



TECHNICAL REVIEW COMMITTEE

A TECHNICAL REVIEW REPORT

PREPARED FOR

**THE RURAL MUNICIPALITY
OF GREY**

RIEDBOW DAIRY LTD.

NE 1/4 8-9-5 WPM

TRC 12-060

January 9, 2020

A. INTRODUCTION – THE TEAM

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

Agriculture and Resource Development (ARD)

- Livestock Environment Specialist
- Nutrient Management Specialist
- Business Development Specialist
- Agricultural Engineer
- Veterinarians
- Habitat Mitigation and Wildlife Land Specialist
- Regional Wildlife Manager
- Groundwater Specialist
- Land-Water Specialist

Municipal Relations (MR)

- Community Planners

Infrastructure (MI)

- Development Review Technologists
- Engineering and Operations Division
- Development Review Officers
- Water Management and Structures Division

Conservation and Climate (CC)

- Environment Officer
- 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 Co-ordinator (Senior Planner, MR) chairs the committee.

THE TECHNICAL REVIEW COMMITTEE (TRC) REPORT

Purpose of TRC Reports

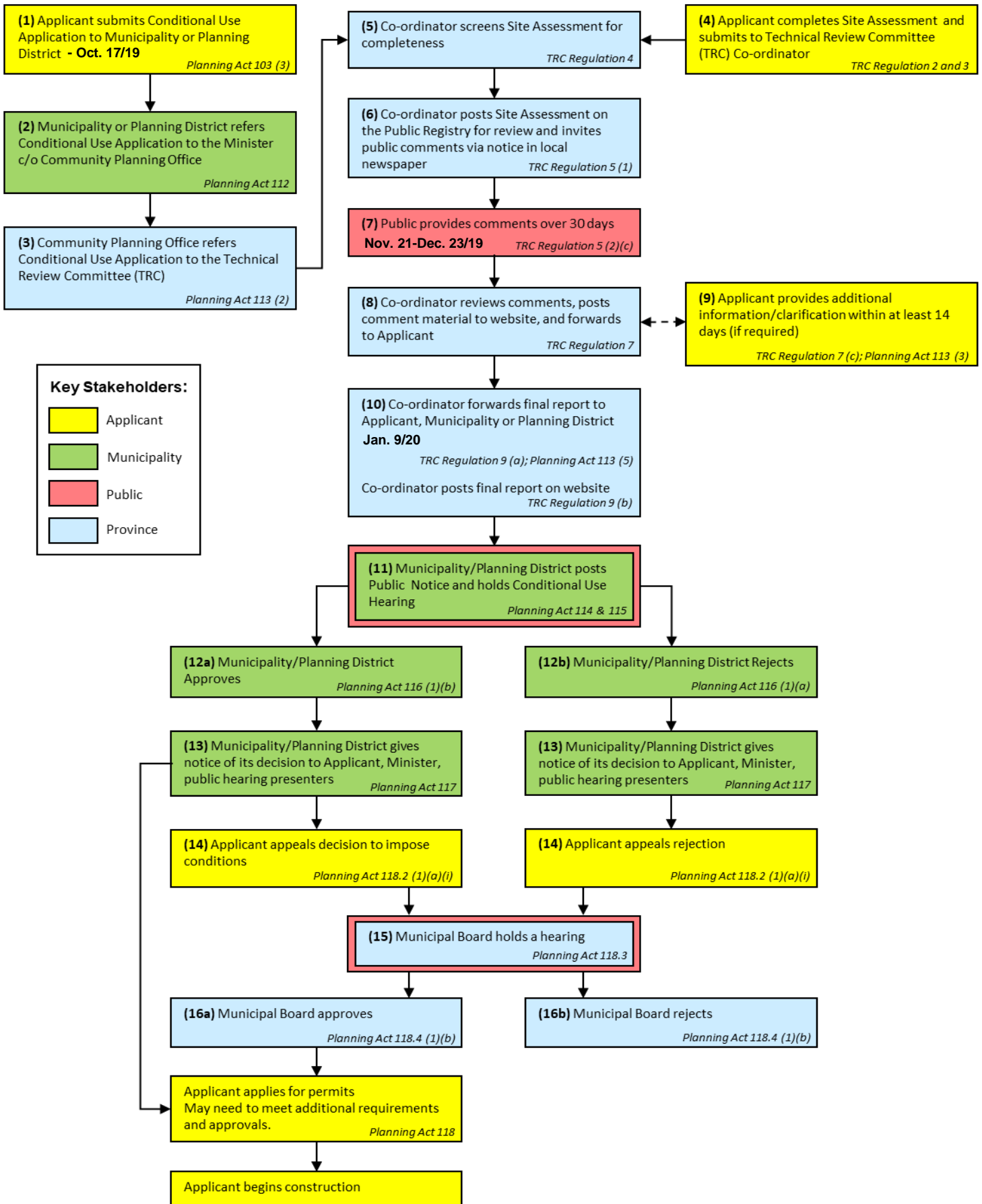
To provide objective, credible, technically-based assessments that:

- 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, measure 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

(November 1, 2019)



B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

Further information can be found at https://www.gov.mb.ca/mr/livestock/public_registries.html

Applicant: Riedbow Dairy Ltd

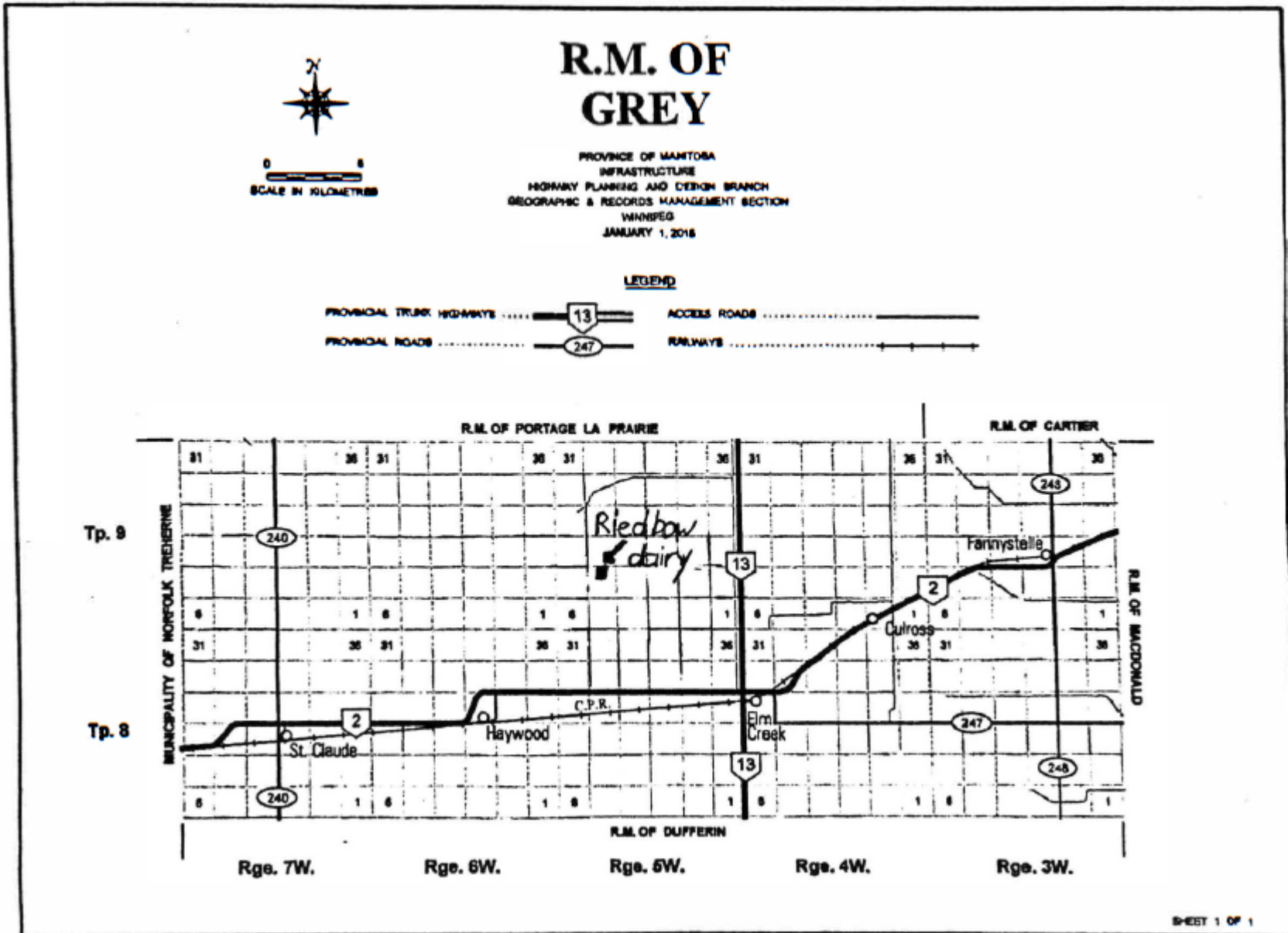
Site Location: NE ¼ 8-9-5 WPM. Refer to map below.

Proposal: To expand the current dairy operation from 800 mature cows (1600 Animal Units) to 1250 mature cows (1000 milking plus 250 dry) and 50 beef cows plus associated livestock (2563 Animal Units) within an animal confinement facility and a confined livestock area.

This will involve the following:

- Constructing additional housing for mature cows indoors and outside corrals for replacement heifers
- Use of existing field storage, steel tank(s) and under-barn concrete facility for manure storage
- Consuming 44,733 imperial gallons of water per day (from a public pipeline)
- Composting mortalities
- Using the truck haul routes as shown in map below

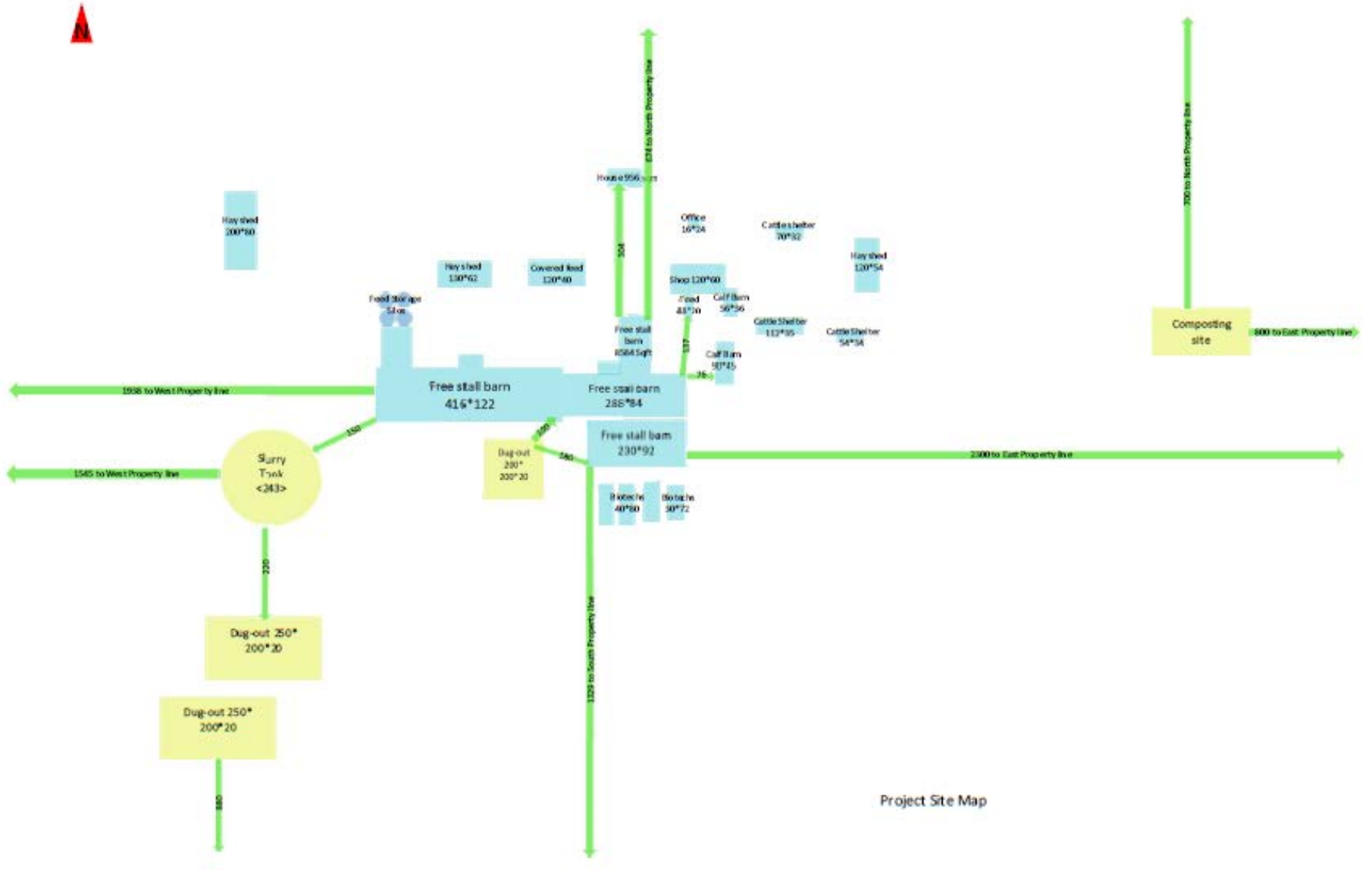
Location Map



Site map and map of dugouts



Site Plan Guide



Project Site Map







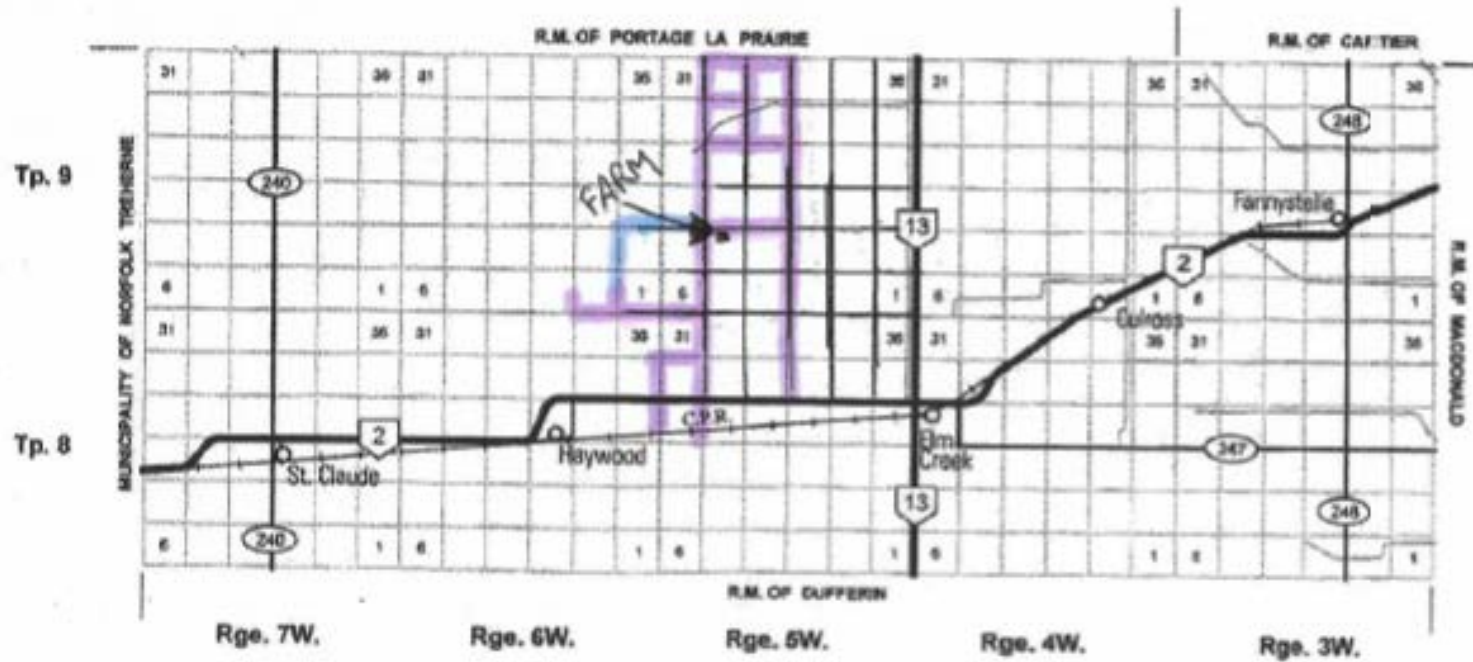
R.M. OF GREY

PROVINCE OF MANITOBA
 INFRASTRUCTURE
 HIGHWAY PLANNING AND DESIGN BRANCH
 GEOGRAPHIC & RECORDS MANAGEMENT SECTION
 WINNIPEG
 JANUARY 1, 2015

Truck haul routes
Riedbow Dairy

LEGEND

- PROVINCIAL TRUNK HIGHWAYS 
- PROVINCIAL ROAD 
- ACCESS ROADS 
- RAILWAYS 



C. SITE ASSESSMENT OVERVIEW

Provincial Technical Overview of TRC 12-061 – Riedbow Dairy Ltd.				
Item No.	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	Project clearly defined as (animal confinement facility and confined livestock area)	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. The construction, modification or expansion of a confined livestock area will require a permit from Manitoba Conservation and Climate.	MR
3	Demonstrated proposed project site physical suitability	X	Detailed soil survey indicates that Riedbow Dairy Ltd is located on land that has been mapped as Agriculture Capability Class 4M.	ARD
4	Demonstrated proposed project site flood risk potential	X	Water Management, Planning and Standards is not aware of any major, overland flooding in the vicinity of the proposed project.	MI
5	Identified 44,733 imperial gallons per 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 their existing groundwater fed dugout. If the groundwater usage is increasing, the proponent will be required to amend their existing Water Rights Licence.	CC
6	Proposed project site meets development plan and zoning by-law requirements	X	Grey-St. Claude Planning District Development Plan By-law 2/99 designates the Proposed Project Site as 'Agriculture'. Pertinent policies include 1.3.5.3, 1.3.5.6 and 1.3.5.9(a). The land is zoned "AG" Agricultural General Zone in the RM of Grey Zoning By-law 5/03. Livestock operations over 300 AU are a Conditional Use in the "AG" zone. The minimum site area is 80 acres. The minimum site width is 1,000 feet. The Proposed Project Site meets the requirements of the Development Plan and Zoning By-law.	MR

Provincial Technical Overview of TRC 12-061 – Riedbow Dairy Ltd.

Item No.	Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept.
7	Proposed measures that meet storage and application manure regulations	X	<p>The operation is planning to use an existing manure storage facility. Therefore, no concerns regarding construction, expansion or modification a manure storage facility.</p> <p>Should the need arise to construct, expand or modify a manure storage facility, a permit must be obtained prior to initiating any of the work in accordance with the Livestock Manure and Mortalities Management Regulation (LMMMR). An application for a permit to construct, expand or modify a manure storage must be submitted to Environmental Approval Branch of Sustainable Development (EABDirector@gov.mb.ca). Design guidelines and application forms are available at: https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html.</p>	CC
8	Proposed suitable mortalities disposal methods (composting)	X	The proponent has indicated that mortalities will be dealt with by composting. This is an acceptable disposal method under the LMMMR. The proponent has also indicated that a plan for mass mortalities is in place.	CC
9	Proposed acceptable odour control measures	X	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.	ARD
10	Proposed sufficient and suitable land for manure spreading with minimum setbacks from water sources	X	Manitoba Agriculture and Resource Development re-calculated the land requirement using 10-year crop yield averages from the Manitoba Agricultural Services Corporation (MASC) and the livestock inventory provided by Riedbow Dairy Ltd. Riedbow Dairy Ltd requires approximately 3505 acres of suitable land for manure application. Riedbow Dairy Ltd has satisfied the Provincial land requirement by providing 3721 suitable acres. A detailed explanation of the land assessment can be found in Appendix A.	ARD
11	Proposed sufficient and suitable land for manure spreading with minimum setbacks from water sources	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.	ARD

Provincial Technical Overview of TRC 12-061 – Riedbow Dairy Ltd.

Item No.	Items Provided by Project Proponent	Confirmed	Related Existing Provincial Safeguards	Dept.
12	Proposed spreadfields that have been secured by spread agreements	X	Land agreements were provided in the site assessment for all but 2 parcels. There are sufficient land agreements to satisfy the land requirement.	ARD
13	Proposed spreadfields that meet development plan and zoning by-law requirements	X	All Proposed Spread fields are designated for agricultural use ('Agriculture' in Grey-St.Claude Planning District By-law 2/99 or 'Agricultural' in Portage la Prairie Planning District By-law 1-2018). The subject land is zoned "AG" Agricultural General Zone in the RM of Grey Zoning By-law 5/03 and the RM of Portage la Prairie Zoning By-law 3096. As such, the Proposed Spread fields meet the requirements of the Development Plans and Zoning By-laws.	MR
14	Identified proposed trucking routes and access points that may impact Provincial Roads or Provincial Trunk Highways	X	<p>The proposed truck haul route will utilize municipal roads with existing access connection onto PTH 2 and PTH 13 . We do not anticipate significant increases in access use.</p> <p>Please be advised of the following:</p> <p>Manure spreading: please note that any structures placed within the controlled area of PTH 2 or PTH 13 (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 placement of temporary draglines or any other temporary machinery/equipment for manure application within the right-of-way of PTH 2 and PTH 13 requires permission from our regional office in Portage. Please contact the Regional Planning Technologist (Denise Stairs) at (204) 871-2239 or Denise.Stairs@gov.mb.ca. In addition, please notify the Regional Planning Technologist for the placement of temporary draglines or other temporary equipment for manure application within the controlled area of PTH 2 and PTH 13 (125 feet from the edge of the right-of-way).</p>	MI
15	Identified proposed trucking routes – local roads	X	The proposed trucking routes utilizes several municipal roads, primarily Road 48N, Road 50N, Road 27W and Road 29W. Other roads used include Road 47N, Road 52N, Road 53N, Road 54N, and Road 30 W.The municipality can require the applicant to enter into a development agreement for the upgrading or maintenance of the roads.	MR
16	Declared Provincial waterways	X	No anticipated impact upon Provincial waterways	MI

Provincial Departments: Agriculture and Resource Development (ARD), Conservation and Climate (CC), Infrastructure (MI), Municipal Relations (MR)

D. PUBLIC COMMENTS AND DISPOSITIONS

Public Comment Summary	
<p>Tim Frost</p>	<p>Opposed</p> <ul style="list-style-type: none"> - Resident who lives 1 mile north of operation - Has witnessed careless management of manure over past several years including <ul style="list-style-type: none"> • spreading liquid waste in areas where waste can access municipal drainage ditches • in commenter’s opinion, over application of manure on fields • liquid manure spillage on public roads and drainage ditches (image included) - Manure wagons cut deep ruts on the road making it difficult for cars to navigate - Public safety is one of commenter’s greatest concerns due to silage truck and tractors’ dangerous driving
<p>Sandra Sharpe</p> <p>NE 17-9-5W Rural Municipality of Grey Elm Creek, MB.</p>	<p>Concerned</p> <ul style="list-style-type: none"> - Concerns regarding air quality, odour from spreading - Contamination of ground water as the manure is loaded on the land - Concerned about animals drinking contaminated water and possible e-coli
<p>Don Hopkins</p> <p>20-9-5W Elm Creek, MB.</p>	<p>Concerned</p> <ul style="list-style-type: none"> - Concerns related to increased noise, increased damage to roads from manure application equipment, increased odours, increased dead stock management and the need for an increased land base for application of manure - There is already another dairy operation of similar size 2-3 miles of applicant, it is suspected land base capacity is already maximized - Concerned applicant is planning to acquire and clear marginal sandy lands with shallow water tables to manure application instead of acquiring more productive lands to the east - Would like assurance from the Province that the applicant will abide by all measures set by the Province, otherwise the proposal should be rejected
<p>Curtis Cavers, Denise Adrian- Cavers, Evelyn Adrian</p> <p>SW 21-9-5W Elm Creek, MB.</p>	<p>Concerned</p> <ul style="list-style-type: none"> - Expect the proponent and Province will ensure proponent has secured a suitable land base for manure application - Proponent’s previous application included manure management plan lands they had no agreement to use for spreading. This has created an erosion of trust. - There must be due diligence on the part of the Province to verify information provided by the applicant is true and accurate.
<p>Henry Dirks</p> <p>Box 32 Haywood, MB. ROG 0W0 36-8-6</p>	<p>Concerned</p> <ul style="list-style-type: none"> - Would like Riedbow Dairy to take responsibility for road collisions, and slow down then they approach yard sites.

See Appendix C for the proponent’s response to the public comments.

A full copy of the public comments as well as the proponent’s response may be viewed on the public registry at: https://www.gov.mb.ca/mr/livestock/public_registries.html

E. CONCLUSIONS AND RECOMMENDATIONS

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

1. As per Section 114(1) of *The Planning Act*, at least 14 days before the date of the hearing, Council must:
 - a) send notice of the hearing to
 - i. the applicant,
 - ii. the Minister (c/o the Portage la Prairie Community Planning Office),
 - iii. all adjacent planning districts and municipalities, and
 - iv. 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*.
2. 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.
3. 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 Portage la Prairie Community Planning Office), and
 - c) every person who made representation at the hearing.

Council is welcome to contact Manitoba Conservation and Climate – 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 licencing or permitting in order to minimize any identified risks to health, safety and the environment be undertaken.

That as per Section 118.2(2)(b), an applicant may appeal the following decisions of a board or council to the Municipal Board:

for an application for approval of a conditional use made in respect of a large-scale livestock operations:

- (i) a decision to reject the application,
- (ii) a decision to impose conditions.

F. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Department	Title <i>Branch</i>	Contact
Don Malinowski	Municipal Relations	Senior Planner <i>Community Planning Branch</i>	204-945-8353
Petra Loro	Agriculture and Resource Development	Livestock Environment Specialist <i>Agri-Resource Branch</i>	204-918-0325
Shannon Beattie	Conservation and Climate	Policy Analyst <i>Sustainable Resource & Economic Policy Branch</i>	204-792-6269
Jeff DiNella	Infrastructure	Senior Development Review Technologist <i>Highway Planning and Design Branch</i>	204-945-2664

Appendix A

**Clay Sawka and Petra Loro
Agri-Resources Branch
Manitoba Agriculture and Resource Development**

In areas of lower livestock intensity such as the RM of Grey, 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 assumes that more land can be brought into the Riedbow Dairy Ltd manure management plan, should it be necessary in the future. Manitoba Agriculture and Resource Development re-calculated the land requirement using 10-year crop yield averages from the Manitoba Agricultural Services Corporation (MASC) and the livestock inventory provided by Riedbow Dairy Ltd.

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. Three of the fields (totaling 300 acres) exceeded 60 ppm Olsen P and were removed from the suitable acreage. According to detailed soil survey, the agriculture capability of the land ranges from Class 1 to Class 6. Class 1 to 5 soils are considered suitable for manure application. The associated limitations are primarily wetness (W) and droughtiness (M) (i.e. wet sands) with a small proportion of density (D). Manure application is prohibited on Class 6 soils. The proponent has indicated that Class 6 soils will be "left out".

According to the above criteria, Riedbow Dairy Ltd requires approximately 3505 acres of suitable land for manure application. Riedbow Dairy Ltd has satisfied the Provincial land requirement by providing 3721 suitable acres.

Appendix B

**Water Science and Watershed Management Branch
Manitoba Agriculture and Resource Development**

Staff in the Water Science and Watershed Management Branch have reviewed the site assessment for the Riedbow Dairy Ltd proposal in the RM of Grey 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 broadcast all liquid manure and incorporate within 48 hours of broadcast wherever possible. When 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, forage grass or pasture), 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 incorporate manure on fields cropped to annual crops which will reduce N losses compared to broadcast without incorporation.
- 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 4,794 acres may be required for the long-term environmental sustainability of the operation. The proponent has identified 3,721 acres for manure application. Application to meet crop N requirements is estimated to use 3,505 acres.
- 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 Draft Report identifies that the water use for the proposed livestock operation is from a pipeline (public) and dugout. The provincial water well database does not show any well on the proposed property. However, there are other wells present within the spread field boundaries. If there are unused water wells on the site or spread fields these must be properly sealed. A sealed well report must be filed with the Groundwater Management Section of Agriculture and Resource Development for each well sealed.
- Information on well sealing and the sealed well report are available from Agriculture and Resource 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.

Appendix C

Proponent response

To the Technical Review Coordination Unit.

We would like to thank you for the opportunity to respond to some of the concerns that have been raised with regards to our application.

Environmental Concerns:

Every year we file our Manure Management Plan, which includes soil samples. This means; before we apply manure, we have to ask permission from the government. Depending on the soil sample and the crop we put in, they calculate the amount of manure we may apply. After the application, we have to confirm which field, how many acres, the application date and the application rate. This is all in their database. Manitoba Sustainable Development conducts regular audits to confirm compliance. In the Fall of 2019, we were scheduled for an audit as well.

We are aware of the 20m setback to drains and roadside ditches. Our general aim is to go above and beyond that, so we have 30m (98 feet) setback with the application of manure. All our employees who are involved with fieldwork know this and must follow this rule.

Our goal is to handle and spread the manure in an environmentally sustainable way because this will be a benefit for us, as well as the environment. We try to incorporate the manure on cultivated land as soon as possible. The sooner we can incorporate the manure, the more nutrients we keep in the soil, and the less fertilizer we have to apply. Weather conditions sometimes restrict us in doing so consistently. Dry conditions in the past couple years, have prevented us sometimes from doing so, due to the risk of erosion.

We do our best to avoid incidents, but when they happen, the 4Cs of Spill Management come into place: Control – Contain – Call – Clean. In the past we have strictly followed this procedure, which MANITOBA CONSERVATION AND WATER STEWARDSHIP can confirm.

Land base:

We have a more than sufficient amount of land for the application of manure¹. The land is mostly owned by Riedbow Dairy or a related family member. For land not owned by Riedbow Dairy, there are long term contracts in place, which legally enable Riedbow Dairy to spread manure on that land.

¹ See chapter 8.8 Site Assessment

Public Road Concerns:

Safety

Despite some people's perception, safety is a very serious matter for us. We strive to train and implement practices that help improve safety on our farm, as well as on the public roads. For example: It was by our request, that a stop sign got placed on road 29/50 intersection. Numbering our vehicles will help with identifying drivers, in case of a concern by a neighbour. During a summer season, we have several driver meetings, where we discuss safety, and possible concerns from our neighbours.

Equipment

In the last two years, we've invested in equipment to reduce the impact of the roads. Trailers behind a tractor haul twice the amount of feed, so we cut the number of loads on the roads in half. The load sizes are bigger, but the weight per square inch per tire is less, because the trailers contain more and bigger tires than our truck. Tractors are also less noisy than our trucks. The trailers we use have two steering and one fixed axle. In corners, they don't damage the roads nearly as much. In addition, tractors drive slower than trucks, which should help in reducing dust and noise, and thereby increase safety.

Dust

Previous Conditional Use agreement stipulated that we pay for dust control on road 29W till highway 2. We identified several additional yard sites on road 50N that we decided to voluntarily paid dust control for. We have noticed that the timing of dust control is not always at the same time of the year, and our harvest season is sometimes already halfway done. This is however out of our control.

Drag Line

Whenever conditions permit, we prefer to use a dragline to haul and incorporate our manure. Due to distance, and field nutrient levels, this is not always possible. In the Fall 2019, most of the manure was applied to the fields by drag line and incorporated at the same time as application. A custom worker did this for us. We don't have the equipment ourselves yet, but with more fields close around the farm, it becomes more interesting. This will reduce the amount of manure loads on the road, the possibility of runoff and will reduce the smell. The fields further away from the farm, we still have to haul with our manure tanks.

Future:

We agree that we operate a large dairy, but we are still very much a family farm. With the current family members, a number of children and grandchildren are interested in farming in the future.

Regards,

Ale Riedstra

Riedbow Dairy Ltd