

# 2020 SPECIES AT RISK (SAR) SUMMARY REPORT

## Aldershot East Quarry - Meridian Brick

Prepared by Goodban Ecological Consulting Inc. (GEC)  
December 30, 2020

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This report provides a brief summary of Species at Risk (SAR) activities completed at the Meridian Brick Aldershot East Quarry in 2020.

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### Transplanting New Jersey Tea and Planting New Jersey Tea Nursery Stock

New Jersey Tea (*Ceanothus americanus*) shrubs growing in the Stage 1 extraction area were marked by GEC using pink flagging tape (see **Attachment A: Photos 1 and 2**). New Jersey Tea is the host plant for the Mottled Duskywing butterfly which is Endangered in Ontario. The shrubs were marked with flagging tape to assist the landscaping crew hired to transplant the New Jersey Tea shrubs. New Jersey Tea was mainly growing along the valley rim and eroding slopes in the Stage 1 extraction area. Sixty-five (65) large plugs of New Jersey Tea were transplanted into SAR Habitat Management Area 2, which is the 15 m setback adjacent to the hydro corridor. The hydro corridor is maintained in an open condition and this provides a suitable growing environment for New Jersey Tea in SAR Habitat Management Area 2.

An additional 40 New Jersey Tea nursery-grown container stock (1 gallon) were also planted in SAR Habitat Management Area 2 (see **Photo 3**). A mycorrhizal inoculant was applied to the planting holes and root balls at the time of planting. Myke Pro Landscape is a mycorrhizal inoculant that contains nine (9) different species of mycorrhizal fungi that increase plant growth due to the establishment of a symbiotic relationship between the plant and the soil fungi. 20 kg (5 bags) of mycorrhizal inoculant was used (see **Photo 4**).

The New Jersey Tea shrubs were planted in a 15 m wide strip of White Oak (*Quercus alba*) and Red Oak (*Quercus rubra*) woodland beside the hydro corridor (see **Photos 6 and 7**). Following extraction and rehabilitation, this area will be a hilltop environment that is a preferred habitat for the Mottled Duskywing butterfly. A total of 65 large New Jersey Tea plugs were transplanted from the Stage 1 extraction area and an additional 40 1-gallon nursery-grown New Jersey Tea were also planted (see **Photos 5 and 8**).

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### Mottled Duskywing Butterfly Field Surveys

In 2020, Meridian Brick gave permission for Ms. J. Linton (Natural Resource Solutions Inc. [NRSI]) and assistants to access the East Quarry for the purpose of undertaking field surveys of the Mottled Duskywing butterfly. This work was part of a broader multi-partner project titled *Recovery and Maintenance of Self-sustaining Populations of the Endangered Mottled Duskywing*. This is a National Sciences and Engineering Council (NSERC) Alliance project, with core funding from NSERC.

The survey was a *Reduced Effort Mark Re-sighting* survey that involved the following:

- Two days per week (one marking day, one re sighting day);
- 45-minute search effort for marking (stopwatch timed during capture and marking);
- 45-minute search effort for re sighting (stopwatch paused if ID needs to be confirmed);
- 1 mark and 1 colour used per week; and,
- GPS coordinates taken of each observation.

The field visits were completed on May 30-31, June 4-5, 10-11, 15-16, 24-25, July 1 and 3, 7-8, 14-15 and 20-21. A total of 18 site visits were made by Ms. Linton and her assistants during the 2020 field season.

Forty-nine (49) Mottled Duskywing (MODU) were marked (22 female, 27 male). Thirteen (13) marked individuals (27%) were resighted (6 females, 6 males and 1 unknown sex).

Meridian Brick intends to work collaboratively with the NSERC Alliance team. The East Quarry has the potential to be a source population for the captive rearing program that is part of the multi-partner project focused on the recovery and maintenance of Mottled Duskywing populations in southern Ontario.

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## **2020 Salamander Surveys**

Salamander surveys continued in 2020, under the auspices of the following permits and authorizations:

- Wildlife Scientific Collectors Authorization (WSCA): AU2020-2206
- Animal Care Protocol (ACP) #384

The purpose of the 2020 salamander surveys was to search for the following species at risk (SAR) salamander taxa:

- Jefferson Salamander
- Unisexual Ambystoma (Jefferson Salamander dependent population)

No surveys were completed during the spring period due to a delay in MNRF Aurora District issuing a Wildlife Scientific Collector's Authorization (WSCA) until July 28, 2020. Twenty-four (24) coverboards were checked for salamanders on November 5, 2020, which was a warm day following some rain in the previous days. Two Red-backed Salamanders were observed under the boards. No SAR salamanders were observed in 2020.

The WSCA will be renewed for 2021 and the cover boards will be checked several times during the field season, after periods of wet weather.

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## **Summary of GEC Site Visits with Meridian Brick Staff and Contractors**

GEC staff visited the East Quarry with J. Lourenco, J. Hewitt, R. Campolo and P. Kelly (Meridian Brick) on November 5, 2020 to review the portion of the Stage 1 extraction area that contains New Jersey Tea shrubs. A. Goodban also flagged the locations of New Jersey Tea shrubs to be transplanted to a nearby setback area and checked salamander coverboards located in the Stage 3 area.

GEC staff visited the East Quarry with S. Herring (Scott's Landscaping) on November 9, 2020. The purpose of the visit was to scope out the work required to transplant approximately 65 New Jersey Tea shrubs from the Stage 1 extraction area.

GEC staff visited the East Quarry on November 26, 2020, to meet Scott's Landscaping crew to drop off nursery stock and supplies, and to show the crew the project area and review project expectations.

GEC staff visited the East Quarry on November 27, 2020 to review the work completed by Scott's Landscaping and have minor corrections made as necessary.

Attachment A:

Aldershot East Quarry  
Photographs of 2020 New Jersey Tea Relocation

Goodban Ecological Consulting Inc. (GEC)

December 30, 2020



Photo 1 – New Jersey Tea (*Ceanothus americanus*) shrubs growing in the Stage 1 extraction area were flagged by GEC prior to transplanting, growing in a turf of Pennsylvania Sedge (*Carex pensylvanica*). New Jersey Tea is the host plant for the Mottled Duskywing butterfly which is Endangered in Ontario. The shrubs were marked to help the landscaping crew hired to complete the transplanting work.

GEC 2020-11-05



Photo 2 – The New Jersey Tea shrubs are mainly growing along the valley rim and eroding slopes in the Stage 1 extraction area. Sixty-five (65) large plugs of New Jersey Tea were transplanted into SAR Habitat Management Area 2, which is the 15 m setback adjacent to the hydro corridor. The hydro corridor is maintained in an open condition and this provides a suitable growing environment for New Jersey Tea in SAR Habitat Management Area 2.

GEC 2020-11-05



Photo 3 – An additional 40 New Jersey Tea nursery-grown container stock (1 gallon) were also planted in SAR Habitat Management Area 2.  
GEC 2020-11-26



Photo 4 – A mycorrhizal inoculant was applied to the planting holes and root balls at the time of planting. Myke Pro Landscape is a mycorrhizal inoculant that contains nine (9) different species of mycorrhizal fungi that increase plant growth due to the establishment of a symbiotic relationship between the plant and the soil fungi.  
GEC 2020-11-26



Photo 5 – Close-up view of a planted 1 gallon New Jersey Tea shrub.  
GEC 2020-11-27



Photo 6 – The New Jersey Tea shrubs were planted in a 15 m wide strip of White Oak (*Quercus alba*) and Red Oak (*Quercus rubra*) woodland beside the hydro corridor. Following extraction and rehabilitation, this area will be a hilltop environment that is a preferred habitat for the Mottled Duskywing butterfly.  
GEC 2020-11-27



Photo 7 – A total of 65 large New Jersey Tea plugs were transplanted from the Stage 1 extraction area and an additional 40 1 gallon nursery-grown New Jersey Tea were also planted.  
GEC 2020-11-27



Photo 8 – View showing larger plugs of New Jersey Tea that were transplanted from the Stage 1 Extraction Area.  
GEC 2020-11-27