TECHNICAL REVIEW COMMITTEE

A TECHNICAL REVIEW REPORT PREPARED FOR

THE RURAL MUNICIPALITY OF ROSSER

STURGEON CREEK HOLDING CO. LTD.

(MEADOW LANE COLONY)

SW 34-11-01WPM

April 8, 2014

INTRODUCTION

The Technical Review Committee (TRC) consists of representatives from the following provincial departments:

- Agriculture, Food and Rural Development (MAFRD);
- Conservation & Water Stewardship (CWS);
- Infrastructure & Transportation (MIT);
- Municipal Government (MMG); and
- Any other department that may have an interest, which may be consulted during the process.

The Technical Review Coordinator, Manitoba Municipal Government, chairs the committee.

The Technical Review Committee Report includes the following:

- An assessment of completeness and nature of the information contained in the Site Assessment provided by the project proponent that enables the TRC to conduct its review.
- A summary of public comments along with proponent and departmental responses, if any.
- Recommendations to the Municipal Council and proponent based upon a review of the information provided by the proponent.

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

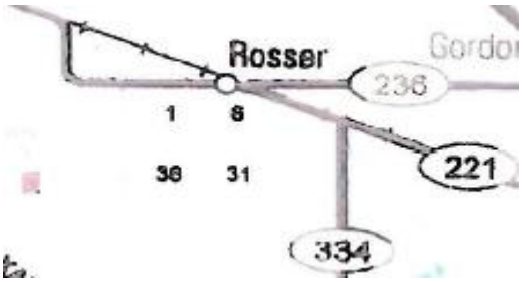
B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

To view a detailed description go to

http://www.gov.mb.ca/ia/livestock/trc-12-008.html

Applicant: Sturgeon Creek Holding Co. Ltd.

Site Location: Approximately 4 miles south west of Rosser, in the R.M. of Rosser (SW 34-11-01WPM) refer to map below.



Proposal: To establish a new poultry (broilers & layers) operation of 466 Animal Units. This will involve the following:

- Constructing a new broiler and layer barns
- Constructing a concrete bunker with roof for layer manure
- Field storage for broiler manure
- Consuming 3,200 imperial gallons of water per day
- Spreading manure over 2,440 suitable acres
- Composting dead animals on site
- Using the truck haul routes as shown below


ROSSER, MB
PROPOSED
DEVELOPMENT
<< TRUCK HAUL ROUTE >>
<< TRUCK HAUL ROUTE >>
St Francis Xavier, MB, Canada

C.SITE ASSESSMENT AUDIT

(THIS SECTION COMPLETED BY: ALL TRC MEMBERS)

The Audit of: ***Sturgeon Creek Holding Co. Ltd***

Site Assessment Sections	***Meets Requirements for TRC Review (type "X")***	***Comment***	***Reviewing Department***
2.0 Description of Operation	***X***	*The applicant has provided a detailed description of the current operation.*	***MMG***
3.0 Nature of Project	***X***	*The applicant has clearly defined the nature of the project.*	***MMG***
4.0 Proposed Type and Size of Operation	***X***	*The applicant is proposing a new 20,000 layer barn and a new 60,000 broiler barn.*	***MAFRD***
5.0 Animal Confinement Facilities	***X***	***Climate Change & Environmental Protection – Environmental Programs and Strategies:*** *Manitoba Conservation and Water Stewardship regulates the construction of manure storage facilities (MSF) by requiring the proponent to submit an "Application for Permit to Construct, Modify or Expand a Manure Storage Facility". The definition of MSF does not include gutter or pit (including under barn storage) used to contain liquid or semi-solid manure for less than 30 days for the purpose of moving the manure to a storage facility.*	***CWS***
6.0 Environmental Farm Planning	***X***	*The applicant has indicated that they do not have an environmental farm plan (EFP). The EFP program is voluntary; however, in the future, if the operation wants to access MAFRD's environmental incentive programming, a valid certificate of completion will be required.*	***MAFRD***
7.0 Water	***X***	***Climate Change & Environmental Protection - Environmental Programs and Strategies:*** *The proposed operation is a new facility and not yet constructed, therefore the producer has not submitted Source Water Monitoring analysis.* ***Water Stewardship – Water Science and Management:*** *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).*	***CWS***

The Audit of: Sturgeon Creek Holding Co. Ltd

Site Assessment Sections	*Meets Requirements for TRC Review (type "X")*	*Comment*	*Reviewing Department*
		Water Stewardship – Water Use Licensing: *Water Use Licensing has received an application from the colony and has no concerns.*	
8.0 Manure Related	***X***	***Climate Change & Environmental Protection - Environmental Programs and Strategies:*** *The proposed operation is a new facility and not yet constructed, therefore the producer has not submitted a Manure Management Plan for the 2014 crop year.* *In accordance with the Livestock Manure and Mortalities Management Regulation, field storage of manure is acceptable provided solid manure cannot escape the field storage area.* ***Climate Change & Environmental Protection – Environmental Approvals:*** *Environmental Approvals Branch does not have any concerns provided that the proposed manure storage facility for the layers will be constructed under the authority of a permit to construct.* ***Climate Change & Environmental Protection – Environmental Compliance and Enforcement:*** *Manitoba Conservation and Water Stewardship Compliance and Enforcement Branch has reviewed this proposal and has no concerns at this time.*	***CWS***
8.1 Land Available/Required for Manure Application	***X***	***MAFRD*** *MAFRD has done a detailed land base requirement calculation. Explanation of the calculation is provided in the Appendix at the end of this report.* *Based on MAFRD's assessment, in order to satisfy the Province's land base requirement, Meadow Lane Colony requires a minimum of 854 acres of suitable land. This is less than the land requirement estimated by the proponent due to the assumption that the broiler flock will be mixed sex which is standard practice in Manitoba. To ensure the long-term environmental sustainability of the operation, Meadow Lane Colony may require up to a total of 1708 acres to balance manure P with crop P removal over the life of the operation.* *Meadow Lane Colony has identified 2440 suitable acres for manure application. As such, Meadow Lane Colony has exceeded the current Provincial land base requirement and demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used.* ***Climate Change & Environmental Protection - Environmental Programs and Strategies:*** *Manitoba Conservation and Water Stewardship has obtained*	***CWS MMG MAFRD***

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Site Assessment Sections	*Meets Requirements for TRC Review (type "X")*	*Comment*	*Reviewing Department*
		information on average phosphorus output from livestock and expected crop removal rates of phosphorus as well as Census data in order to estimate the phosphorus budget in each Rural Municipality within agro-Manitoba. "Certain Areas", are defined by the Livestock Manure and Mortalities Management Regulation as areas where the amount of phosphorus in the manure produced annually by livestock in an area of not less than 93.24 km^2 is greater than two times the annual crop removal rate of P_2O_5 in that area. The Rural Municipality of Rosser is not considered to be a "certain area". *Manitoba Conservation and Water Stewardship requires permits for construction of manure storage facilities. As part of the review, operators must identify manure spread fields. In areas of Manitoba which are not considered to be "certain areas" as defined above, Manitoba Conservation and Water Stewardship's current policy for the construction permit is to require an operation to demonstrate access to sufficient land to apply manure at a rate equivalent to 2 X the crop removal rate of phosphorus. The proponent has indicated that sufficient land is available and suitable for manure application; therefore Manitoba Conservation and Water Stewardship is sufficiently satisfied with the proposal for broiler/layer operation in this respect.* *The Site Assessment has identified proposed spread fields located in the Red River Valley Special Management Area (RRVSMA). Application of manure to spread fields in the RRVSMA must be done in compliance with Section 14.2 of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98).* ***Water Stewardship – Water Science and Management:*** *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 excessive build-up in soils. Consequently, sufficient land base or economically achievable treatment technologies must be available so that manure can be applied at no more than 1 times crop removal rates. Over the short-term, regulations allow manure to be applied at no more than 2 times crop removal rates when soil-test phosphorus is between 60 ppm and 120 ppm. Once phosphorus levels reach 120 ppm, applications of manure would be restricted to no more than 1 times crop removal rates. It should be noted that soil-test phosphorus levels of 60 ppm are well above phosphorus needs for most crops (over 20*	

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Site Assessment Sections	***Meets Requirements for TRC Review (type "X")***	***Comment***	***Reviewing Department***
		ppm is usually considered very high), and that as excess phosphorus levels build up in soils, greater losses occur to surface and ground water. For long-term planning purposes, the proponent needs to have sufficient land available to ensure that manure can be applied at 1 times crop removal. *Sufficient land (2440 acres) has been identified by the proponent to ensure that manure can be applied at 1 times crop removal over the long term.* ***Department of Municipal Government:*** *The identified spread fields are compliant with the applicable development plans and zoning by-laws. The subject lands are designated "Agricultural Area" within the South Interlake Planning District Development Plan By-law No. 3/10 and "Rural General Policy Area" within the White Horse Planning District Development Plan By-law No. 1-2008; and located in the "A80" Agriculture Zone within the RM of Rosser Zoning By-law No. 4-85 and the "AG" Agricultural General Zone within the RM of St. François Xavier Zoning By-law No. 4-2011.*	
9.0 Mortalities Disposal	***X***	***Climate Change & Environmental Protection – Environmental Programs and Strategies:*** *In accordance with the Livestock Manure and Mortalities Management Regulation 42/98, mortalities must be kept in a secure storage room, covered container or secure location; and continuously frozen or refrigerated, if not disposed of within 48 hours after death.* *Composting mortalities is acceptable provided the composting site is located at least 100-meters from any surface watercourse, sinkhole, spring or well, and the operation's boundaries. Mortalities must be composted in a manner that does not cause pollution of surface water, groundwater or soil, and the composting facility and process must be acceptable to the Director of Manitoba Conservation and Water Stewardship.* *Composting mortalities in a manure storage facility must be done in compliance with the LMMMR. Composting activities must be disclosed in the MSF permit application to ensure adequate sizing of the facility. Separation of the composted material from the manure must be maintained during the composting process. After the composting process is complete, the proponent must keep the compost separate from the manure, or, if they mix the compost with the manure, all the material must be treated as manure.* *Disposing of end of lay hens requires a pre-approved plan for disposal.* *Application of composted mortalities to land is prohibited*	***CWS***

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Site Assessment Sections	***Meets Requirements for TRC Review (type "X")***	***Comment***	***Reviewing Department***
		between November 10 of one year and April 10 of the following year. *The proponent should prepare a contingency plan in case of a catastrophic event resulting in mass mortalities.*	
10.0 Project Site Description	***X***	*The proposed livestock operation generally complies with the applicable policies of the "A" Agricultural Area designation pursuant to the South Interlake Planning District Development Plan By-law 3/10.* *The property is zoned "A80" Agricultural Zone within the RM of Rosser Zoning By-law 4-85. The site area and width meet the minimum requirements of the A80 zone. Siting criteria for structures related to the livestock operation are provided in Part V – Agricultural Zones, Section 11(2). The proposed site appears to exceed the required setback distances to single residences and designated areas for livestock operations.*	***MMG (CRP Regional Office)***
10.0 Project Site Description (Native Prairie, Wildlife Mgt Areas, Crown Land)	***X***	***Conservation Programs – Wildlife & Ecosystem Protection:*** *The Conservation Data Centre has no concerns* ***Regional Programs – Central Region:*** *Regional Programs has reviewed the Sturgeon Creek Holding Company Site Assessment and have no resource related comments to offer.* ***Conservation & Water Stewardship – Lands Branch:*** *Lands Management & Planning Section of Manitoba Conservation and Water Stewardship has no comments as no Crown lands are impacted by this proposal.*	***CWS***
11.0 Truck Haul Routes and Access Points	***X***	This site does not front onto a provincial highway nor does it directly access onto a provincial highway. As such there are no concerns with this proposal. Please inform the applicant that PR 236 can carry Class B1 loading and PTH 26 can handle Class A1 loading.	***MIT***

CWS – Conservation and Water Stewardship

MAFRD- Manitoba Agriculture, Food and Rural Development

MIT – Manitoba Infrastructure and Transportation

MMG- Municipal Government

D. PUBLIC COMMENTS & DISPOSITIONS

N/A

E.CONCLUSIONS & RECOMMENDATIONS

Overall Conclusion

- The proposed operation meets all of the land use planning requirements related to the R.M. of Rosser and R.M. of St. Francois Xavier.
- Based on MAFRD's calculation, in order to satisfy the Province's land base requirement, Meadow Lane Colony requires a minimum of 854 acres of suitable land. To ensure the long-term environmental sustainability of the operation, however, Meadow Lane Colony may require up to a total of 1708 acres to balance manure P with crop P removal over the life of the operation.
- Meadow Lane Colony has identified 2440 suitable acres for manure application. As such, Meadow Lane Colony has exceeded the current Provincial land base requirement and demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used.

  Based on the Site Assessment submitted by the producer and available information, the Technical Review Committee recommends the following appropriate practices, measures and safeguards be taken in addition to 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.

Recommended Actions to Council

- As per Section 114(1) of The Planning Act, Council must set a date for a Conditional Use hearing which must be at least 30 days after it receives this report
- 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;

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.

- Council should specify the type(s) of operation, legal land location, number of animals in each livestock category and total animals 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 should specify in its Conditional Use Order, the number of head of each subspecies and the legal location of the animal confinement area(s);

Recommended Actions to Proponent

- The proponent is required to submit an ``*Application for Permit to Construct, Modify, or Expand a Manure Storage Facility*" to Manitoba Conservation and Water Stewardship for each Manure Storage Facility (MSF) to be constructed;
- Construction of a MSF shall not commence until a permit is granted by the Director, and adequate notification is given to Manitoba Conservation and Water Stewardship;
- The proponent shall ensure the MSF, alone or in combination with other MSFs located on the property of the agricultural operation, is/are of sufficient capacity to store all livestock manure produced and used by the agricultural operation;
- Composting activities must be disclosed in the MSF permit application to ensure adequate sizing of the facility.
- Separation of the composted material from the manure must be maintained during the composting process. After the composting process is complete, the proponent must to keep the compost separate from the manure, or, if the compost is combined with the manure, all the material must be treated as manure.
- Livestock manure shall be stored until such a time that it can be applied as fertilizer.
- The proponent must submit a Manure Management Plan (MMP) annually to Manitoba Conservation and Water Stewardship in accordance with the *Livestock Manure and Mortalities Management Regulation* (MR 42/98).

- In accordance with the *Livestock Manure and Mortalities Management Regulation*, the proponent must annually submit to Manitoba Conservation and Water Stewardship analytical results from samples of drinking water provided to their livestock.
- Disposing of end of lay hens requires a pre-approved plan for disposal.
- The proponent should prepare a contingency plan in the event of a catastrophic event resulting in mass mortalities.

The overall conclusion represents the consensus of the TRC Members.

F. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Department	Title	Address	Telephone
Don Malinowski Chair	Municipal Government	Senior Planner, TRC Community & Regional Planning Branch	604-800 Portage Avenue Winnipeg	945-8353
Andrea Bergman	Conservation and Water Stewardship	Technical Review Officer Environmental Programs & Strategies Branch	1007 Century St Winnipeg	945-4384
Petra Loro	Agriculture, Food & Rural Development	Livestock Environment Specialist	545 University Crescent Winnipeg	945-3869
Heinz Lausmann	Infrastructure and Transportation	Senior Highway Planning Engineer Highway Planning and Design Branch	1420-215 Garry Street Winnipeg	945-2664

Appendix
Land Base Assessment for Meadow Lane Colony TRC Report
April 3, 2014
Petra Loro, Livestock Environment Specialist

Manitoba Agriculture, Food and Rural Development (MAFRD) assessed the land base for manure application as provided by the proponent in order to provide Council with the assurance that adequate suitable land is available for this operation. The Province will require sufficient suitable land when the proponent applies for the manure storage facility permit.

In the Rural Municipality of Rosser, it is currently the Government of Manitoba's policy to require enough suitable land to allow manure application at a rate that does not exceed the nitrogen uptake or 2 times the phosphorus that will be removed from the field in the harvested portion of the crop. Phosphorus typically determines the land base requirement. Only lands with Agriculture Capability Class 1 to 5 and recent soil tests demonstrating phosphorus (P) levels below 60 ppm Olsen P are considered suitable. Buffer strips and setbacks must be excluded.

Meadow Lane Colony has submitted 2440 acres of land below 60 ppm Olsen P for manure application. All of this land is Agriculture Capability Class 2 and 3 (prime agricultural land) based on detailed and reconnaissance soil survey. The soil survey information indicates the land has slight to moderate limitations due to wetness (W) and salinity (N).

MAFRD has calculated the land base requirement considering 60,000 broilers (assuming 50% male and 50% female), 20,000 layers, N and P excretion rates, Meadow Lane Colony's expected cropping system, a 20% N loss during storage and the crop nitrogen *uptake* and phosphorus (expressed as P_2O_5) removal rates. Long-term (2003-2012) MASC yield averages for the RM of Rosser were used. Based on MAFRD's calculation, in order to satisfy the Province's land base requirement, Meadow Lane Colony requires a minimum of 854 acres of suitable land. This is less than the land requirement estimated by the proponent due to the assumption that the broiler flock will be mixed sex which is standard practice in Manitoba. To ensure the long-term environmental sustainability of the operation, however, Meadow Lane Colony may require up to a total of 1708 acres to balance manure P with crop P removal over the life of the operation.

Meadow Lane Colony has identified 2440 suitable acres for manure application. As such, Meadow Lane Colony has exceeded the current Provincial land base requirement and demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used.

MAFRD also reviewed the soil test reports provided by the operation. In Manitoba, manure application to land is regulated on the basis of residual soil nitrate-N limits and phosphorus thresholds. The fields identified for manure application include Class 2 and 3 soils (excluding 3M and 3MW) for which the residual soil nitrate-N limit is 140 lbs/acre. None of the soil test reports exceed this limit.

All of the fields identified for manure application are currently below 60 ppm Olsen P. Manure can be applied to meet the nitrogen requirements of the crop on these fields. However, this often results in more phosphorus being applied than is removed from the field and a build-up of soil test phosphorus. No more than 2 times crop removal rates for phosphorus can be applied when soil-test phosphorus is between 60 ppm and 120 ppm. If soil test levels reach 120 ppm Olsen P, manure application rates will be restricted to no more phosphorus than what is removed in the harvested portion of the crop over the course of a rotation.

Actual manure application rates will be determined in the manure management plan submitted to Manitoba Conservation and Water Stewardship. Although the regulations allow for greater build-up of soil test P, since Meadow Lane Colony has enough land to balance manure application rates with crop P_2O_5 removal, it is recommended that Meadow Lane Colony manage the fertility of the fields that receive manure to keep all soil tests below 60 ppm P for the long-term environmental sustainability of the operation.

MAFRD provides extension support and computer software to help producers complete manure management plans. If the operation uses professional services to prepare the plan, manure management planners must successfully complete the Manure Management Planners Course offered by the Assiniboine Community College and be a member in good standing in the Manitoba Institute of Agrologists or a Certified Crop Advisor. If the services of a Commercial Manure Applicator are obtained to apply the manure, the applicator must be trained by the Assiniboine Community College and licensed by MAFRD.

Table 1 (DRAFT)

Setback requirements for livestock manure application on land adjacent to surface waters or a groundwater feature. Setback requirements extracted from the Livestock Manure and Mortalities Management Regulation (MR 42/98) and the Nutrient Management Regulation (MR 62/2008).

Surface water or Groundwater Feature		Manure Application Method	Manure Application Setback Width (metres) with Permanently Vegetated Buffer Width (metres)	Manure Application Setback Width (metres) with no Permanently Vegetated Buffer	Regulation Source for Setback Width
Lakes	Designated as vulnerable in Nutrient Management Regulation schedule[1]	Any method	30 m setback, consisting of 30 m permanently vegetated buffer	35 m setback	Nutrient Management Regulation (MR 62/2008)
	-	Injection or low-level application followed by immediate incorporation	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback	Livestock Manure and Mortalities Management Regulation (MR 42/98)
		High-level broadcast or low-level application without incorporation	30 m setback, including 15 m permanently vegetated buffer	35 m setback	
Rivers, creeks, streams and large unbermed drains, designated as an Order 3 or greater drain on a plan of Manitoba Water Stewardship, Planning and Coordination, that shows designations of drains	Designated as vulnerable in Nutrient Management Regulation schedule[1]	Any method	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback	Nutrient Management Regulation (MR 62/2008)
	-	Injection or low-level application followed by immediate incorporation	3 m setback, consisting of 3 m permanently vegetated buffer	8 m setback	Livestock Manure and Mortalities Management Regulation (MR 42/98)
		High-level broadcast or low-level application without incorporation	10 m setback, including 3 m permanently vegetated buffer	15 m setback	
Groundwater feature[2]	-	Any method	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback	Nutrient Management Regulation (MR 62/2008)
Major wetland, bog, marsh or swamp[3] and constructed storm water retention ponds	-	Any method	3 m setback, consisting of 3 m permanently vegetated buffer	8 m setback	
Wetland, bog, marsh or swamp not defined as major	-	Any method	Distance between the water's edge and the high water mark		
Roadside ditch or an Order 1 or 2 drain	-	Any method	No direct application to ditches and Order 1 and 2 drains		

[1] Designated as vulnerable if listed in the schedule in the Nutrient Management Regulation under the Water Protection Act.

[2] Groundwater feature means a sinkhole, a spring or a well other than a monitoring well.

[3] As defined in 1(2) in the Nutrient Management Regulation under the Water Protection Act. For the purposes of this regulation, a wetland, bog, marsh or swamp is major if it:

- has an area greater than two hectares (4.94 acres)
- is connected to one or more downstream water bodies or groundwater features
- contains standing water or saturated soils for periods of time sufficient to support the development of hydrophytic vegetation.