



TECHNICAL REVIEW COMMITTEE

A TECHNICAL REVIEW REPORT
PREPARED FOR

THE RURAL MUNICIPALITY
OF STE. ANNE

**De Jong Dairy/
Enterprises Louis Balcaen Ltd.**
SW ¼ 1-7-7 EPM

TRC 12 – 058

October 18, 2019

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); Land-Water Specialist, Environment Officer, Habitat Mitigation and Wildlife Land Specialist, Regional Wildlife Manager, Groundwater Specialist, Water Rights Licensing Technologist
- 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.

Livestock Technical Review Process



B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

To view a detailed description, go to:

<http://www.gov.mb.ca/mr/livestock/index.html>

Applicant: De Jong Dairy

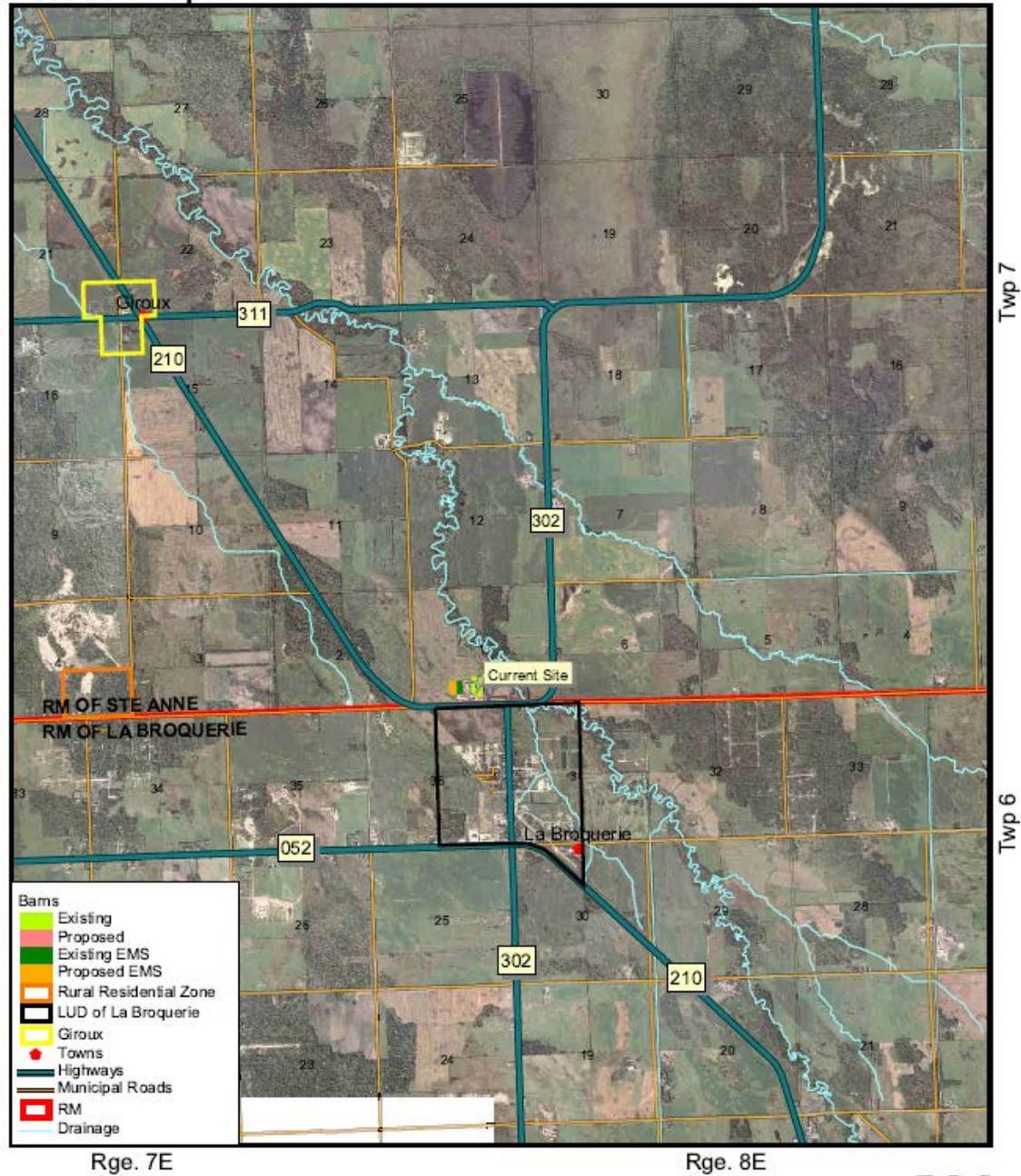
Site Location: SW ¼ 1-7-7 EPM.

Proposal: To expand the current dairy operation from 300 animals (600 Animal Units) to 920 animals (1840 Animal Units) within an animal confinement facility and a confined livestock area.

This will involve the following:

- Construction of an animal confinement facility
- Field storage of manure
- Consuming 30,203 imperial gallons of water per day (from a public pipeline)
- Composting mortalities
- Using the truck haul routes as shown in Maps below

Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc. Location Map

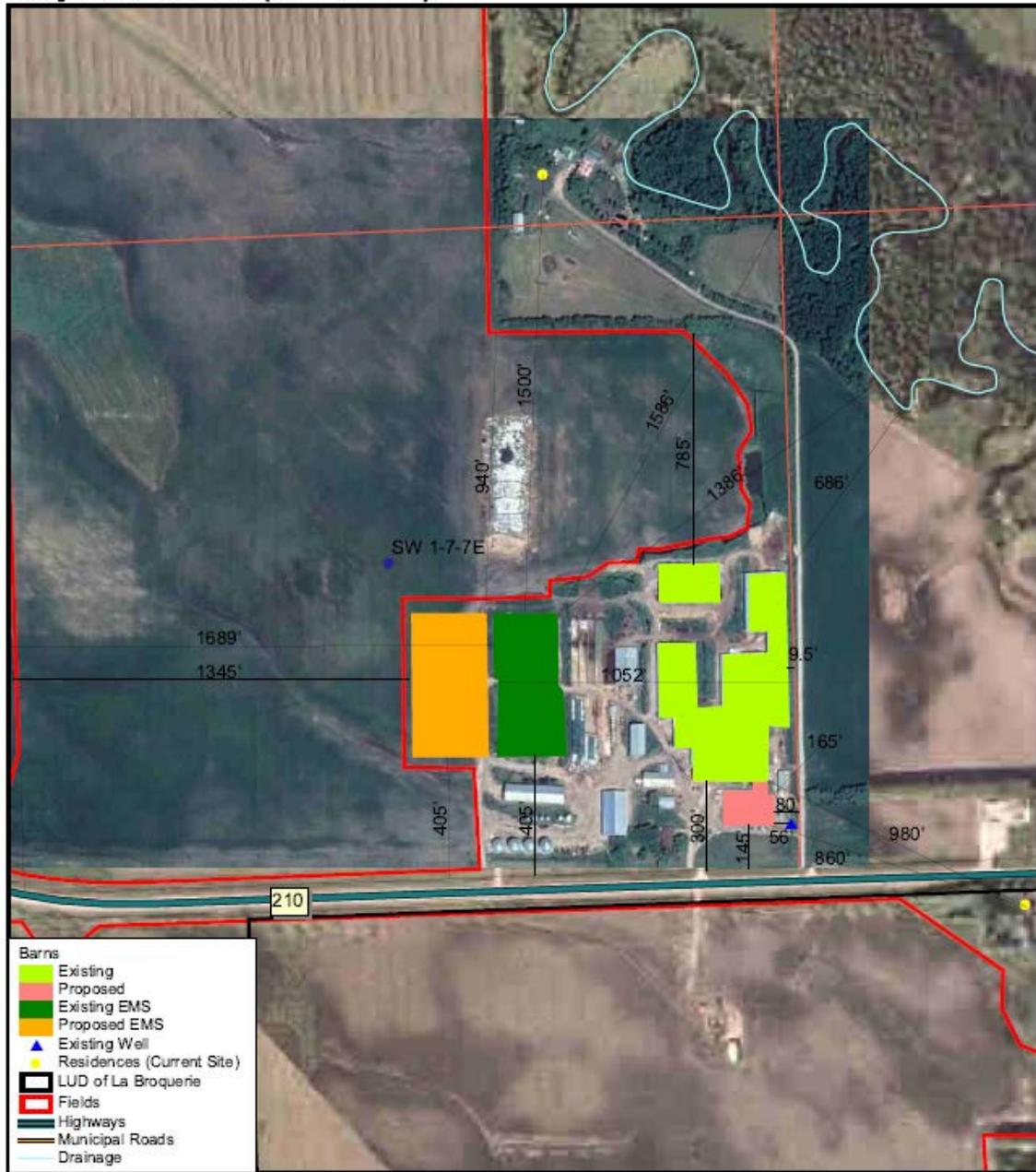


0 1 Miles
1:60000

Data Sources:
Fields drawn by Tone Ag in consultation with landowners, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website.
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994.
Sections are from Manitoba Land Initiative website.



**Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc.
Project Site Plan (SW 1-7-7E)**

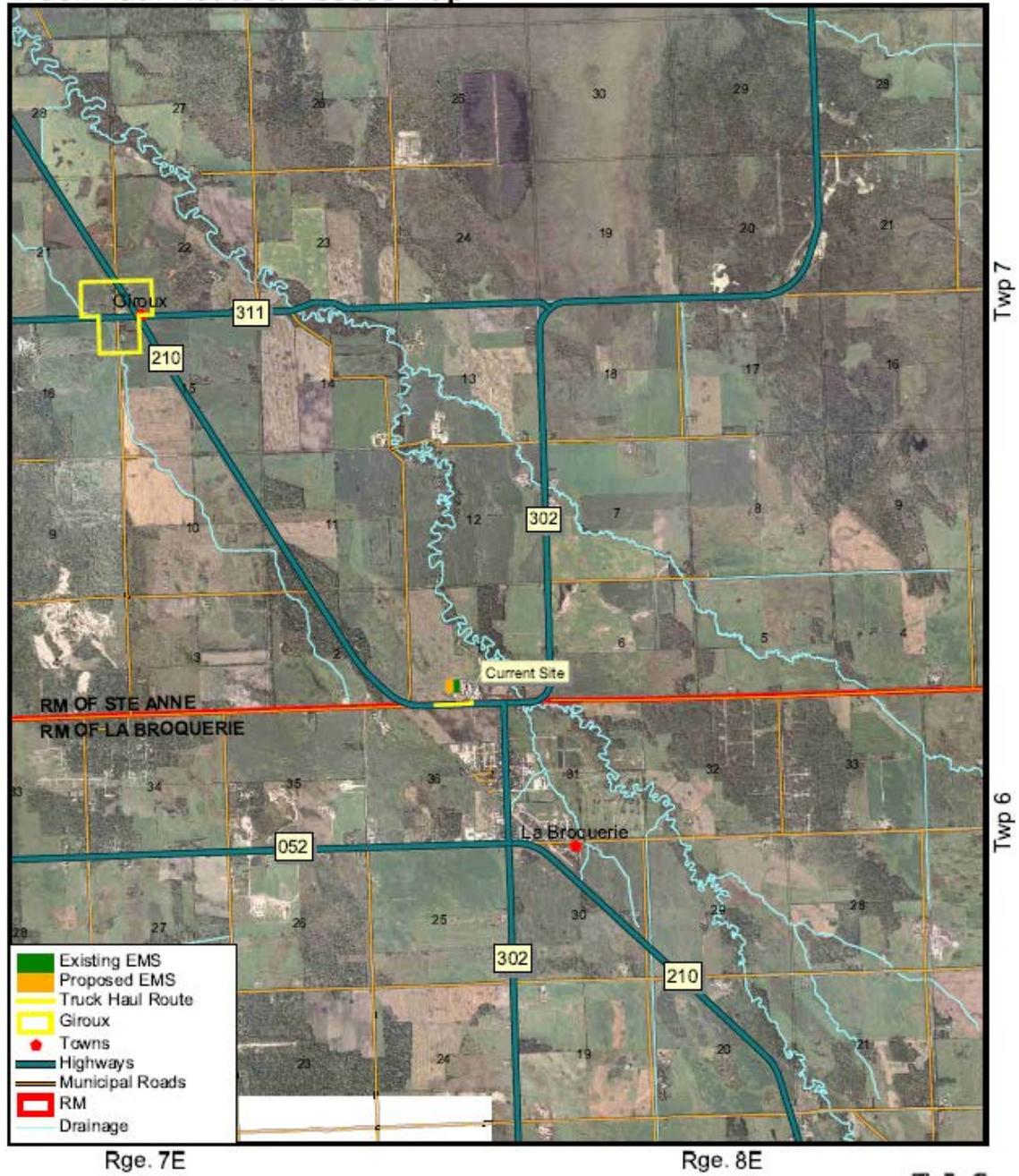


0 0.1 Miles
1:5500

Data Sources:
Fields drawn by Tone Ag in consultation with landowners, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website



**Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc.
Truck Haul Route & Access Map**



0 1 Miles
1:60000

Data Sources:
Fields drawn by Tone Ag in consultation with
landowner, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and
Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website



C. SITE ASSESSMENT OVERVIEW

Assessment Overview Table

Provincial Technical Overview of TRC 12-058 – De Jong Dairy			
Items Provided by Project Proponent	Confirmed	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 (animal confinement facility) 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	Semi-detailed soil survey indicates that Enterprises Louis Balcaen Ltd. is located on land that has been mapped as Agriculture Capability Classes 2 to 5.	Ag
4. Proposed Project Site Flood Risk Potential	X	The site is adjacent to the Seine River, which is prone to major overland flooding. During the spring 1997 flood, the proposed barn site was not affected by flooding. 1:200 year flood levels not available at this location.	MI
5. Identified 30,203 imperial gallons /day required for proposed operation	X	This project proposal has noted an estimated water usage that will exceed 25 000 litres per day, therefore a Water Rights Licence is required. The proponent currently holds a Water Rights Licence for the existing project, and the estimated water usage with the barn expansion remains below their licensed allocation. They are currently in good standing with the Water Use Licensing Section.	SD
6. Proposed measures to meet storage and application regulations for manure	X	The Environmental Approvals Branch of Sustainable Development is responsible for administering the Livestock Manure and Mortalities Management Regulation (LMMMR). The applicant must submit annual Manure Management Plans (MMP) in accordance with the LMMMR. This project will require an expansion of their existing earthen manure storage facility. The proponent is required to obtain a permit for expansion of the facility. Details on the requirements for MMPs, as well as design	SD

Provincial Technical Overview of TRC 12-058 – De Jong Dairy

Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept
		guidelines and application forms for manure storage facilities are available at: https://www.gov.mb.ca/sd/waste_management/livestock	
7. Proposed Project Site with suitable mortalities disposal methods (composting)	X	Sustainable Development recommends the operator notify Sustainable Development of their plans for their composting facilities so that we can ensure that they are acceptable to the director in accordance with Section 8(1) of the Livestock Manure and Mortalities Management Regulation.	SD
8. Proposed Project Site with acceptable odour control measures	X	<p>The proponent has indicated that a straw cover will be used. 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> <p>The Planning Act allows Municipal Councils to require a manure storage cover and the planting of a shelter belt as a condition of approval.</p>	Ag MR
9. Proposed Project Site that meets development plan and zoning by-law requirements	X	<p><i>The Planning Act</i> requires municipalities to issue development permits for any development on a site. All development must comply with the Zoning By-law and Development Plan. Any proposed development that does not meet the separation distances or setbacks requires Council approval and a public process to vary those requirements.</p> <p>The proposed livestock operation is on lands designated Rural Agriculture Area pursuant to the RM of Ste. Anne Development Plan By-Law No. 13-2007. The proposal complies with Development Plan Policies 5.5.1.a. / 5.5.2 / 5.5.3 / 5.5.5 / 5.5.6 / and 5.5.8 pertaining to the expansion of existing livestock operations. Policy 5.5.10 states that the siting of</p>	MR

Provincial Technical Overview of TRC 12-058 – De Jong Dairy

Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept
		<p>livestock operations shall maintain a setback of 1000 ft. from the Ordinary High Water Mark of the Seine River.</p> <p>The proposed livestock operation expansion is on lands zoned A, Agriculture pursuant to the RM of Ste. Anne Zoning By-Law No. 10-2010. It is important to note that there is a 1000 ft. Livestock Buffer overlay along the Seine River in accordance with Development Plan Policy 5.5.10, whereby the north-east portion of the title is located within. However, proposed new infrastructure are located away from this buffer area. <i>New/expanding livestock operations greater than or equal to 200AU</i> is a conditional use within the A, Agriculture zone, and requires a minimum site area of 80 acres. Minimum site widths are to be determined by Council. A conditional use order is required to permit this use. A variance order to vary the minimum site width may be required if deemed necessary by Council.</p>	
10. Proposed Project Site that is a sufficient distance from native prairie, Wildlife Managements Areas and Crown Land	X	The distance of the project exceeds 1 mile from Crown land. Lands Branch has no objection to the proposal.	SD
11. Proposed Spreadfields that are sufficient, and suitable for manure spreading	X	Enterprises Louis Balcaen Ltd. requires 1131 acres of suitable land for manure application. Enterprises Louis Balcaen Ltd. has exceeded the Provincial land requirement by providing 2130 suitable acres. A detailed explanation of the land assessment can be found in Appendix A.	Ag
12. Proposed Spreadfields with sufficient minimum setbacks on Spreadfields from natural features (water sources etc.)	X	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 and groundwater. See Appendix B.	SD
13. Proposed Spreadfields that have been secured by spread agreements	X	The proposal indicates that all of the land available for manure application is owned by Enterprises Louis Balcaen Ltd.	Ag

Provincial Technical Overview of TRC 12-058 – De Jong Dairy

Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept
14. Proposed Spreadfields that meet development plan and zoning by-law requirements	X	<p>All the proposed spread fields in the RM of Ste. Anne are located on lands designated Rural Agriculture Area or Rural Mixed Use Area. They meet the intents and policies of the RM of Ste. Anne Development Plan By-Law No. 13-2007.</p> <p>All the proposed spread fields in the RM of Ste. Anne are zoned A, Agriculture or RM, Rural Mixed, and complies with the RM of Ste. Anne Zoning By-Law No. 10-2010.</p> <p>The two proposed spread fields in the RM of La Broquerie are located on lands designated Agriculture 2 Area. They meet the intents and policies of the RM of La Broquerie Development Plan By-Law No. 20-2011.</p> <p>The two proposed spread fields in the RM of La Broquerie are zoned RA2 – Rural Area 2, and complies with the RM of La Broquerie Zoning By-Law No. 10-2013.</p>	MR
15. Proposed trucking routes and access points that may Provincial Roads or Provincial Trunk Highways	X	<p>The operation has frontage along PR 210 with two existing accesses. Please be advised that permit for the intensification of use of the existing accesses may be required pending further development and/or expansion of the agricultural operation.</p> <p>Please be advised that any structures placed within the controlled area of PR 210, PR 302, PR 311 and PTH 52 (125 feet from the edge of the right-of-way) requires a permit from our office. The contact is Sheena del Rosario at (204) 945-3457 or Sheena.DelRosario@gov.mb.ca. The placements of temporary drag lines or any other temporary machinery/equipment for manure application within the right-of-way of PR 210, PR 302, PR 311 and PTH 52 requires permission from our regional office in Steinbach. Please contact the Acting Regional Planning Technologist (Robert Fender) at (204) 371-6858 or Robert.Fender@gov.mb.ca. In addition, please notify the Acting Regional Planning Technologist for the placement of temporary draglines or other temporary equipment for manure application within the controlled area of PR 210, PR 302, PR 311 and PTH 52 (125 feet from the edge of the right-of-way).</p>	MI
16. Proposed trucking routes – local roads	X	Under <i>The Planning Act</i> , municipalities as a condition of approval may require Enterprises Louis Balcaen Ltd. to enter into a Development Agreement regarding the condition and upkeep of local roads used as truck haul routes.	MR

Provincial Technical Overview of TRC 12-058 – De Jong Dairy			
Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept
17. Declared Provincial Waterways	X	No impact to Provincial Waterways.	MI

Provincial Departments

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

D. PUBLIC COMMENTS & DISPOSITIONS

No public comments were received for this proposal.

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 Steinbach 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;and
 - b) post a copy of the notice of hearing on the affected property in accordance with Section 170 of *The Planning Act*.
- 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 Steinbach Community & Regional Planning Office);
 - and
 - c) every person who made representation at the hearing.

Council is welcome to contact Manitoba Sustainable Development Environmental Approvals Branch or Regional Environmental Compliance and Enforcement staff, with respect to the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) including compliance and enforcement issues.

Recommended Actions to Proponent

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.

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	918-0325
Shannon Beattie	Sustainable Development	Policy Analyst Sustainable Resource & Economic Policy Branch	792-6269
Jeff DiNella	Infrastructure	Senior Development Review Technologist Highway Planning and Design Branch	945-2664

Appendices

Appendix A: Land Base Requirements for De Jong Dairy/Enterprises Louis Balcaen Ltd. Manitoba Agriculture Clay Sawka and Petra Loro

In areas of lower livestock intensity such as the RM of Ste Anne, 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. In areas of high livestock intensity, specifically the RMs of Hanover and La Broquerie, the proponent must balance phosphorus excretion by the livestock with crop phosphorus removal over the long-term. The land requirement calculation takes into consideration typical nutrient excretion rates for dairy as well as realistic, long-term crop yields from the Manitoba Agricultural Services Corporation (MASC). The land assessment for Enterprises Louis Balcaen Ltd. is based on 920 mature cows (lactating and dry) plus all of the calves and replacement stock.

Most of the lands (84%) provided by Enterprises Louis Balcaen Ltd. are in Ste Anne with the remaining 16% being in La Broquerie. The land required for the manure nutrients is based on crop nitrogen utilization and 2 times crop phosphorus removal for lands in Ste Anne, and crop nitrogen utilization and phosphorus balance (1X) for the lands in La Broquerie. Additional suitable land is required for the manure in the RMs of Hanover and La Broquerie to provide greater assurance in areas with a high density of livestock that soil test phosphorus can be maintained below 60 ppm Olsen P over the long-term. Since the land in La Broquerie is based on phosphorus "balance", with appropriate manure management planning, it should be possible to maintain soil test phosphorus levels below 60 ppm Olsen P over the long-term. The land requirement in the RM of Ste Anne assumes more land can be brought into the Enterprises Louis Balcaen Ltd. manure management plan, should it be necessary in the future to reduce soil phosphorus build-up.

Land suitability is determined using soil testing for phosphorus and soil survey to establish the agriculture capability. Soil tests must be below 60 ppm Olsen P to be considered suitable. All of the soil test information provided meets the phosphorus requirements. According to semi-detailed soil survey, the agriculture capability of the land included in the proposal is predominantly Class 2 to 5 with some areas of Class 6. Class 2 to 5 soils are considered suitable for manure application. The associated limitations are wetness (W), droughtiness (M) and possibly stoniness (P). Manure application is prohibited on Class 6 soils. The proponent has indicated that manure application will be set back from Class 6 lands.

According to the above land calculation, Enterprises Louis Balcaen Ltd. requires 1131 acres of suitable land for manure application. Enterprises Louis Balcaen Ltd. has exceeded the Provincial land requirement by providing 2130 suitable acres.

Appendix B: Sustainable Development

Staff in the Water Science and Watershed Management Branch have reviewed the site assessment for the De Jong Dairy proposal in the RM of Ste. Anne and have the following comments:

- Nutrient management that avoids excess loss of nutrients to surface waters is 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 all liquid manure and incorporate all solid manure within 48 hours of broadcast. Injection of manure at appropriate rates poses lower environmental risk than other manure application methods. When solid manure is broadcast, immediate incorporation reduces losses of nitrogen via ammonia-volatilization and reduces the risk of N and P losses in runoff to surface waters. When incorporation is not possible (e.g. application to established perennial forage such as alfalfa), application timing can minimize runoff risk by avoiding periods when runoff risk is high. For example, broadcast manure between the first and second cuts of alfalfa, avoiding application when heavy rains are forecast or when soils are saturated or frozen and during the last few weeks before the soil freezes in fall.
- For most crops, manure contains an excess of phosphorus (P) compared to nitrogen (N) and as a result, application at N-based rates causes a buildup of soil P. Practices which reduce N losses from the manure improve the N:P ratio in the manure and help slow P buildup when manure is applied at N-based rates. The proponent is planning to apply the liquid manure with injection which will reduce N losses compared to broadcast methods.
- The proposal indicates plans to add another cell to the manure storage. When properly managed, a multi-cell lagoon allows for better utilization of manure nutrients than a single-cell lagoon. When application of nutrients is limited to crop requirements, there is a reduced risk of nitrogen and phosphorus loss to surface and groundwater.
- 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 and groundwater.
- 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 (P balance). 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 2,076 acres may be required for the long-term environmental sustainability of the operation. The proponent has identified 2,130 acres for manure application. Application to meet crop N requirements is estimated to use 1,081 acres. 2,076 acres is estimated to achieve P balance with current crop choices and yield potential.

- As phosphorus levels build up in soils, the concentration of phosphorus in runoff to surface waters increases. It is important to rotate manure application across all spread fields and whenever possible focus manure applications on fields with low Olsen-P soil test levels so as to prevent excessive P buildup when applying manure at rates above P balance (P removal by harvested crops).
- The provincial water well database indicates one production well on the proposed property at SW section of 1-7-7E. The draft report identified that this well is associated with the proposed livestock operation.
- 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: https://www.gov.mb.ca/sd/water/groundwater/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.