

Memo

To:	Polocorp Inc.	From:	Stantec Consulting Ltd.
Project/File:	161414558	Date:	March 20, 2025

Reference: 6581 Highway 6, Fergus, Ontario, Minimum Distance Separation Assessment

1 Purpose

The purpose of this Memo is to identify the Minimum Distance Separation (MDS) setbacks required for 6581 Highway 6, Fergus, (the 'Subject Property', owned by our client, Polocorp) from nearby farm properties. The Subject Property is directly north of a property currently recommended for inclusion in the Fergus Settlement Area Boundary through a County-initiated Settlement Area Boundary Expansion (SABE). This report contributes to the justification for the Subject Property to also be included within the Fergus Settlement Area Boundary.

This Memo provides background information on MDS policy, describes the methods used to analyze the Subject Property and nearby farm properties, lists the properties of impact, justification, and finishes with our recommendation and conclusion.

2 Background Review

2.1 Provincial Planning Statement, 2024

The Provincial Planning Statement, 2024 (PPS, 2024) provides policy direction for land use planning and development on matters of provincial interest (Ministry of Municipal Affairs and Housing, 2024). The PPS, 2024 came into effect as of October 20, 2024, and replaced the previous Provincial Policy Statement, 2020.

The PPS, 2024 includes guidance on expanding settlement area boundaries to meet housing and other land use needs. As well, the PPS, 2024 provides the policy that requires the Minimum Distance Separation (MDS) Document and formulae to be used when Settlement Area Boundary Expansions are to include agricultural lands.

2.2 Minimum Distance Separation Document

The Minimum Distance Separation (MDS) Document provides the basis for MDS setbacks required for livestock barns, manure, and anaerobic digesters (Ontario Ministry of Food, Agriculture and Rural Affairs, 2016). The MDS Document lays out background information to calculate separation distances, which can

also be done by using the online tool, AgriSuite, which calculates setbacks using a specific set of inputs (Government of Ontario, 2024).

The MDS Document lays out formulae for MDS1 and MDS2 setbacks. MDS1 setbacks are determined between proposed new development and existing livestock barns, manure storages, and/or anaerobic digesters. MDS2 setbacks are determined between proposed new or altered livestock facilities and/or anaerobic digesters and existing or approved development, lot lines, and road allowances.

2.3 Centre Wellington Settlement Area Boundary

The County of Wellington and its lower-tier municipalities, including the Township of Centre Wellington, are currently undertaking a review of the Settlement Area Boundary and are taking requests for expansion (County of Wellington, 2024). Settlement Area Boundary Expansions should be based on need, feasibility, and appropriate location for growth (County of Wellington Committee Report, 2024).

The existing Settlement Area Boundary for Centre Wellington along with the currently recommended Settlement Area Boundary Expansions (SABE 2024) are depicted in Attachment 1. The Subject Property is directly north of a property that is currently being recommended for inclusion in the Fergus Settlement Area Boundary.

3 Policy Overview

This section contains a summary of the policy that provides the basis for MDS, specifically the Provincial Planning Statement (PPS), 2024, and the MDS Document (Ministry of Municipal Affairs and Housing, 2024).

3.1 Application of MDS based on Provincial Policy Statement

Table 1: MDS policy in the PPS, 2024

Section:	Text:						
2.3.2.1	 a) the need to designate and plan for additional land to accommodate an appropriate range and mix of land uses; 						
	b) if there is sufficient capacity in existing or planned infrastructure and public service facilities;						
	c) whether the applicable lands comprise specialty crop areas;						
	 d) the evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas; 						

	e) whether the new or expanded settlement area complies with the minimum distance separation formulae;
	 f) whether impacts on the agricultural system are avoided, or where avoidance is not possible, minimized and mitigated to the extent feasible as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance; and g) the new or expanded settlement area provides for the phased progression of urban development.
2.3.2.2	Notwithstanding policy 2.3.2.1.b), planning authorities may identify a new settlement area only where it has been demonstrated that the infrastructure and
	public service facilities to support development are planned or available.

3.2 MDS Document

The MDS Document contains information specific to the expansion of urban settlement boundaries, including the process for applying the MDS when seeking an Official Plan Amendment that would permit a more sensitive land use, as is the case for the Subject Property. The nature of this development proposal requires calculating the MDS1 setbacks (Ontario Ministry of Food, Agriculture and Rural Affairs, 2016).

In this Memo, five properties were identified as having potential to impact the Subject Property. Two of the identified properties are being considered for inclusion in the Fergus Settlement Area Boundary Expansion being completed by Centre Wellington (6585 Highway 6 and 6602 Highway 6). Although assessing these properties for their potential to be brought into the Settlement Area Boundary based on MDS1 setbacks was beyond the scope of the current Memo, it should be noted that if the Settlement Area Boundary is expanded to include these properties, MDS1 setbacks between these properties and the Subject Property would become non-applicable, as MDS applies only to agricultural lands.

The MDS Document provides the basis for the AgriSuite software, which allows users to calculate MDS setbacks using the appropriate MDS1 or MDS2 formulae (Ontario Ministry of Food, Agriculture and Rural Affairs, 2016).

4 Methods and Properties of Impact

4.1 Methods of Analysis

This Memo takes the approach of identifying properties near the Subject Property that could require an MDS1 setback through desktop analysis. The precise setback required from a livestock barn or manure storage is determined based on a variety of factors, including total lot size, type and sub-type of livestock/manure, number of livestock, manure storage type, existence of anaerobic digester, and encroaching land use. All calculations in this analysis were completed using the AgriSuite software.

For the purposes of this Memo, we have opted to provide a 'low-impact scenario' and 'high-impact scenario' MDS1 setback for each property of impact. *Low-impact scenario* refers to the type of livestock that would require a lesser MDS1 setback. *High-impact scenario* refers to the type of livestock that would require a greater MDS1 setback. For example, a livestock barn housing horses (small, < 250 kg) requires a lesser setback as compared to the same livestock barn housing horses (large, > 650 kg). It should be noted that the actual low-impact scenario setbacks could be less than indicated in this Memo if the livestock barn in question is not filled to 100% capacity. By providing two MDS1 setbacks based on two types of livestock, we are able to produce a figure (Attachment 1) that shows two scenarios that depicts more and less conservative impacts to the Subject Property's proposed concept.

4.1.1 Assumptions

This Memo required certain assumptions to be made about the properties of impact, given that the analysis was conducted from desktop, as described below.

- Low-impact and high-impact scenario analysis used assumes that the livestock barns on the properties of impact are at 100% capacity. If livestock barns are not at 100% capacity, the MDS1 setback would be less than indicated in this Memo. If barns are not used for livestock operations or manure storage, there would be no MDS1 setback.
- 2) Existing On-site Conditions setbacks were derived using the actual use as verbally confirmed by the owners of the relevant properties. This scenario assumes that the barns will continue this use until the Subject Property is brought into the Settlement Area Boundary, at which time MDS1 setbacks would no longer apply to the Subject Property.
- 3) Based on the most up-to-date imaging and mapping available, assumptions were made about the type of livestock in barns based on the construction of the building and surrounding area (e.g. two-storey barns typically contain birds; barns accompanied by outdoor enclosures with small shelters typically contain horses).
- 4) Anaerobic digesters are most commonly located at dairy farms. We did not identify any dairy farms in this analysis, nor were any anaerobic digesters visible on aerial or street view imaging. As such, we assume that there are no anaerobic digesters on the properties assessed here.
- 5) Using imaging and information about types of manure, we made reasonable assumptions about the type of manure that was produced and stored on the property.

4.2 Properties of Impact

We have identified five properties that may have impacts on the Subject Property. These properties and the required setback (low-impact and high-impact scenarios based on livestock housed) of the Subject Property's potential development are presented in Table 2 below.

In the low-impact scenario setback calculations, the following livestock were used:

- Beef: Backgrounders (7-12.5 months), Confinement
- Horses: Small-framed, mature; < 227kg (including unweaned offspring)

In the high-impact scenario setback calculations, the following livestock were used:

- Beef: Cows, including calves to weaning (all breeds), Yard
- Horses: Large-framed, mature; > 680kg (including unweaned offspring)

Table 2: Properties of potential impact and resulting MDS1 setbacks, low-impact and high-impact scenarios

Property Address:	Low-impact scenario setback (100% livestock barn capacity)	High-impact scenario setback (100% livestock barn capacity)	Existing On-site Conditions	
965 Gartshore St, Fergus, ON	292 m	358 m	Not assessed	
6611 Highway 6, Centre Wellington, ON	236 m	268 m	201 m	
6602 Highway 6, Fergus, ON	209 m	231 m	Not assessed	
6585 Highway 6, Centre Wellington, ON	322 m	395 m	V/A (barn currently used for hay storage only)	
7784 Sideroad 15, Centre Wellington, ON	164 m	175 m	Not assessed	

Verbal confirmation was received from the owners of 6611 Highway 6 and 6585 Highway 6 of the existing on-site use of the barns on those properties. The barn at 6611 Highway 6 houses 11 hobby horses and has solid outdoor manure storage with no cover. The barn at 6585 Highway 6 is used for general storage purposes only, specifically hay storage, and is not used for livestock operations or manure storage. As is demonstrated in the subsequent section of this report, out of the five properties identified in Table 2, only the setbacks resulting from 6611 Highway 6 and 6585 Highway 6 (at 100% livestock barn capacity) would encroach on the Subject Site. As such, these were the only sites that were further reviewed for their actual existing on-site uses and actual MDS setbacks.

The barn located at 968 St. David Street, directly south of the Subject Site, was not considered in this MDS assessment as it is owned by Polocorp. Polocorp has confirmed the barn is not currently used for livestock operations or manure storage and will not be used for this purpose in the future. A statement of Polocorp's guarantee that the barn is not in use can be provided upon request. 968 St. David Street is also currently recommended for inclusion within the Fergus Settlement Area Boundary. Should this property be included within the expanded boundary, MDS1 setbacks would become non-applicable, as MDS applies only to agricultural lands.

As mentioned in the previous section, the low-impact scenario setback is derived from the MDS formula using the livestock of lowest impact at 100% livestock barn occupancy. If the livestock barn is not fully occupied or is unoccupied, then the low-impact scenario setback would be lower than indicated in the above table. As well, the lowest and highest impact livestock were used for these calculations, but livestock with impacts between low and high exist. Thus, the results of the setback calculations are subject to change based on actual capacity and actual type of livestock in each livestock barn.

The setbacks presented in Table 2 are depicted in Attachment 1. A comprehensive table containing the data used to generate the MDS1 setbacks using AgriSuite can be found in Attachment 2.

5 Results and Recommendations

5.1 Results

Table 3 shows the amount by which the MDS1 setback would encroach on the Subject Property in the lowimpact and high-impact scenarios for each property of impact.

Our analysis found that two properties, 6585 Highway 6 and 6611 Highway 6, have some potential to impact the Subject Property at 100% barn capacity. Based on actual existing on-site conditions, there is no applicable setback encroachment for the barn at 6585 Highway 6 and minimal encroachment by the setback for the barn at 6611 Highway 6.

6585 Highway 6

Based on the verbal confirmation from the owner of 6585 Highway 6, under the barns existing on-site use there are no required MDS setbacks. The existing use of the barn is for general storage only, specifically hay storage, with no livestock operation or manure storage present which would trigger setback requirements. The setback noted in Table 3 is only applicable if the barn is used for livestock operation or manure storage, which it is not. Therefore, no setbacks should be required under existing conditions.

In the future, were the livestock barn to be in use before residential development begins at the Subject Site, it remains unlikely that MDS setbacks would be of impact. This is for two reasons: First, as mentioned in Section 3.2, 6585 Highway 6 is one of the properties currently being considered in the SABE and, if included, MDS setbacks would no longer be applicable. Second, the potential MDS1 setback on the Subject Property by the barn at 6585 Highway 6 only exists in the high-impact scenario at 100% livestock barn occupancy. As noted in the table below, the setback encroaches the Subject Property by 73.5m in the high-impact scenario. It is unlikely that the livestock barn will be used in this way in the near future.

6611 Highway 6

Based on verbal confirmation from the owners of 6611 Highway 6, under the barns existing on-site use the MDS setback required is 201m. This existing on-site condition based setback is less than both the lowimpact and high-impact scenarios used for demonstration of setbacks in Table 2. The setback based on existing on-site use encroaches on the Subject Property by 6.5 m on a small portion of a single block. It's of our opinion that this encroachment has negligible impact to the Property and should not impact potential for development.

Based on our analysis, the potential future MDS1 setback on the Subject Property by this barn could be up to 41.5m if used to 100% barn capacity in the low-impact scenario or 73.5m if used at to 100% capacity in the high-impact scenario. However, it is of our opinion that these barns are currently being used less than the amount indicated in the low-impact scenario, further reducing impacts to the Subject Property.

Table 3: Setback	encroachments on	Subject Property

Property Address:	Low-impact scenario setback encroachment (100% livestock barn capacity)	High-impact scenario setback encroachment (100% livestock barn capacity)	Existing On-site Conditions setback encroachment	
965 Gartshore St, Fergus, ON	None	None	None	
6611 Highway 6, Centre Wellington, ON	41.5 m	73.5 m	6.5 m	
6602 Highway 6, Fergus, ON	None	None	None	
6585 Highway 6, Centre Wellington, ON	None	73.5 m Encroachment into the Subject Property in the future event that the barn may contain livestock	None (barn currently used only for storage)	
7784 Sideroad 15, Centre Wellington, ON	None	None	None	

5.2 Recommendation to bring Subject Property into Settlement Area Boundary

Based on our analysis of the five properties identified, there are minimal potential impacts to the Subject Property by the surrounding livestock operations or manure storage. As shown in Table 3, the livestock barn located at 6611 Highway 6 has some impact potential on the Subject Property. Based on the existing on-site use of this barn, the encroachment of the MDS setback is 6.5 m onto the Subject Property.

Although MDS impacts from 6611 Highway 6 to the Subject Property exist, the Subject Property represents a phased progression of the Settlement Area Boundary, which is in line with local and provincial policies. Our client, Polocorp, owns the adjacent property at 968 St. David St N, which is currently recommended for inclusion within Fergus limits (SABE 2024). With the inclusion of 968 St. David St N in the Settlement Area

Boundary, the Subject Property will be contiguous with the Boundary. The inclusion of the Subject Property in the Fergus Settlement Area Boundary would be a reasonable next step.

Provincial Policy Justification

The Subject Property is currently designated as Prime Agricultural Lands. The PPS, 2024 requires that planning authorities consider the following when identifying new settlement areas or settlement area boundary expansion on prime agricultural areas:

- The evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas.
- Whether the new or expanded settlement area complies with the minimum distance separation formulae.
- The new or expanded settlement area provides for the phased progression of urban development.

Our recommendation that the Subject Property be brought into the Settlement Area Boundary contributes to overarching Provincial goals in the following ways:

- 1) Bringing the Subject Property into the Settlement Area Boundary would allow the Boundary to be expanded in a way that largely aligns with the MDS setbacks on prime agricultural lands, as the impacts to the Subject Property are relatively small.
- 2) Since the Subject Property is adjacent to a property that is recommended for inclusion in the Settlement Area Boundary, this analysis justifies the Subject Property as a reasonable alternative to other properties that would be more impacted by MDS setbacks or would compromise the prime agricultural areas to a greater extent (i.e. are not contiguous with the Boundary, serviceability).
- Bringing the Subject Property, which is contiguous to the SABE expanded settlement area, into the Fergus Settlement Area Boundary supports the PPS in providing phased progression of urban development.

Municipal Policy Justification

The County of Wellington identifies the following priorities for directing growth within the County:

- 1) The majority of growth will be directed to primary urban centres that offer municipal water services and municipal sewage services.
- 2) Growth will be limited in primary urban centres, secondary urban centres, and hamlets that offer partial, private communal or individual on-site services.

The County of Wellington has been assigned increasing population, household and employment forecasts until 2051 under the Province's *A Place to Grow: Growth Plan for the Greater Golden Horseshow Plan* (County of Wellington, 2021).

• From 2016 to 2051, Centre Wellington is anticipated to need 322 new units per year to meet 2051 housing needs.

Our recommendation that the Subject Property be brought into the Settlement Area Boundary contributes to County goals in the following ways:

- The Subject Property is adjacent to the current settlement area and as such can be easily serviced with existing municipal water and sewage services.
- The expansion of the Settlement Area Boundary to include the Subject Property represents a limited and phased expansion of development of agricultural areas in the County, while still helping to accommodate future anticipated growth.
- The Subject Property, in conjunction with 968 St. David St N, is a large parcel which creates significant opportunities for housing development that can contribute to the large number of units needed to meet current and future housing needs.

Additional Note on Prime Agricultural Lands

On October 28, 2024, Township Council endorsed the Settlement Area Boundary Expansion Recommendation Report (2024), which will allow the County of Wellington to move forward with an amendment to the County Official Plan needed for the Settlement Area Boundary Expansion. In this report, 968 St. David St N is referred to as Proposed SABE Area E. The report found that expanding into Prime Agricultural Areas cannot be avoided, as all land outside the Fergus Urban Centre is a Prime Agricultural Area. To mitigate loss of farmland, development into these areas should be phased, and prime agricultural lands should be kept in agricultural production until the land is needed for development.

Although the Subject Property was not included in the report, the inclusion of the Subject Property in the SABE would support the noted phased approach as the next phase which further mitigates impacts on the prime agricultural lands. Given the need for a Settlement Area Boundary Expansion to accommodate future population and employment, we believe that the Subject Property would be a good candidate for inclusion, as all alternative locations are also within prime agricultural areas (Settlement Area Boundary Expansion Recommendation Report, 2024). The Subject Property represents lower priority prime agricultural lands given it is adjacent to the recently expanded Settlement Area Boundary and its potential for continued phased development.

6 Conclusion

Given that the MDS1 setback encroachment to the Subject Property is negligible, and that the proposed developed would support Provincial and Municipal policy related to agricultural areas and development as described in this Memo, our conclusion is that the Subject Property is suitable for inclusion in the Settlement Area Boundary.

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Reference: 6581 Highway 6, Fergus, Ontario, Minimum Distance Separation Assessment

Regards,

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Attachment 1: Minimum Distance Separation Figure

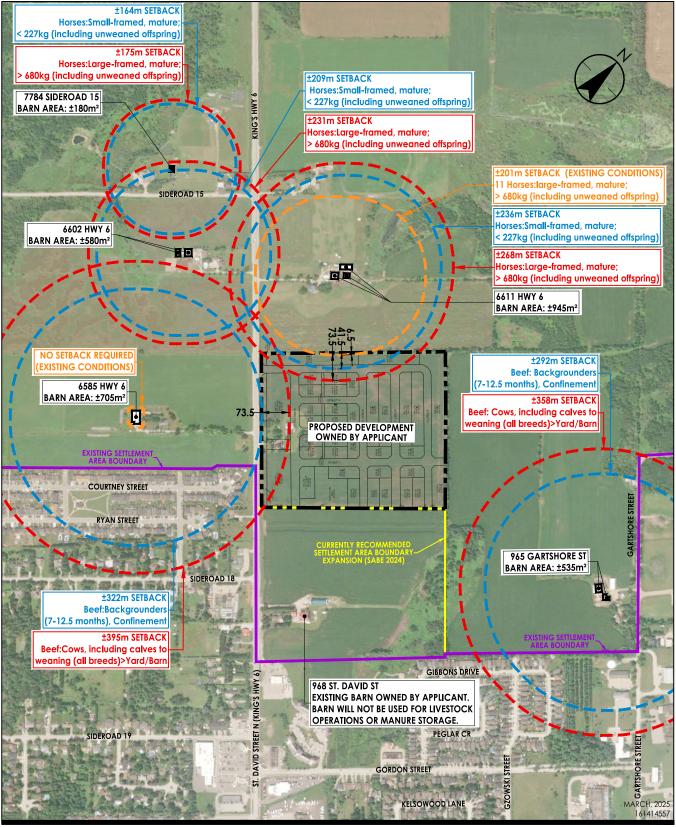
Attachment 2: AgriSuite MDS1 Inputs and Outputs

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References

- Government of Ontario. (2024). AgriSuite Software. Accessed online, October 17, 2024. https://www.ontario.ca/page/agrisuite
- Ontario Ministry of Agriculture, Food and Rural Affairs. (2023). *Minimum Distance Separation Document*. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ontario.ca/files/2023-07/omafra-minimum-distance-separation-document-en-2023-07-26.pdf
- Ontario Ministry of Municipal Affairs and Housing. (2024). *Provincial Planning Statement, 2024.* Accessed online, October 17, 2024. <u>https://www.ontario.ca/files/2024-08/mmah-provincial-planning-statement-en-2024-08-19.pdf</u>
- Wellington County. (2024). Committee Report, Thursday, February 8, 2024. Accessed online, October 17, 2024. chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.wellington.ca/media/file/official-planreviewurban-boundary-expansion
- Wellington County. (2024). Official Plan Review New Urban Boundary Expansion Review. Accessed online, October 17, 2024. <u>https://www.wellington.ca/business-development/planning-development/official-plan-land-use/official-plan-review</u>
- Wellington County. (2024). Settlement Area Boundary Expansion Recommendation Report (PLN2024-38). Accessed online, November 19, 2024. <u>https://www.connectcw.ca/download_file/525/539</u>
- Wellington County. (2021). Phase 1 MCR Report: Urban Structure and Growth Allocations. Accessed online, February 19, 2025. <u>https://www.wellington.ca/media/file/official-plan-review-final-phase-1-mcr-report-urban-structure-and-growth-allocations-0</u>





400-1305 Riverbend Road London ON N6K 0J5 Tel. 519-645-2007 www.stantec.com HORZ - 1 : 10000 100 0 200m POLOCORP INC 6581 Hwy 6 Fergus, ON Figure No. 1.0 Title MINIMUM DISTANCE

Client/Project

SEPARATION

AgriSuite MDS1 Inputs and Outputs Primary Site: 6581 Highway 6, Fergus, ON											
Property Address	Total Lot Size (ac)	Barns	Barn Size (sq m)	Potential Livestock Type (Least Restrictive, Lesser MDS1)	Potential Livestock Type (Most Restrictive, Greater MDS1)	Manure Storage Type	Anaerobic Digester	Method of Assumption	Existing On-Site Conditions	Lesser MDS1	Greater MDS1
965 Gartshore St, Fergus, ON	94	Yes	330; 205	Beef>Backgrounders (7-12.5 months), Confinement OR Feeders (7-16 months, Confinement Bedded Pack	Beef>Cows, including calves to weaning (all breeds)>Yard/Barn	V3. solid, outside, no cover, >=30% DM	No	Imagery depicts barn with dry, outdoor manure storage. 'REC Farms' search results contains images of cattle and livestock- related equipment. Given that anaerobic digesters exist primarily on dairy farms (only occasionally at greenhouses or other livestock operations) and none are visible in imaging, it is assumed that there is no anaerobic digester on the premises.	Not assessed	292m from barn; 292m from manure	358m from barn; 358m from manure
6611 Highway 6, Centre Wellington, ON	96	Yes	415; 325; 205	Horses>Small-framed, mature; < 227kg (including unweaned offspring)	Horses>Large- framed, mature; > 680kg (including unweaned offspring)	V1. solid, inside, bedded pack	No	Imaging depicts barn with outdoor pen, no outdoor manure or manure storage. Streetview imaging shows horses held in pen. Given that anaerobic digesters exist primarily on dairy farms (only occasionally at greenhouses or other livestock operations) and none are visible in imaging, it is assumed that there is no anaerobic digester on the premises.	201m from barn; 201m from manure	236m from barn; 236m from manure	268m from barn; 268m from manure
6602 Highway 6, Fergus, ON	89	Yes	230; 350	Horses>Small-framed, mature; < 227kg (including unweaned offspring)	Horses>Large- framed, mature; > 680kg (including unweaned offspring)	V1. solid, inside, bedded pack	No	Imaging depicts barn with outdoor pen (detached from barn), assumed to be for equine use. No outdoor manure or manure storage. Given that anaerobic digesters exist primarily on dairy farms (only occasionally at greenhouses or other livestock operations) and none are visible in imaging, it is assumed that there is no anaerobic digester on the premises.	Not assessed	209m from barn; 209m from manure	231m from barn; 231 from manure
6585 Highway 6, Centre Wellington, ON	85	Yes	705	Beef>Backgrounders (7-12.5 months), Confinement OR Feeders (7-16 months, Confinement Bedded Pack	Beef>Cows, including calves to weaning (all breeds)>Yard/Barn	V3. solid, outside, no cover, >=30% DM	No	Imaging of property shows a barn without a pen or outdoor holding area. Streetview imaging does not show accessories, vehicles, equipment that might reasonably be assumed for use with livestock. Given that anaerobic digesters exist primarily on dairy farms (only occasionally at greenhouses or other livestock operations) and none are visible in imaging, it is assumed that there is no anaerobic digester on the premises.	N/A (barn currently used for hay storage only)	322m from barn, 322 from manure	395m from barn; 395m from manure
7784 Sideroad 15, Centre Wellington, ON	112	Yes	180	Horses>Small-framed, mature; < 227kg (including unweaned offspring)	Horses>Large- framed, mature; > 680kg (including unweaned offspring)	V3. solid, outside, no cover, >=30% DM	No	Imaging of property shows outdoor buildings. Further research shows that 'Hoppy Fields Farms' is a produce farm and provides a CSA service. Streetview imaging shows outdoor pen/holding area for horses. Given that anaerobic digesters exist primarily on dairy farms (only occasionally at greenhouses or other livestock operations) and none are visible in imaging, it is assumed that there is no anaerobic digester on the premises.	Not assessed	164m from barn; 164m from manure	175m from barn; 175m from manure