

 MEMO	Project:	369 Douro 1st Line J. Brown MDS calculations	Date:	2022 10 23
	File No.:	22-2495	Designed:	RLH
	Subject:	Calculation of MDS I for livestock facility at 369 Douro 1st Line Jordan and Melinda Brown Response to Consent Application B-116-21		

MEMO TO: K. Randall

FROM: Roy L. Haig, C.Tech

Background

The Browns are concerned that the MDS I calculations and report filed in support of application B116-21A, by the applicant, was prepared without their input. The CCS report does not reflect the fact that the Browns purchased the property with the intention to re-establishing a beef feeder operation to eventually match or even exceed the previous herd of 48 cattle, as well as several horses. It is their intention to make full use of the capacity of the existing structure and to utilize the existing coverall for hay storage and housing of livestock in future.

A site visit was completed on October 21, 2022. The information gained during this visit are the basis for this report.

In October of 2021, an application for consent to sever a non-farm residential lot from an existing agricultural holding at 400 Douro 1st Line was filed with the County of Peterborough's Land Division Committee (CPLDC). The application (B116-21) proposed that the new lot be located at the south-east corner of the subject property and fronting onto the Douro 1st Line. Included with the application was a sketch showing the MDS arc generated by the existing livestock facility at the clients' property (formerly the Clysdale farm), as shown on Figure 1 below. Please note that the Browns did not have any concerns with the original severance, as it would not have impacted their agricultural operation. Notwithstanding, it is our understanding that Application B116-21 was not approved by the CPLDC.

An amended application for Consent was filed with the CPLDC in December of 2021 and assigned application number B116-21A. The amended application sought a lot location directly across the Township concession road from the agricultural holding at 396 Douro 1st Line (Jordan and Melinda Brown).

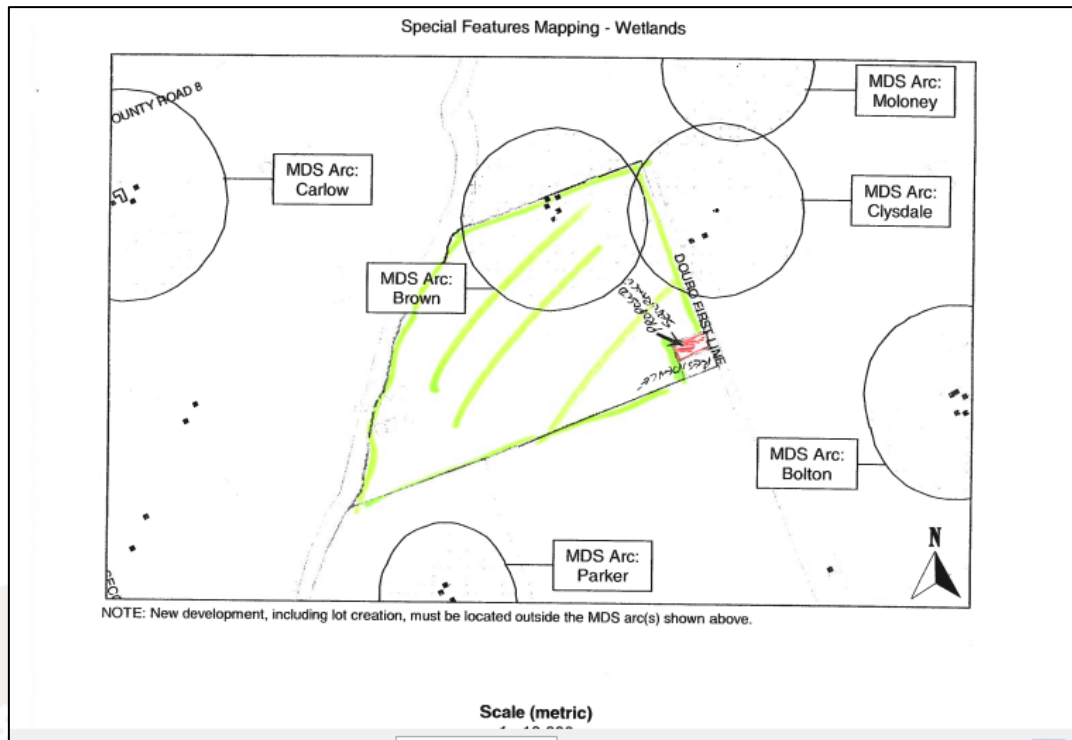


Figure 1 - MDS ARC - as per Application B116-21

The application was supported by an MDS Report, prepared by Clark Consulting Services (CCS). The Report provided MDS I calculations for six barns located within 750m of the proposed lot, including the barn at 369 Douro 1st Line, which was identified as "Barn A". The Report concluded that the MDS arc generated by "Barn A" extends 108m from the livestock barn and 108m from the manure storage area located to the east of the barn. The distance from these locations to the proposed lot are 136m and 160m, respectively, and will not impact the proposed severance. The coverall building is currently described as a storage area, with possible use as a field shelter and not subject to MDS calculations.

J&M Brown Cattle Farm Plan

The Browns are slowly re-establishing a beef cow/calf operation on their farm property. The farm was previously used for this purpose with a maximum herd size of 48 cattle. The existing facilities on the property are suitable for this use. Reference can be made to information available on the OMAFRA

website page entitled OMAFRA Virtual Beef – Facilities for Beef Cattle. According to the website, *‘Beef Farmers of Ontario (BFO) conducted an extensive study last year as they looked at what a start-up beef operation would require for land, machinery, and facilities. Long discussions with farmers, advisory staff, and economists considered a wide range of options.’*

The study found that

“...with a beef cow/calf operation, three critical care points are easily identifiable: calving, health treatments and weaning. In Ontario, our weather determines how elaborate our calving facility needs to be. Traditional calving during the winter months requires some type of barn to protect the newborn calves from the elements, and typically include a heat source of some kind. The BFO model looks at working with nature and the seasons, with calving on grass during the summer months. This eliminates the need for a heat source, and a specific calving barn.

Treating animals for health reasons requires an excellent handling system. Under the Beef Code of Practice it is critical to handle cattle safely and humanely. The BFO model builds in a facility for handling livestock in a safe manner.”

“What did the BFO model indicate as an absolute requirement for facilities to look after these animals?

The first building is a simple open fronted pole shed, 30' X 100', or in that size range, that would serve primarily as storage for high quality hay. Wastage from dry hay stored outside without cover can be extensive. Storing some high quality dry hay under cover would retain quality, plus allow for hay that could be accessed in the middle of winter if it is stormy. The secondary purpose of this facility would be for sick pens and a weaning area as the hay is fed out. See Diagram 1 or follow this link for plans for such a building.

The second building would be a covered handling facility, approximately 30' X 30'. This would house the crowd tub, working chute and squeeze for restraining livestock for treatment purposes.”

Clearly, the existing barn, yard and coverall are sufficient to serve the purposes outlined in the BFO study, without the need for a building permit to be issued. Although the coverall is used primarily for

hay storage, it is suitable for sick pens and a weaning area. The hay provides a wind barrier for prevailing westerly winds.

The existing barn provides shelter from the wind and is suitable for use as a covered handling facility. The barn was most recently used as a holding area for three cattle sent to the abattoir from the farm on October 21, according to Mrs. Brown.

Review of CCS Report

As is stated on page 4 of the CCS Report, the introduction of non-farm uses into a rural area requires consideration of compatibility with existing farming activities, specifically livestock operations. Clearly, the goal is to protect the right of farmers to farm their land and to prevent conflict with non-farm uses. The MDS calculations provided by CCS fail to reflect the intent of the Browns to utilize the capacity of the existing farm buildings to support a cow/calf operation of up to 60 cattle and up to 8 horses.

Guideline 20 of OMAFRA Publication 853 states that *“The number of livestock or the area of livestock housing of unoccupied livestock barns should be based on information supplied by the farm operator or owner”*. Further, MDS Section #16 of Publication 853 states that *“Even though information may be provided by the applicant or their agent, ultimately, it is the responsibility of the municipality to determine if information used for an MDS I calculation is reasonably accurate and reflects existing conditions.”*

CCS staff never contacted the farm owner at 369 Douro 1st Line to ascertain the number of livestock historically, those currently on site, or the area of the livestock facility suitable or capable of being used in the future. According to their report, the information was gathered during discussions with the applicant. CCS maintains that face-to-face contact with the Browns was not possible because of COVID protocols. It is not clear why CCS was unable to complete a site visit while maintaining social distancing requirements, or to contact the Browns by telephone. This has, in our opinion, resulted in the use of inaccurate information regarding the capacity of the barns and yard, and the potential for agricultural uses in the future.

The CCS report accurately describes “Barn A” as having a total floor area of 250m². The report refers to a “closed in area on the west end of barn” as having an approximate area of 50m². While it is true that this area is not currently being used for livestock, the area was previously used for livestock housing and a manure collection channel in the floor remains in place. Publication 853 describes an *“Unoccupied livestock barn as a livestock barn that does not currently house any livestock, but that housed livestock in the past and continues to be structurally sound and reasonably capable of housing*

livestock". The 50m² area of the barn was previously used to house livestock, is structurally sound, and is capable of being used in the future. As such, it should be considered an unoccupied livestock barn area within an existing livestock facility.

The Report assumes that only half of the barn (100m²) is sheltered and suitable for housing livestock, while the balance (100m²) is exposed to open weather. There is no reason given for this determination. During the site visit, the open area was fully accessible, such that the farm's cattle and horses could move freely around within the loose-housing barn and yard area.

Mrs. Brown expressed her concern, based on her experience, that confining the farm's cattle and horses to the barn can lead to poor health of the animals. Her position is supported by the Food and Agriculture Organization of the United Nations paper entitled *FAO ANIMAL PRODUCTION AND HEALTH PAPER 1 - Open yard housing for young cattle*. The paper argues that it is a frequent misconception about stabling to give undue emphasis to protection of the animals from inclement weather. Often, in fact, excessive concern with protection, such as stables which completely isolate the animal from the outside, can provoke even greater problems (such as lung diseases furthered by poor circulation) than those the building was designed to avoid. Therefore, based on the agricultural practices for the Brown's farm, the CCS assumption that the barn is unsuitable for housing cattle is not supported. Had the authors of the Report contacted the Browns regarding their farm practices, this would have been made evident.

In the case of feeder cattle, the barn and barnyard are considered part of the beef cow/calf livestock facility. This was confirmed during the site visit. The OMAFRA Agri-Suite Tool includes both the barn and yard in the estimated *livestock barn area for feeder cattle (up to 16 months)*. The barn and fenced yard area has a total area of approximately 2500m², as illustrated in Figure 2 below.



Figure 2 - Total Area of Existing Barn/Yard

Using the Agri-Suite Tool, we have determined that the existing 2500m² barn/yard is sufficient to house well in excess of 350 feeder cattle and eight (8) horses. As mentioned previously herein, the Browns have stated their intention to house approximately 60 cattle and up to eight (8) horses. There was one (1) beef cow, one (1) calf and five (5) horses, as well as 12 layer hens on the property at the time of the site visit. Three (3) beef cattle were shipped to the abattoir earlier that morning. The MDS arc generated for this number of livestock is 183m. as shown in Figure 2 below. The farm previously supported approximately 45 head of cattle.

Ontario Agricultural Planning Tools Suite

Start Page | File Information | Worksheet 1 | Worksheet 2

Print | Add MDS Calculation

General Information

Calculations

Farm 1

Farm 2

Livestock/Manure Information

Is there ONLY a manure storage on this lot (i.e. no existing livestock barn)?

Is there an anaerobic digester on this lot?

The livestock/manure information for this location has been confirmed with the property owner and/or farm operator?

Manure Type	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barn Area
Solid	Beef, Feeders (7 - 16 months), Yard/Barn [Livestock barn is currently unoccupied]	60	20.0	251 m ²
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	8	11.4	242 m ²

Calculation Summary

Design Capacity (NU): 31.4

Potential Design Capacity (NU): 94.3

Factor A (Odour Potential) 0.76 X Factor B (Size) 310.64 X Factor D (Manure Type) 0.7 X Factor E (Encroaching Land Use) 1.1 = Building Base Distance "F" (minimum distance from livestock barn) 183 m (599 ft) Storage Base Distance "S" (minimum distance from manure storage) 183 m (599 ft)

Building Base Distance "F" (actual distance from livestock barn) TBD

Storage Base Distance "S" (actual distance from manure storage) TBD

Figure 3 - MDS Calculation for J. Brown Farm Operation

This arc precludes the creation of a new non-farm residential lot at 400 Douro 1st Line.



Figure 4 - Approximate Location of 183m MDS Arc, Relative to Proposed Lot

Conclusions

Although the CCS Report concludes that the existing farm operation will generate an MDS arc of 108m, thereby allowing the proposed lot to proceed, this conclusion is not based on the existing capacity of the farm or the intentions of the Browns to optimize these facilities.

The CCS Report was prepared without input from Jordan and Melinda Brown, owners of the farm at 369 Douro 1st Line. The Report fails to reflect the existing conditions, including the capacity of the Brown farm to support a beef cow/calf herd of at least 60 cattle and 8 horses. Further, the Report fails to reflect that the Browns purchased the farm for this purpose. They are currently re-establishing the cattle historically supported on the farm, using the existing facilities. The Browns are employing best practices for beef cow/calf farming, as outlined by the BFO. No building permits are currently required to accommodate the operation.

In conclusion, The MDS setback generated by the existing barn/yard at 369 Douro 1st Line precludes the proposed a rural non-farm residential lot on the property at 400 Douro 1st Line lot created, when the existing capacity of the barn/yard is considered for a beef cow/calf operation.

Respectfully submitted,

ECOVUE CONSULTING SERVICES INC.



Roy L. Haig, C.E.T.
Senior Engineering Technologist



Minimum Distance Separation I

Worksheet 1

Prepared By: Heather Sadler MCIP RPP, Principal Planner , EcoVue Consulting Services

Description: arc for proposed severance

Application Date: Sunday, October 23, 2022

Municipal File Number: B116-21A

Proposed Application: Lot creation for a maximum of three non-agricultural use lots
Type A Land Use

Applicant Contact Information

Jordan Brown
369 Douro 1st Line
Douro, ON, Canada
Phone #1: 705 741-8867

Location of Subject Lands

County of Peterborough, Township of Douro-Dummer
DOURO, Concession: 1, Lot: 5
Roll Number: 152201000201100

Calculation Name: *Farm 1*

Description: 369 Douro 1st Line

Farm Contact Information

Not Specified

Location of existing livestock facility or anaerobic digester

County of Peterborough, Township of Douro-Dummer
DOURO, Concession: 1, Lot: 5
Roll Number: 152201000201100
Total Lot Size: 42 ha

The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.

Manure Type	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barn Area
Solid	Beef, Feeders (7 - 16 months), Yard/Barn [Livestock barn is currently unoccupied]	60	20.0	251 m ²
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	8	11.4	242 m ²

Existing Manure Storage: V3. Solid, outside, no cover, >= 30% DM

Design Capacity (NU): 31.4

Potential Design Capacity (NU): 94.3

Factor A (Odour Potential)	Factor B (Size)	Factor D (Manure Type)	Factor E (Encroaching Land Use)	Building Base Distance 'F' (minimum distance from livestock barn)	(actual distance from livestock barn)
0.76	X 310.64	X 0.7	X 1.1	= 183 m (599 ft)	TBD
Storage Base Distance 'S'					
(minimum distance from manure storage)					(actual distance from manure storage)
183 m (599 ft)					TBD

Calculation Name: *Farm 2*

Description:

Farm Contact Information

Not Specified

Location of existing livestock facility or anaerobic digester

County of Peterborough
Concession: , Lot:
Roll Number:



Total Lot Size: 0 ha



The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.



The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Existing Manure Storage: N/A

Design Capacity (NU): 0.0

Potential Design Capacity (NU): 0.0

Factor A (Odour Potential)	Factor B (Size)	Factor D (Manure Type)	Factor E (Encroaching Land Use)	Building Base Distance 'F' (minimum distance from livestock barn)
N/A	X	N/A	X 1.1	= N/A

Storage Base Distance 'S'
(minimum distance from manure storage)

N/A

Preparer Information

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Principal Planner
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Email: rosesonreid@gmail.com

Signature of Preparer: _____
Heather Sadler MCIP RPP, Principal Planner

Date: _____

NOTE TO THE USER:

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