansion project in the RM of Rockwood. We want to assure them that we respect their opinions. I would also like to respond to their concerns. As many of the comments raised common themes this is a response to all the concerns expressed.

To provide some background Lifewind Farm has existed since 1951 and been in our family at our present site since 1986 - for 42 years. During that time we have had no complaints regarding the operation of the farm and anticipate that the impact on the surrounding area will not substantially change with the proposed increase in herd size at our farm. We believe we are good stewards of the land.

#### **Provincial Government requirements for new and expanding farms**

Environmental issues that were raised are addressed in detail through a very rigorous approval process in Manitoba. Manitoba livestock producers are required to go through a provincial government approval process for developing or expanding operations. The process includes the preparation of a detailed site assessment, public review and a municipal conditional use hearing prior to receiving a permit to construct the facility. All aspects of the site assessment proposal including municipal siting requirements, manure management and potential environmental impacts are reviewed by the Provincial Government Technical Review Committee.

#### **Manure Storage and application**

In conjunction with an existing earthen manure storage (EMS) a new EMS is proposed to store liquid manure generated by the dairy operation

Earthen manure storages have been regulated by the Province of Manitoba since 1995. A permit to construct an EMS requires a detailed geotechnical assessment of soils; a design prepared by a professional engineer; review of the design and all relevant information by Manitoba Sustainable Development prior to issuing the permit; site supervision of the construction by the responsible engineer; and finally certification of the storage by the engineer when the work is completed.

Since this program originated, the Province annually conducts audits of manure storages. Any storages found to have experienced damage or deterioration are required to implement remedial repairs to ensure environmental safety. To date, no permitted storage in Manitoba has experienced an incident that has resulted in any significant environmental impact.

The above process is required for all manure storages constructed in Manitoba. Since the legislation was enacted in 1995 many hundreds of hog, poultry and dairy storages have been constructed. This is among the strongest legislation in Canada.

Manure application will be in accordance with a government approved annual manure management plan. All manure application will be applied at an agronomic rate and in locations that meet the

requirements of the Livestock Manure & Mortalities Regulation. Manure fertilizer application will also be GIS mapped and supervised by a professional agronomist.

### **Water Quality**

Surface and groundwater protection is provided through environmental regulations and through monitoring and enforcement. Manure storages must be designed by a professional engineer and approved by Manitoba Sustainable Development.

Manure application is controlled by requiring manure management plans and soil, manure and source water testing. If an operation is over 300 animal units a manure management plan must be filed annually and approved by Manitoba Sustainable Development prior to manure application. Lifewind Farm will have sufficient land (acres) to inject/spread the manure for the proposed expansion. Solid manure generated by this facility will be stored on site and applied to the land during the spring/fall. All fields used for solid manure application will be part of the manure management plan.

The management of potential release and drainage of nutrients can be accomplished in several ways with best management practices for manure application.

- Ensuring crop rotation matches nutrient application (aggressive, high nutrient usage and deep-rooted crops following manure application)
- Nutrient application rates that are targeted for specific crops (rate of applied manure nutrients to match crop uptake requirements)
- Timing of nutrient application (best season) that meets highest or peak nutrient demand in crop utilization.
- Using good manure application technology with appropriate rate and placement of the nutrients.
- Implementation of annual 0"-24" soil testing to monitor residual nutrient levels
- Rotation of manure application fields.

**Odours**

Concerns were expressed about odours. Nearby residents should not experience any increase in odours with the expansion. By today's standards ours will not be a large farm and we will continue to use good farming practices as we have in the past 42 years of operation at this site. The expansion should have no impact on current or future residential property values.

As in the past, Lifewind Farm is committed to sustainable farming practices.

Sincerely

Chris and Monika Roulin  
Lifewind Farm