

APPENDIX B



TECHNICAL MEMORANDUM

DATE 25 October, 2019

Project No. 1784557-6000-M01

TO Terry Korsiak, Principal
Korsiak Urban Planning

FROM Benjamin Holthof, M.Pl., M.M.A., CAHP

EMAIL Benjamin_Holthof@golder.com

CULTURAL HERITAGE CONSERVATION OPINION MEMORANDUM, MCDUFFE CONNECTED BARN 191-205 BURNHAMTHORPE ROAD EAST, TOWN OF OAKVILLE, ONTARIO.

Introduction

In September 2019, Korsiak Urban Planning (Korsiak), approached Golder Associates Ltd. (Golder) on behalf of DG Farms Burnhamthorpe Inc. (DG Farms) for assistance with a Heritage Permit Application and for a cultural heritage conservation opinion memorandum related to a plan to disassemble the historic timber frame barn on 191-205 Burnhamthorpe Road East (the property)—also known as the McDuffe Connected Barn (the Barn)—and put it in storage until it can be rebuilt as a shade structure in a future park in North Oakville.

Cultural Heritage Conservation Proposal

The property owner, DG Farms, has submitted a Notice of Intention to Demolish' under s. 27 (9) of the *Ontario Heritage Act*. The Barn on the property has cultural heritage value or interest. DG Farms proposes to disassemble the Barn and put it in storage until the salvaged material can be used to build a shade structure in a public park in North Oakville. This proposed shade structure is intended to conserve some of the heritage attributes of the Barn, retain some elements of the areas agricultural history and maintain a historical connection between the Barn and North Oakville and geographic Trafalger Township area.

In order to understand the Barn David Vrljic P.Eng. from the structural engineering firm Blackwell Structural Engineers conducted a site investigation on August 30, 2019. He found that overall the Barn timbers are in good condition and can be reused (Attachment A).

The proposed shade structure (Figure 1 through Figure 4 and Attachment B) will be built using the timber posts, beams and wood cladding of the Barn while maintaining some of the original mortise and tenon joinery. Historic adze marks, existing unused mortise openings and saw marks will be conserved. The proposed shade structure will also maintain the general form and massing of the Barn. It will be smaller than the Barn and the beams will be exposed but the shade structure will be scaled down generally in proportion to the original structure. The shade structure will maintain the two connected parts, keeping the "L" shape plan of the Barn. The three bays of the front façade will be replicated and the central bay on the shade structure will be slightly taller than the exterior bays consistent with the design of the Barn. The Barn's timber posts and beams will be used for the shade structure. Furthermore, D.G. Farms intends to maintain two of the original mortise and tenon joints, and install as part of the front of the shade structure to expose the construction techniques used. Board and batten cladding from the Barn

will be reused on the gable ends of the shade structure along with the byre, the south elevation window openings and the track lift and hoist beam. The Barn's wagon lift will be conserved and installed in the shade structure. The rusticated concrete block foundation of the Barn can not be salvaged for reuse. It is understood that the concrete blocks are in poor physical condition and are expected to disintegrate when disassembled. However, the proposed shade structure includes low seating walls built from new rusticated concrete block to symbolically maintain the appearance of foundation walls.



Figure 1: Concept of the front of the shade structure



Figure 2: Concept of the joint between both parts of the shade structure



Figure 3: Concept of the back section of the shade structure



Figure 4: Concept of the inside of the shade structure

Heritage Conservation Opinion

In Golder's opinion the proposed plan to disassemble, store and build a shade structure from the salvaged materials of the McDuffe Connected Barn will enable proposed redevelopment of the property while conserving significant heritage attributes of the Barn and the agricultural heritage of Oakville and the former Trafalger Township. Additionally, the proposed shade structure will continue to provide a sense of identity and continuity of the evolving space and lifeways of the area.

It is understood that the following guiding principles based on the Ontario Ministry of Tourism, Culture and Sport's *Eight Guiding Principles in the Conservation of Built Heritage Properties* (2007) and international charters are –in part–used by the Town of Oakville to assess heritage alteration permit applications. The principles –from the Oakville Heritage Permit Kit–and discussion of the proposed project follow:

- 1) **Do not base restorations solely on conjecture. Conservation work should be based on historic documentation and/or historical precedents using archival photographs, drawings, physical evidence and historical references.**

The design of the barn has changed little since it was originally built and the existing structure has been documented in detail through photographs. While the proposed shade structure is not a restoration, it has been designed and can be built based on the detailed documentation of the Barn. Conservation of the barn's heritage attributes will be based on contemporary photographic documentation and physical evidence which is largely consistent with this principle.

- 2) **Do not move buildings unless there is no other means to save them. Site is an integral component of a building.**

The salvage and reuse of original material from the Barn to construct a shade structure is an effective way of conserving some of the cultural heritage attributes of the Barn and the agricultural heritage of Oakville and the former Trafalger Township.

- 3) **Repair and conserve existing materials and finishes rather than replacing them, except where absolutely necessary. Minimal intervention maintains the historical integrity and true character of the resource and is often less expensive.**

The heritage attributes of the Barn will be conserved through the salvage of original material and reused to construct the proposed shade structure in similar form and mass.

- 4) **Repair with like material whenever possible.**

Original barn materials will be salvaged and reused to construct the proposed shade structure. Where new materials are required –such as the rusticated concrete block seating walls—they will be similar to the originals.

- 5) **Do not restore to one period at the expense of another period. Do not destroy later additions in order to restore the house to a single time period, except when a later addition is uncomplimentary or inappropriate historically.**

Not applicable.

- 6) **Massing and height of new additions should not overshadow the heritage portions of the building. Additions should appear smaller and subordinate to the historic portions of the building and should ideally be located to the rear.**

Not applicable.

- 7) **Whenever possible, alterations should be executed in a way that they could be reversed later to return the building to its original condition.**

The proposed work is a major change to the Barn that will not be reversible.

- 8) **New work should be distinguishable from the old structure. Building additions and new construction should be recognized as products of their own time, and new additions should not blur the**

distinction between old and new by attempting to duplicate. Strive for complimentary additions not replicas of the existing building.

Not applicable.

9) With continuous care and upkeep, future restoration will not be necessary and the high costs of conservation projects can be avoided.

Not applicable.

Based on Golder's understanding of the proposed project, the plan to disassemble, store and build a shade structure using materials from the barn is consistent with many of the principles for heritage conservation outlined in these guidelines. It does involve deconstruction of the Barn and removal from its original location. It is recognized that this proposed work is a major impact on the cultural heritage resource. However, the proposed project salvages and reuses the Barn's heritage attributes for a new shade structure that will authentically conserve its heritage attributes and provide opportunity for interpretation and public appreciation of north Oakville's agricultural heritage.

Heritage conservation of the Barn will take planning and care. The Canada's Historic Places *Standards and Guidelines for the Conservation of Historic Places in Canada (Standards and Guidelines)* aids to inform conservation measures for this project.

Golder's cultural heritage studies along with the Town of Oakville's evaluations and assessments of the property provide detailed documentation of the property, the farm, its history and the physical character and condition of the Barn. Detailed and measured drawings of the wagon lift and any mortise and tenon joints proposed for conservation may still be required in order to fully document these elements for deconstruction and inclusion in the proposed shade structure. All documentation will inform plans for building the Barn materials into a shade structure.

Planning for this project has involved detailed discussion between DG Farms, its agents and the Town of Oakville, and has considered the heritage value, the future of the Barn and the needs of the owners, users and community. Detailed heritage conservation planning will be completed as the project progresses to the next steps. Heritage conservation planning will address the interventions on the Barn as part of the dismantling, storage and building process.

Guidance from the *Standards and Guidelines* Section 4.5 Guidelines for Materials, subsection 4.5.2 Wood and Wood Products is suitable for guiding heritage conservation of the Barn through the deconstruction and storage process.

Recommendations

It is understood that a Heritage Relocation and Restoration Plan or Heritage Conservation Plan will be required as part of approval of conditions for a heritage permit. That plan will include detailed conservation recommendations for the project. However, in general, Golder recommends the following heritage conservation measures:

- Measured drawings and photographs be taken of all parts of the Barn that will be salvaged intact. This would include the mortise and tenon joints that will be salvaged and all parts of the wagon lift. This documentation will complete the understanding of the Barn in preparation for deconstruction and for designing and constructing the shade structure.

- As a measure of risk management, salvage more material from the Barn than required for the construction of the shade structure, to account damage and future repair.
- Salvage as many intact mortise and tenon joints as possible to ensure enough survive for balanced inclusion on the new shade structure.
- Use the gentlest means feasible to disassemble the Barn to limit damage to the historic material/ heritage attributes.
- Store the Barn material in a secure, dry and well-ventilated location. This will prevent water and moisture from damaging the historic material and will prevent growth of fungi, mildew, and other agents of deterioration and rot.
- Regularly monitor the historic material in storage to check for agents of deterioration such as; insect infestation, fungi growth, mold rot, and rust to ensure storage conditions remain favourable for long term conservation.
- Use contractors experienced in working with historic timber frame buildings for the deconstruction of the Barn and construction of the shade structure.
- Surplus historic material from the barn after the shade structure is built should be offered to interested parties for further re-use in heritage conservation projects or to parties interested in building with historic timber, in order to keep as much historic barn material out of landfill as possible.

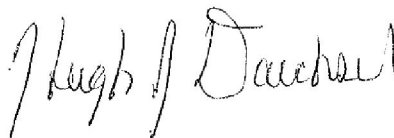
Conclusion

Golder is of the opinion that the proposed project to deconstruct the McDuffe Connected Barn and salvaged its historic materials for its reuse in the construction of a shade structure in a public park in North Oakville is an opportunity to conserve many heritage attributes of the Barn. Furthermore, the proposed project is an opportunity for some of the agricultural heritage of the area to be conserved and interpreted in a public location in the Town.

Golder Associates Ltd.



Benjamin Holthof, M.Pl., M.M.A., CAHP
Cultural Heritage Specialist



Hugh Daechsel, M.A.
Principal, Senior Archaeologist

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[https://golderassociates.sharepoint.com/sites/16283g/deliverables/phase 6000_heritage permit and opinion memo/1784557-6000-m01-rev1-mcduffe connected barn opinion memo oct24 2019.docx](https://golderassociates.sharepoint.com/sites/16283g/deliverables/phase%206000_heritage%20permit%20and%20opinion%20memo/1784557-6000-m01-rev1-mcduffe%20connected%20barn%20opinion%20memo%20oct24%202019.docx)

APPENDIX A

Site Investigation Report

Site Investigation Report

TO: Paul DiProfio – NAK Design Strategies
COPY TO: Susan Schappert – Town of Oakville
FROM: David M. Vrljic, P.Eng.
DATE: August 30 2019
PROJECT: Biggar Barn Reclamation
PROJECT NO: 190510

RE: Biggar Barn Structural Site Investigation

At the request of Paul DiProfio, we visited the property at 191 Burnamthorpe Road East in Oakville, Ontario on August 30, 2019 to review the existing structural timber elements used in the barn for reclamation and use as part of a new pavilion structure for a new development. Our preliminary findings are as follows:

Observations:

1. The existing beams and columns throughout the barn are in good condition. The sizes of beams and columns size varies between 9"x12" and 10"x13"
2. The existing roof rafters are typically 4"x8" in size and are in good condition
3. The existing barn boards are in good condition
4. The vast majority of existing beam and column connections have been completed using mortise and tenon joinery in conjunction with conventional timber knee braces



Photo 1: Existing roof rafters



Photo 2: Existing beams columns rafters and knee braces

September 4, 2019



Photo 3: Existing beams and columns with knee braces and mortise and tenon joints



Photo 4: Existing barn boards

Conclusions / Recommendations:

1. Overall, the existing timber elements are generally in good condition and can be reused for the proposed pavilion structure. This includes beams, columns, braces, rafters and barn boards throughout the existing barn.
2. Blackwell would recommend that selective demolition of the existing structure be completed by a contractor who is experienced in preservation of heritage structures to reclaim structural members needed for the proposed pavilion structure.
3. It is recommended that a itemized summary outlining the quantity of structural elements be compiled for reuse. Reclaiming existing members should incorporate a 10 to 20% increase in reclaimed elements to ensure that any damage during demolition, transportation or storage does not inhibit the reuse within the new pavilion structure.

Please let us know if there are any questions.

Sincerely,

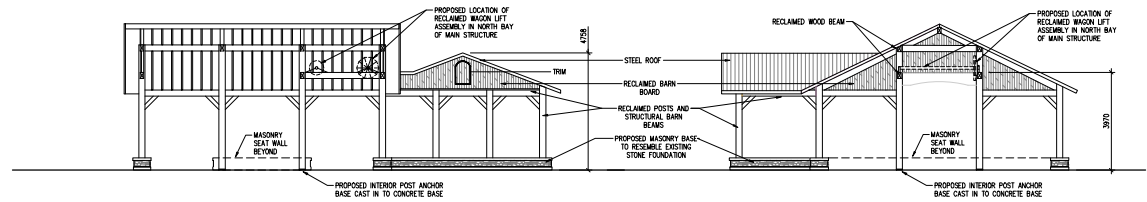
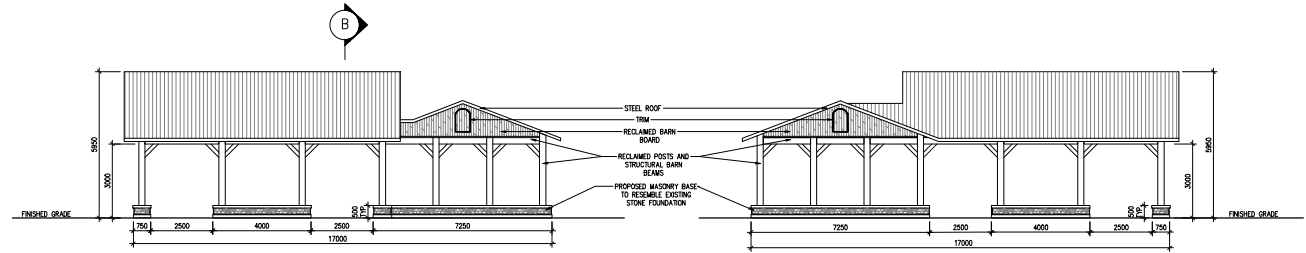
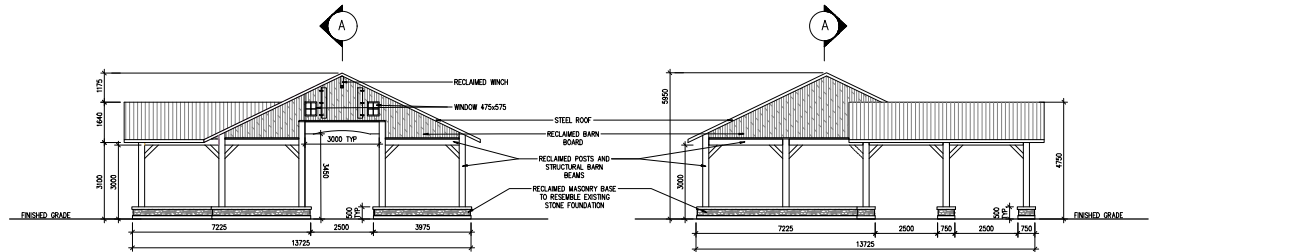
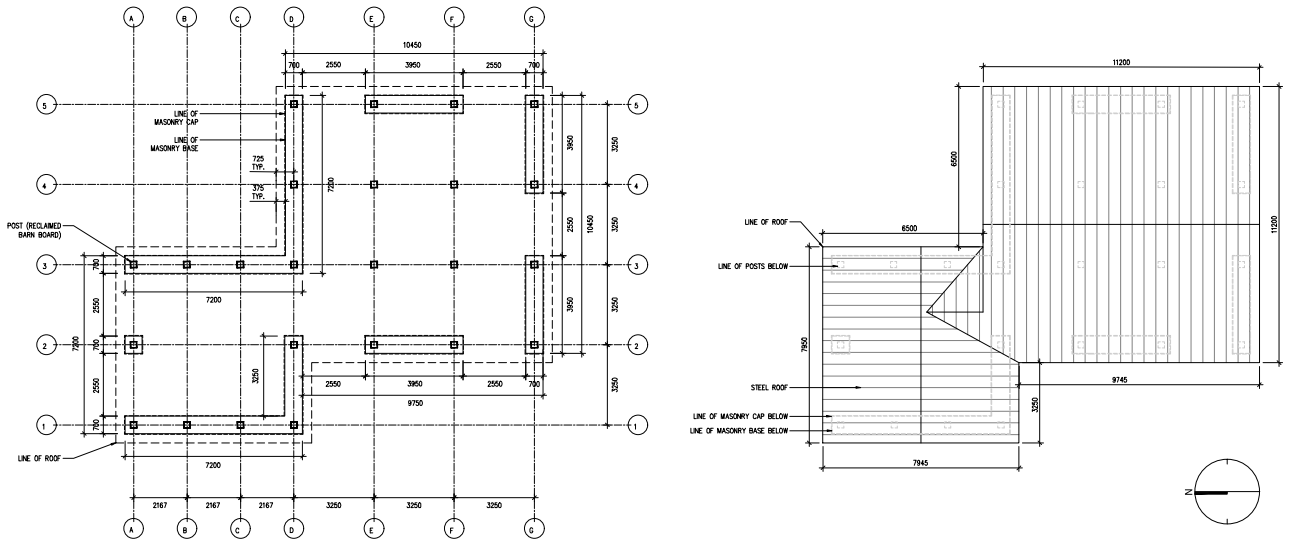

David M. Vrljic, P.Eng.

Blackwell

APPENDIX B

Concept Plan and Elevations

Contractor shall check all dimensions on the work and report any discrepancy to the Landscape Architect before proceeding. All drawings and specifications are the property of the Landscape Architect and must be returned at the completion of the work. This drawing is not to be used for construction until signed by the Landscape Architect.



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| 3 | Wagon lift assembly added | Sept.23.2019 |
| 1 | Issued for Town Review | May.17.2019 |
| No. | Description | Date |



NAK
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BIGGAR BARN HERITAGE STRUCTURE

CONCEPT PLAN AND ELEVATIONS

| | | | |
|---------|----------|-------|----|
| Date | 05/17/19 | Sheet | L1 |
| Drawn | JAN | | |
| Checked | PD | | |
| Job No. | 19025 | | |