

## Part 2 – Technical Requirements

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

<b>NRCB USE ONLY</b>	Application number <b>RA24005</b>	Legal land description <b>SE 21-41-24 W4M</b>
<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Registration <input type="checkbox"/> Authorization <input type="checkbox"/> Amendment		

### APPLICATION DISCLOSURE

This information is collected under the authority of the *Agricultural Operation Practices Act (AOPA)*, and is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This information is public unless the NRCB grants a written request that certain sections remain private.

**Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.**

I, the applicant, or applicant's agent, have read and understand the statements above, and I acknowledge that the information provided in this application is true to the best of my knowledge.

March 22 2024

Date of signing

Wilpshaar Dairy Ltd

Corporate name (if applicable)

Signature

Herco & Kirstin Wilpshaar

Print name

### GENERAL INFORMATION REQUIREMENTS

**Proposed facilities:** list all proposed confined feeding operation facilities and their dimensions. Indicate whether any of the proposed facilities are additions to existing facilities. (attach additional pages if needed)

Proposed facilities	Dimensions (m) (length, width, and depth)
Expanding Free stall Barn	88.1 m x 32 m
New Lagoon      Referred to as a synthetically lined liquid manure storage	60 m x 60 m x 4.5 m

**Existing facilities:** list ALL existing confined feeding operation facilities and their dimensions

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Heifer barn	67 m x 30.5 m	Checked
Dry cow shed	29.75 m x 16 m	Checked
Free stall barn	92.7 m x 32 m	Checked

**NRCB USE ONLY**

Dairy CFO permitted for 250 Milking cows (plus replacements) under Approval RA12002. Application seeks to expand the dairy CFO to 500 milking cows (plus replacements), to expand the free stall barn and construct a new synthetically lined liquid manure storage



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If a new facility is replacing an old facility, please explain what will happen to the old facility and when.  N/A

N/A

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Construction completion date for proposed facilities November 2025

**Additional information**

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**Livestock numbers:** Complete only if livestock numbers are different from what was identified in the Part 1 application. Note: if livestock numbers increase in your Part 2 application, a new Part 1 application must be submitted which may result in a loss of priority for minimum distance separation (MDS).

Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation)	Permitted number	Proposed increase or decrease in number (if applicable)	Total
Dairy Cows + replacements	250	250	500

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### **DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE**

issued by Alberta Environment and Protected Areas (EPA) for a confined feeding operation (CFO)

*Date and sign one of the following four options*

#### **OPTION 1: Applying through the NRCB for both the AOPA permit and the Water Act licence**

I **DO** want my water licence application coupled to my AOPA permit application.

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*

#### **OPTION 2: Processing the AOPA permit and Water Act licence separately**

1. I (we) acknowledge that the CFO will need a new water licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant the *Water Act* licence application.
5. I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water licence application number(s) 00403525-00-00

Signed this 22 day of March, 2024.

\_\_\_\_\_  
*Signature of Applicant or Agent*

#### **OPTION 3: Additional water licence not required**

1. I (we) declare that the CFO will not need a new licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. **Provide:** Water license number(s) or water conveyance agreement details \_\_\_\_\_

Signed this 22 day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*

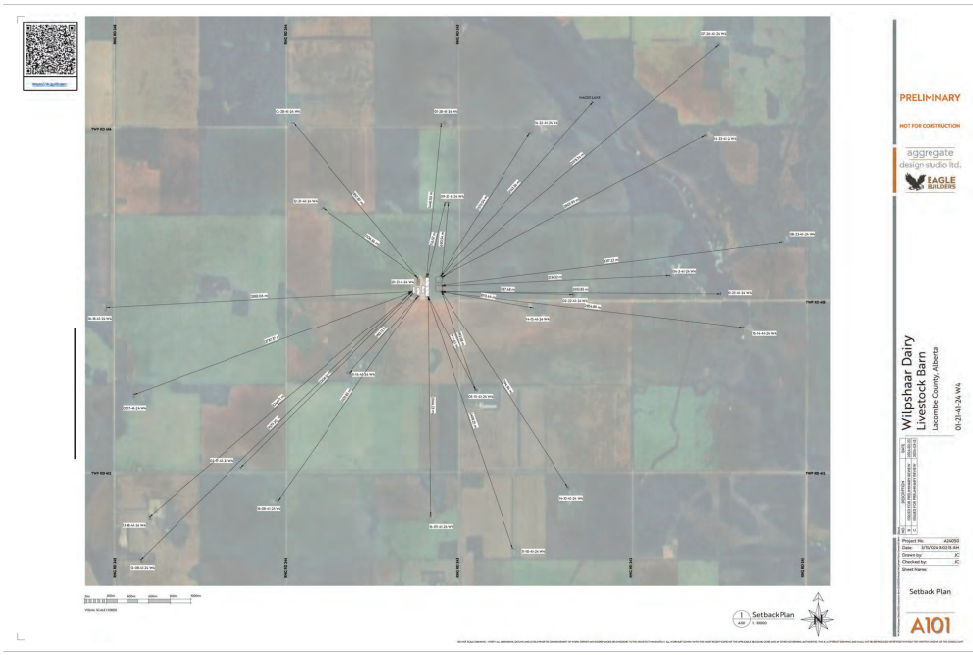
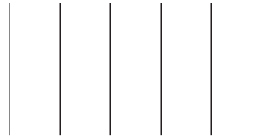
## Part 2 – Technical Requirements

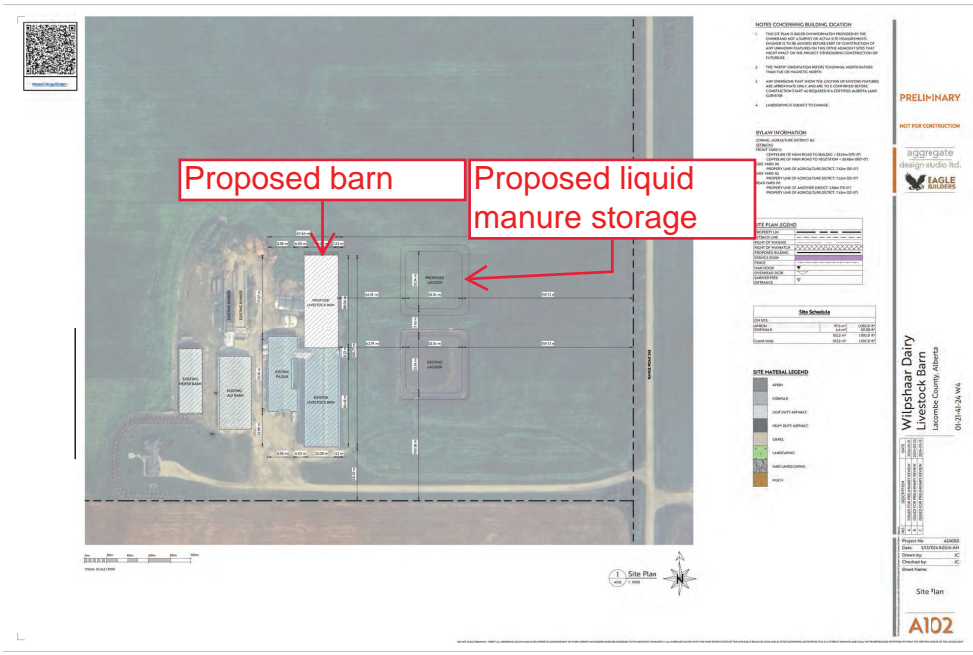
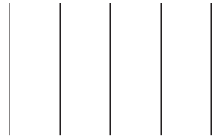
### **OPTION 4: Uncertain if Water Act licence is needed; acknowledgement of risk (for existing CFOs only)**

1. At this time, I (we) do not know whether a new water licence is needed from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. If a new *Water Act* licence is needed, I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with additional livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant my *Water Act* licence application, if a new water licence is needed.
5. I (we) acknowledge that any such construction or livestock increase will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water license number(s) or water conveyance agreement details \_\_\_\_\_

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*





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Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)



### GENERAL ENVIRONMENTAL INFORMATION

*(complete this section for the worst case of the existing facility which is the closest to water bodies or water wells and for each of the proposed facilities)*

Facility description / name *(as indicated on site plan)*

Existing: Livestock barn Proposed 1: Lagoon #2 (synthetically lined liquid manure storage)

Proposed 2: Livestock barn addition Proposed 3: \_\_\_\_\_

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		Existing	Proposed 1	Proposed 2	Proposed 3	Meets requirements	Comments
Flood plain information	What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	<input type="checkbox"/> >1 m <input checked="" type="checkbox"/> ≤ 1 m	<input type="checkbox"/> >1 m <input checked="" type="checkbox"/> ≤ 1 m	<input type="checkbox"/> >1 m <input checked="" type="checkbox"/> ≤ 1 m	<input type="checkbox"/> > 1 m <input checked="" type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	> 1 m above flood plain
	How many springs are within 100 m of the manure storage facility or manure collection area?	0	0	0		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	None observed during a site visit
Surface water information	How many water wells are within 100 m of the manure storage facility or manure collection area?	0	0	0		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	One WW located within 100 m of an existing heifer barn > an Exemption was granted in 2018
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	2249 m	2249 m	2249 m		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	500 m to a slough south of the CFO
Groundwater information	What is the depth to the water table?	More than 4m	More than 4m	More than 4m		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Water table found at 4.5 m below grade
	What is the depth to the groundwater resource/aquifer you draw water from?	8.5m	8.5m	8.5m		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	UGR identified at 8.5 m in WW ID# 1590128

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)



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**NRCB USE ONLY**  
**ENVIRONMENTAL RISK SCREENING INFORMATION**

ERST for **proposed** facilities

Facility	Groundwater score	Surface water score	File number
Expansion of free stall barn	Low	Low	RA24005
New liquid manure storage	Low	Low	RA24005

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File number
Free stall barn	Low	Low	RA18018
Heifer barn	Low	Low	RA18018
Synthetic lined liquid manure storage	Low	Low	RA18018

ERST related comments:

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**NRCB USE ONLY**

**WATER WELL AND SURFACE WATER INFORMATION**

Well IDs:     1590128 and 2089093    

Surface water related concerns from directly affected parties or referral agencies:  YES  NO

Groundwater related concerns from directly affected parties or referral agencies:  YES  NO

**Water wells**  N/A

If applicable, exemption for 100 m distance requirements applied:  YES  NO      Condition required:  YES  NO

**Surface water**  N/A

If applicable, exemption for 30 m distance requirements applied:  YES  NO      Condition required:  YES  NO

**Water Well Exemption Screening Tool**  N/A

Water Well ID	Preliminary Screening Score	Secondary Screening Score	Facility

**Groundwater or surface water related comments:**

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### DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

Neighbour name(s)	Legal land description	Distance (m)	NRCB USE ONLY				
			Zoning (LUB) category	MDS category (1-4)	Distance (m)	Waiver attached (if required)	Meets regulations
Wilpshaar Dairy Ltd	09-21-41-24-W4	690 m					
Sam Catellier	14-15-41-24-W4	870 m	Agriculture	1	851 m		Yes
Law	05-15-41-24-W4	993 m	Agriculture	1	985 m		Yes
Russel Wildeman	11-16-41-24-W4	983 m	Agriculture	1	966 m		Yes
Nobody, empty house	12-21-41-24-W4	1106 m	Agriculture	1	1,070 m		Yes

### LAND BASE FOR MANURE AND COMPOST APPLICATION (complete only if an increase in livestock or manure production will occur)

Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY	
				Usable area (ha)	Agreement attached (if required)
Wilpshaar Dairy Ltd	SW / NE / SE21-41-24-W4	128	Black		
Van Sevenhoven	NE20-41-24-W4	64	Black		Yes
Wilpshaar Dairy Ltd	SW25-41-24-W4	64	Black		
Van Sevenhoven	NW / NE / SE15-41-24-W4	192	Black		Yes
Van Sevenhoven	NW / SW14-41-24-W4	128	Black		Yes
Total				576 hectares	

\* If you are **not** the registered landowner, you must attach copies of land use agreements signed by all landowners.

\*\* Available manure spreading area (excluding setback areas from residences, common bodies of water, water wells, etc. as identified in Agdex 096-5 [Manure Spreading Regulations](#))

\*\*\* Brown, dark brown, black, grey wooded, or irrigated

**Additional information (attach any additional information as required)**

Last updated September 11, 2023

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## NRCB USE ONLY

### MINIMUM DISTANCE SEPARATION

Methods used to determine distance (if applicable): Google Earth

Margin of error (if applicable): \_\_\_\_\_

Requirements (m): Category 1: 487 Category 2: 650 Category 3: 812 Category 4: 1,300

Technology factor:  YES  NO

Expansion factor:  YES  NO

MDS related concerns from directly affected parties or referral agencies:  YES  NO

### LAND BASE FOR MANURE AND COMPOST APPLICATION

Land base required: 464 hectares

Land base listed: 576 hectares

Area not suitable: Applicant provided extra land for manure application

Available area 576 hectares Requirement met:  YES  NO

Land spreading agreements required:  YES  NO

Manure management plan:  YES  NO If yes, plan is attached:

### PLANS

Submitted and attached construction plans:  YES  NO

Submitted aerial photos:  YES  NO

Submitted photos:  YES  NO

### GRANDFATHERING

Already completed:  YES  NO  N/A

If already completed, see \_\_\_\_\_

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**NRCB USE ONLY**

**ALL SIGNATURES IN FILE**

YES  NO

**DATES OF APPROVAL OFFICER SITE VISITS**

April 16, 2018	November 8, 2022
April 3, 2019	January 31, 2024
June 3, 2019	June 14, 2024

**CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES**

Date deemed letters sent: April 28, 2024

**Municipality:** Lacombe County

letter sent  response received  written/email  verbal  no comments received

**Alberta Health Services:**  N/A

letter sent  response received  written/email  verbal  no comments received

**Alberta Environment and Parks:**  N/A

letter sent  response received  written/email  verbal  no comments received

**Alberta Transportation:**  N/A

letter sent  response received  written/email  verbal  no comments received

**Alberta Regulatory Services:**  N/A

letter sent  response received  written/email  verbal  no comments received

**Other:** Chain Lakes Gas Co-op  N/A

letter sent  response received  written/email  verbal  no comments received

**Other:**  N/A

letter sent  response received  written/email  verbal  no comments received

**Manure Spreading Agreement**

This agreement is between Wilpshaar Dairy, manure producer, and

van Sevenhoven Farms Manure receiver.

Length of agreement: This agreement is valid for a time period of 3 years  
(minimum of three years)

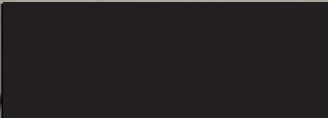
Legal land location	Soil type <sup>1</sup>	Acres suitable for manure spreading <sup>2</sup>
NE20-41-24-W4	black	64
NW/NE/SE/5-41-24-W4	Black	192
SW 14-41-24-W4	Black	64
NW 4-41-24-W4	Black	64
NW 14-41-24 W4M (Corrected by applicant on June 14, 2024)		

<sup>1</sup> Soil type choices: Dark brown and brown, Grey wooded, Black, Irrigated.

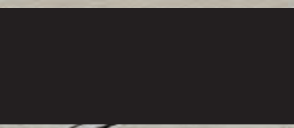
<sup>2</sup> Land within required setbacks from water bodies, water wells, residences, etc. is not to be included.

Other comments:

Manure producer (confined Feeding Operation) Legal Land Location SE 21-41-24-W4

March 15 2024            Hermannus Wilpshaar      Wilpshaar Dairy  
 Date of signing      Signature      Print name      Corporate name(if appl)

Manure Receiver – Landowner(s)<sup>3</sup>

March 15 2024            Gerbrand van Sevenhoven      Sevenhoven Farms  
 Date of signing      Signature      Print name      Corporate name(if appl)

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Date of signing      Signature      Print name      Corporate name(if appl)

<sup>3</sup> All registered owners of land, or authorized signing authorities must sign.

# Part 2 – Technical Requirements

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## SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner

(complete a copy of this section for **EACH** barn, feedlot, and storage facility for solid manure, composting materials, or compost with a concrete liner)

Facility description / name (as indicated on site plan) **1.** Expantion freestall barn  
**2.** \_\_\_\_\_

### Manure storage capacity

	Length (m)	Width (m)	Depth below grade to the bottom of the liner (m)	<b>NRCB USE ONLY</b> Estimated storage capacity (m <sup>3</sup> )
1.	88m	32m	0	
2.				
TOTAL CAPACITY				

I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The AOPA requirements for STMS are set out in the NRCB [Short-Term Solid Manure Storage Requirements Fact Sheet](#).

### Surface water control systems

Describe the run-on and runoff control system \_\_\_\_\_

Berms \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

AO comment: Barn with walls and roof

### Liner protection

Describe how the physical integrity of the liner will be maintained \_\_\_\_\_

Inspect for cracks \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**NRCB USE ONLY**  
 Requirements met:  YES  NO

# Part 2 – Technical Requirements

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## SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner (cont.)

### Concrete liner details

Concrete thickness 4"	Method of sulphate protection: Type 50
Concrete strength 30 mpa	Concrete reinforcement size and spacing 10mm 12" O/C B/W

Concrete requirements can be found in Technical Guideline Agdex 096-93

Guideline minimums:  
 Solid manure: 25MPa (D)  
 Solid manure (wet): 30MPa (C)  
 Method of sulphate protection:  
 Type 50 or Type 10 with fly ash or equivalent

### NRCB USE ONLY

Requirements met:  YES  NO  
 Condition required:  YES  NO  
 Report attached:  YES  NO

### Additional information *(attach as required)*

#### NRCB USE ONLY

Nine month manure storage volume requirements met  YES  YES With STMS  NO  
 Depth to water table:           > 4 m           Requirements met:  YES  NO  
 Depth to Uppermost groundwater resource:           8.5 m           Requirements met:  YES  NO  
 ERST completed:  see ERST page for details

#### Surface water control systems

Requirements met:  YES  NO Details/comments:

#### Concrete liner details

A condition will be included in the approval requiring the permit holder to provide written proof that the constructed concrete liner meets the requirement in Non- Engineered Concrete Liners for Manure Collection and Storage Areas

Leakage detection system required:  YES  NO If yes, please explain why.



# Part 2 – Technical Requirements

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## LIQUID MANURE STORAGE: Synthetic liner

(complete a copy of this section for **EACH** proposed liquid manure storage facility with a synthetic liner)

- Facility description / name (as indicated on site plan)
1. Lagoon (synthetically lined liquid manure storage)
  - 2.

Manure storage capacity (use one row in the table for **EACH** cell of the synthetic lined storage, attach additional pages if you require more rows)

	Length (m)	Width (m)	Total depth (m)	Depth below ground level (m)	Slope run:rise			NRCB USE ONLY	
					Inside end walls	Inside side walls	Outside walls	Calculated storage capacity (excl. 0.5 m freeboard) (m <sup>3</sup> )	Filled in lower 1/4? Y/N
1.	60m	60m	4.5m	2.5m	3:1	3:1	4:1	8,292	Yes
2.									
TOTAL CAPACITY									

### Surface water control systems

Describe the run-on and runoff control system

Berms \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Sealing

Describe sealing practices for piping, etc. that penetrates the liner

In cased in Concrete in bottom 1/4 \_\_\_\_\_

\_\_\_\_\_

**NRCB USE ONLY**  
Requirements met:  YES  NO

### Liner protection

Describe how the inside walls, bottom and outside walls are protected from erosion

Fence \_\_\_\_\_

\_\_\_\_\_

Describe how the physical integrity of the liner will be maintained from other damage

Fence \_\_\_\_\_

\_\_\_\_\_

**NRCB USE ONLY**  
Requirements met:  YES  NO



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<b>NRCB USE ONLY</b>	
<b>LIQUID MANURE STORAGE VOLUME CALCULATOR (if applicable)</b>	
<b>Facility 1</b>	
Name / description	Capacity
Liquid manure storage # 1	8,292 m <sup>3</sup>
<b>Facility 2</b>	
Name / description	Capacity
Liquid manure storage # 2	8,292 m <sup>3</sup>
<b>Facility 3</b>	
Name / description	Capacity
Manure collection pit	24 m <sup>3</sup>
<b>Facility 4</b>	
Name / description	Capacity
<b>TOTAL CAPACITY</b>	
	16,608 m <sup>3</sup>
<b>REQUIRED 9 MONTH STORAGE CAPACITY</b>	
	13,500 m <sup>3</sup>
<b>MEETS THE REQUIREMENTS FOR A MINIMUM OF 9 MONTHS STORAGE</b>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

# HIGH DENSITY POLYETHYLENE (HDPE)

High Density Polyethylene (HDPE) is a versatile material that is used widely across many applications. One of the primary uses of HDPE is as a liner at the base of landfills, where its chemical resistance is put to use. HDPE applications also include pond linings and water containment projects.

April 2023		High Density Polyethylene (HDPE), Black					
Style	ASTM	HDPE 40 Smooth	HDPE 60 Smooth	HDPE 80 Smooth	HDPE 40 Textured	HDPE 60 Textured	HDPE 80 Textured
Nominal Thickness	D5199	40 mil 1.0 mm	60 mil 1.5 mm	80 mil 2.0 mm	38 mil 0.96 mm	57 mil 1.45 mm	76 mil 1.90 mm
Asperity Height	D7466				16 mil 0.4 mm	16 mil 0.4 mm	16 mil 0.4 mm
Density	D792	≥ 0.94 mg/l	≥ 0.94 mg/l	≥ 0.94 mg/l	≥ 0.94 mg/l	≥ 0.94 mg/l	≥ 0.94 mg/l
Typical Properties Tensile Strength Type IV Die	D6693 Yield Strength	84 ppi 15 kN/m	126 ppi 22 kN/m	168 ppi 29 kN/m	84 ppi 15 kN/m	126 ppi 22 kN/m	168 ppi 29 kN/m
	Break Strength	152 ppi 27 kN/m	228 ppi 40 kN/m	304 ppi 53 kN/m	60 ppi 10 kN/m	90 ppi 16 kN/m	120 ppi 21 kN/m
	Yield Elongation 33 mm Gauge Length	12%	12%	12%	12%	12%	12%
	Break Elongation 50 mm Gauge Length	700%	700%	700%	100%	100%	100%
Tear Resistance	D1004	28 lbs 125 N	42 lbs 187 N	56 lbs 249 N	28 lbs 125 N	42 lbs 187 N	56 lbs 249 N

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For up-to-date technical information, be sure to visit us online at [www.LayfieldGroup.com](http://www.LayfieldGroup.com)

# HIGH DENSITY POLYETHYLENE (HDPE)

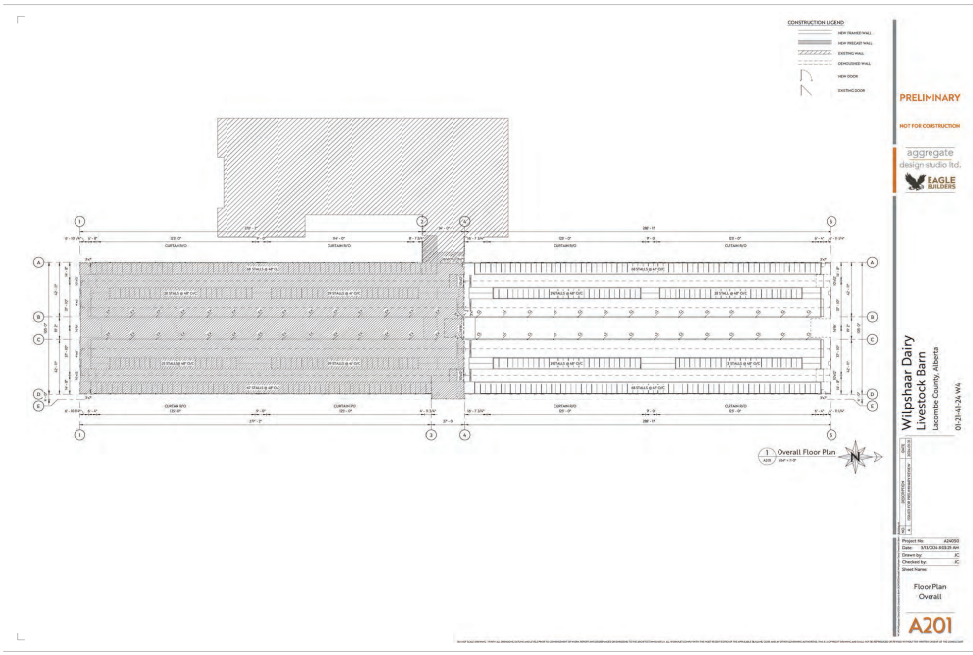
Stress Cracking	D5397	500 Hours	500 Hours	500 Hours	500 Hours	500 Hours	500 Hours
Puncture Resistance	D4833	72 lbs 320 N	108 lbs 480 N	144 lbs 640 N	60 lbs 267 N	90 lbs 400 N	120 lbs 534 N
Carbon Black Content	D6370	2.0-3.0 %	2.0-3.0 %	2.0-3.0 %	2.0-3.0 %	2.0-3.0 %	2.0-3.0 %
Carbon Black Dispersion	D5596	Cat 1 or 2	Cat 1 or 2	Cat 1 or 2	Cat 1 or 2	Cat 1 or 2	Cat 1 or 2
HPOIT	D5885	400 mins	400 mins	400 mins	400 mins	400 mins	400 mins
Oven aging at 85° C HPOIT - % retained after 90 days	D5721 D5885	80%	80%	80%	80%	80%	80%
UV Resistance High Pressure OIT (min. ave.)- % retained after 90 days	D7238 D5885	50%	50%	50%	50%	50%	50%
Maximum Continuous use Temperature <sup>1</sup>		60°C	60°C	60°C	60°C	60°C	60°C

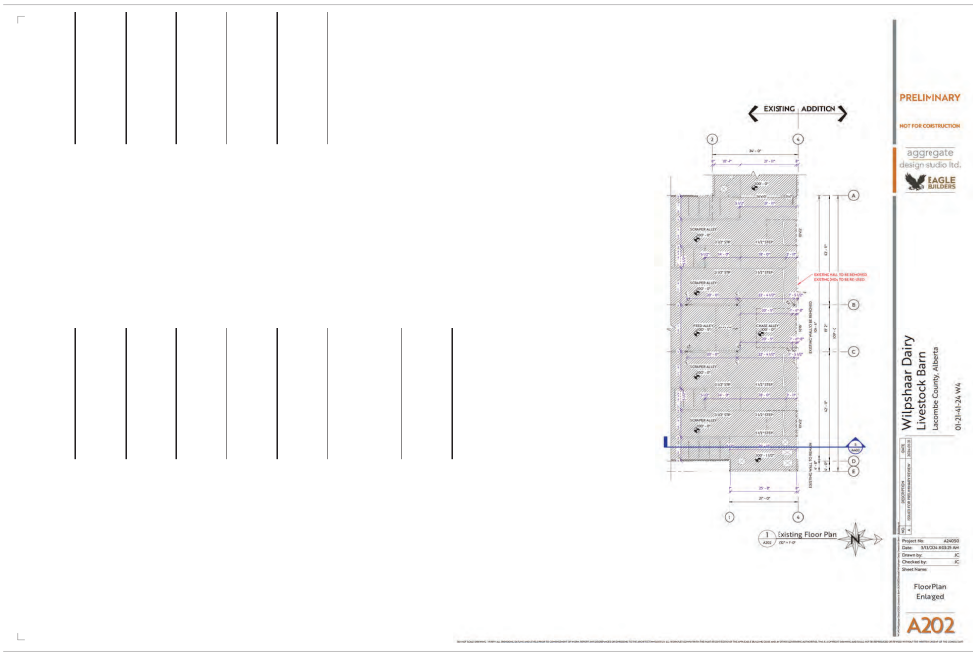
<sup>1</sup> Please contact Layfield Technical Services for more information

April 2023		HDPE Minimum Field Seam Strengths					
Style	ASTM D6392	HDPE 40 Smooth	HDPE 60 Smooth	HDPE 80 Smooth	HDPE 40 Textured	HDPE 60 Textured	HDPE 80 Textured
Bonded Seam Strength Test Temp 23°C, 73°F	25 mm (1") Strip	80 ppi 14 N/mm	120 ppi 21 N/mm	160 ppi 28 N/mm	120 ppi 21 N/mm	120 ppi 21 N/mm	160 ppi 28 N/mm
Peel Adhesion Strength (Extrusion Welds)	25 mm (1") Strip	52 ppi 9 N/mm	78 ppi 14 N/mm	104 ppi 18 N/mm	78 ppi 14 N/mm	78 ppi 14 N/mm	104 ppi 18 N/mm

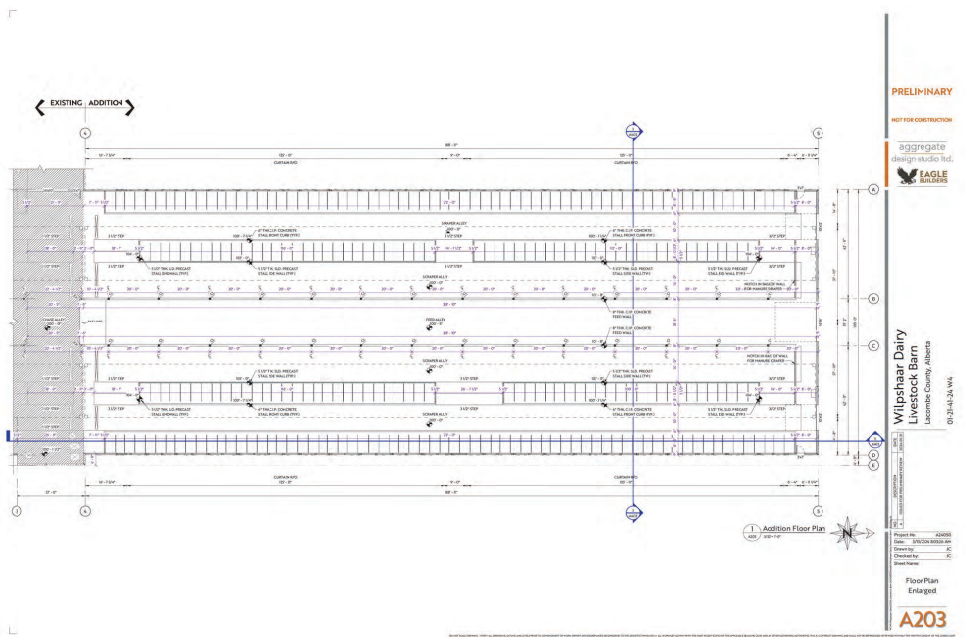
For up-to-date technical information, be sure to visit us online at [www.LayfieldGroup.com](http://www.LayfieldGroup.com)

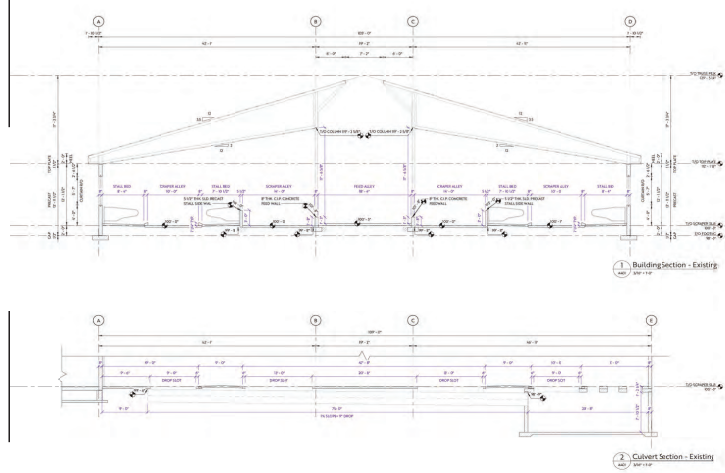
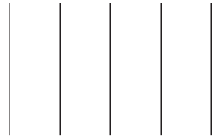












PRELIMINARY

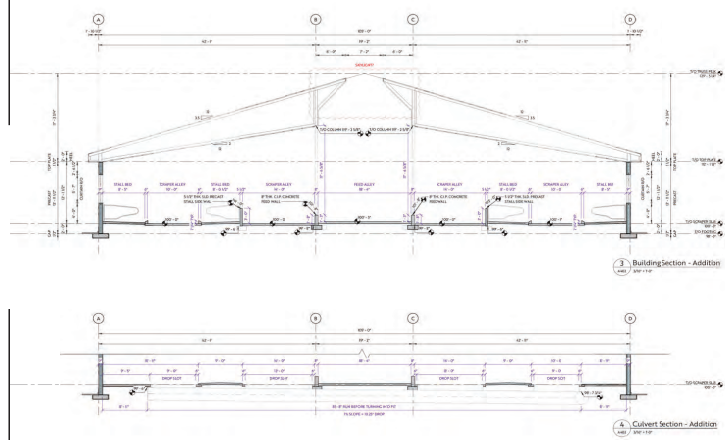
HOT FOR CONSTRUCTION



Wilkshear Dairy  
Livedock Barn  
Lacombe County, Alberta  
03-28-24-24-WA

Project No. 42005  
Drawn: WILKSHEAR  
Checked by: [Signature]  
Scale: As Shown

Building  
Sections  
**A401**



PRELIMINARY

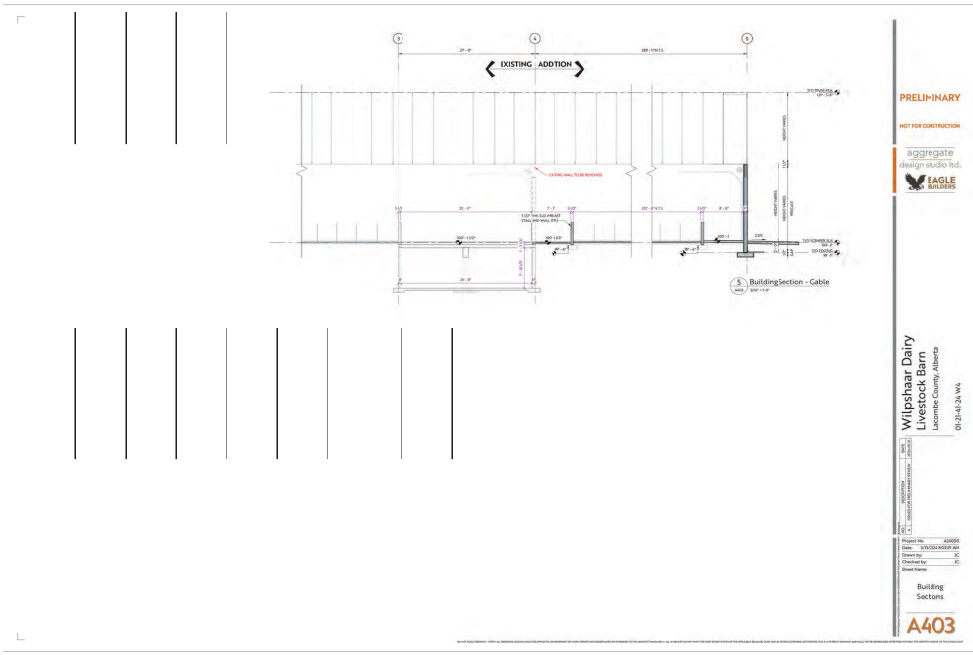
HOT FOR CONSTRUCTION

aggregate  
design studio ltd.  
**EAGLE BUILDERS**

Wilkshear Dairy  
Livedock Barn  
Lacombe County, Alberta  
03-28-24-24-VNA

Project No.	42005
Date	20/03/2024
Drawn by	...
Checked by	...
Scale	1:1

Building  
Sections  
**A402**



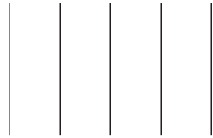
PRELIMINARY  
NOT FOR CONSTRUCTION



Wilkshear Dairy  
Livedock Barn  
Lacombe County, Alberta  
03-28-24-24-W4

Project No.	42020
Date	03/20/2024 09:44
Drawn by	...
Checked by	...
Scale	...

Building Sections  
**A403**



**L I C E N C E  
A M E N D M E N T**

**PURSUANT TO THE PROVISIONS  
OF THE WATER ACT**

**LICENCE No.** 00403525-00-00

**FILE No.** 00403525


**PRIORITY No.** 2017-10-26-002

**AMENDMENT No.** 00403525-00-01

**LICENSEE:** Wilpshaar Dairy Ltd.

The Licence is amended as follows:

1. Change the Birdhill Farms Ltd. to Wilpshaar Dairy Ltd. (the Licensee).

  
**Designated Director under the Act**  
Todd Aasen, P.Eng.  
Red Deer North Saskatchewan Region

November 20, 2018  
**Dated**