

**Monitoring and Habitat Management for
Bobolink/Eastern Meadowlark and Open Country
Birds**

Annual Report (Year 2)

ESA C-Permit #PT-C-011-13

**Lot 29, Concession 8, Township of Montague,
Lanark County, Ontario**

prepared for

BLUEEARTH ASSET MANAGEMENT INC.

by



ECOLOGICAL SERVICES

Report Author Signature

Dale Krutz

Date

13 July 2015

Contents

Summary	2
2.0 Site Location and Habitat Description	2
3.0 Survey Results (See Figure 1 and Appendix 1 survey data)	4
3.1 Common Nighthawk.....	4
3.2 Bobolink.....	4
3.3 Eastern Meadowlark	4
3.4 Other Grassland Species	4
4.0 Habitat Improvement Actions to be Undertaken in 2015	4
5.0 References	5
APPENDIX 1. Bird Survey Data	6

List of Figures, and Photos

Figure 1. OBA site (Dillon Consulting, Jan. 17, 2014).	3
--	---

Appendices

APPENDIX 1. Bird Survey Data.....	9
-----------------------------------	---

1.0 Summary

This report details the 2015 (Year 2) results of bird monitoring at a BlueEarth Asset Management Inc. ('BEAM') property near Smith's Falls, Ontario. This property was approved for GoodLight LP as an *Overall Benefit Area* (OBA) for Bobolink/Eastern Meadowlark under C-Permit #PT-C-011-13 (MNR 2013). The property is also intended to serve as Open Country Breeding Bird Habitat under the terms of a Habitat Restoration and Management Plan for 21.05 hectares submitted by Dillon Consulting Limited (July 2013) as per the condition in the Ministry of Natural Resources (MNR) confirmation letter (dated July 5, 2012).

Accordingly, 3 sets of early morning and evening breeding bird surveys were conducted on June 3rd, June 24th, and July 3rd. As in 2014, there remains a substantial breeding population of Bobolink and Eastern Meadowlark, as well as one other Open Country species (Eastern Kingbird). Barn Swallows were relatively common aerial foragers across the property, with nesting sites available in local farm buildings. No Common Nighthawks or Eastern Whip-poor-wills were encountered during the 2015 evening surveys (suitable nesting habitat in the form of open soil patches or exposed bedrock does not occur on the property).

2.0 Site Location and Habitat Description

The OBA site is located on Lot 29, Concession 8, Township of Montague, Lanark County (Kemptonville District) approximately 3.5 km north of Smith's Falls on Ferguson-Tetlock Road (See Figure 1). The total size of open land available within the OBA is 31.61 ha, which slightly exceeds the 30.85 ha requirements of the C-Permit. Most of the property is represented by managed hayfields and meadow dominated by cool season pasture grasses and mixed forbs with approximately 7.5 ha of interior grassland habitat present (see Figure 1). The grass to forb species ratio is approximately 70/30, which is considered ideal for grassland bird breeding habitat. There are patches of lowland shrubs (dogwood, willow, spiraea), young regen (black ash, white elm) and wetland grasses and forbs across the west central sections of the property over an area of about 4 ha, where drainage is poor and a viable hay crop could not be maintained. A drainage ditch runs through this area (See Figure 1).

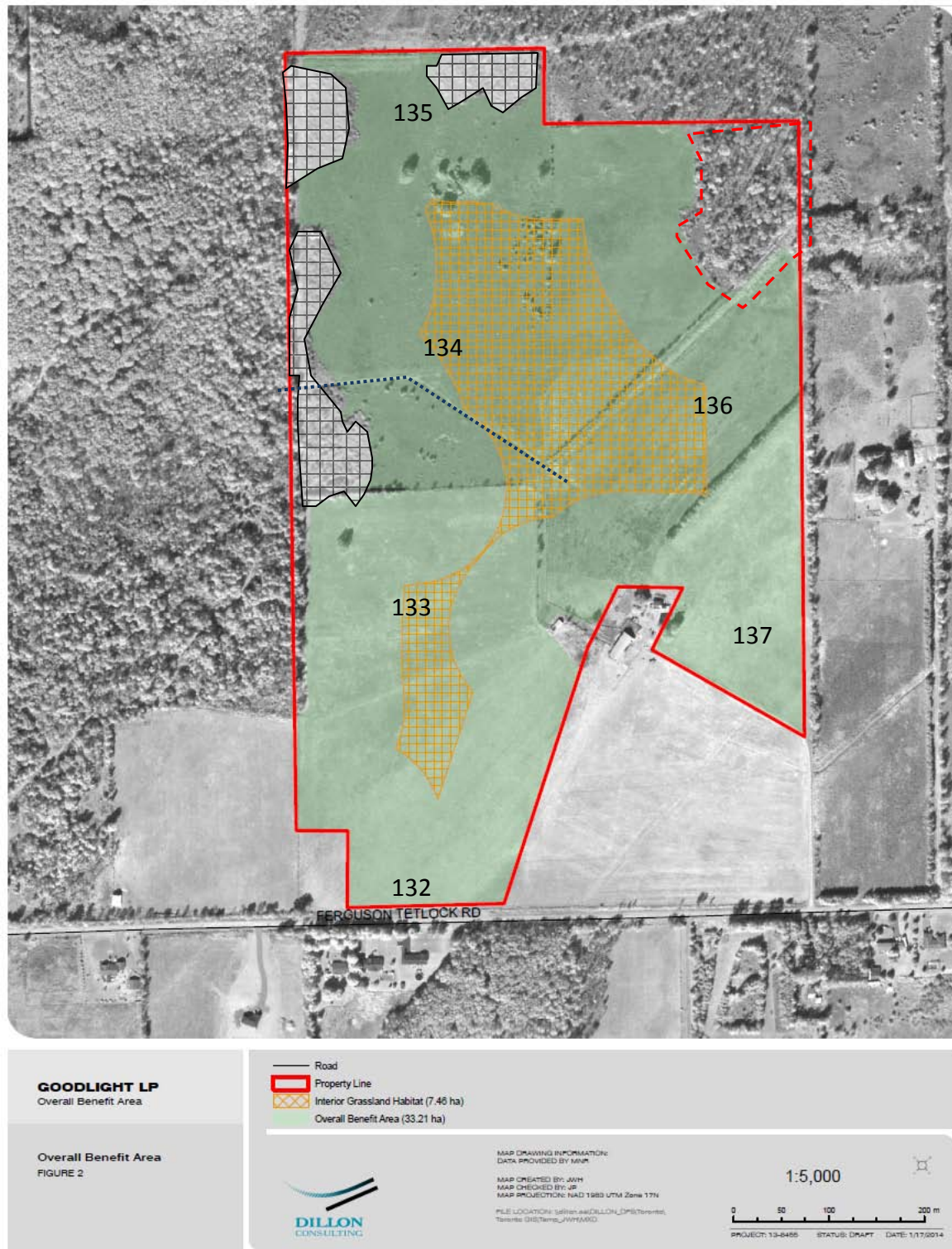


Figure 1. OBA site (Dillon Consulting, Jan. 17, 2014). Woodland in the north east corner is not included as OBA. Numbers identify survey station locations. Hatched areas represent former patchy shrub and tree regen targeted for remedial action in 2014 (brush cutting).

3.0 Survey Results (See Figure 1 and Appendix 1 survey data)

As per the terms outlined in the C-Permit, Ecological Services conducted 3 standardized OBBA point count surveys of the site in order to determine the level of breeding activity by Bobolink, Eastern Meadowlark, and other Open Grassland species. Evening surveys were also conducted in order to determine the presence of Common Nighthawk. The point count survey protocols follow those outlined in the MNR approved documents provided to us by BEAM, specifically:

- GoodLight - Open Country Breeding Bird 1 Habitat Restoration Management (Dillon, June 26 2013)
- GoodLight Overall Benefit Area Letter_170114 (Dillon January 17, 2014)

3.1 Common Nighthawk

Common Nighthawks were not encountered in 2015. Habitat conditions across the site are appropriate for aerial foraging, but there are few areas of exposed soil or bedrock available for nesting. This species is considered locally present, but not breeding.

3.2 Bobolink

2015 had a very late spring which likely delayed nesting. Approximately 35 Bobolink were encountered on June 3rd and June 24th, while more than 50 were encountered on July 3rd, representing a considerable increase from the previous year (July 3rd 2014 - 7). Adults of both sexes as well as juveniles were observed in July at 4 of 6 stations (none at Stations 133 and 135), with the greatest abundance occurring within the more productive upland hayfields to the south and east.

3.3 Eastern Meadowlark

Six Eastern Meadowlarks were observed or heard calling from across much of the site during the initial survey on June 3rd, 2015. Individuals were present at 3 of 6 stations (132, 133 and 137),. Similar numbers were encountered during the second survey of June 24th, 2014. A third survey on July 3rd resulted in a reduced number of observations (3 in total).

3.4 Other Grassland Species

As in 2014, Savannah Sparrow was the only obligate open country breeding bird species observed on the property. Much more common were shrubland species such as Eastern Towhee, Common Yellowthroat, Willow Flycatcher, Song Sparrow and Yellow Warbler.

4.0 Habitat Improvement Actions to be undertaken in 2015

Now that much of the successional vegetation on the property has been cleared, there is sufficient area of open grassland present at the BEAM OBA site to meet the requirements of the C-Permit (i.e., 30.85 ha), and there is documented use of the upland meadows by substantial breeding populations of the target species (Bobolink, Eastern Meadowlark). Poorly drained

areas (approx. size 4 ha) along the western portions of the property cannot be transformed into breeding habitat appropriate for these species, but efforts to suppress shrub, tree and weedy forb succession (e.g., brush-hogging) will continue as needed so as to maintain these lowland areas in a state of early succession. Regarding the uplands, annual mowing/mulching of the meadows will be undertaken in late summer/fall 2015 so as to maintain breeding habitat in an optimal state. Timing of all vegetation management actions will be in accordance with the protection of the target species (i.e., cutting will occur outside the breeding season of May – July inclusive). As for the limited presence of Open Country Breeding Bird species, there are no additional recommendations for habitat improvement at this time. Further breeding bird monitoring surveys planned over the next several years may show changes in their abundance that are unrelated to on-site conditions.

5.0 References

- Dillon Consulting. June 26, 2013. GoodLight LP Solar Energy Project OCBB Compensation Lands. Electronic submission to Eric Prevost, Renewable Energy Planning Ecologist, MNR Peterborough
- Dillon Consulting. January 17, 2104. GoodLight LP Solar Energy Project Endangered Species Act Permit #PT-C-011-13: Overall Benefit Area. Electronic submission to Kate Pitt, Species at Risk Biologist. MNR Peterborough
- Ecological Services. July 2014. Monitoring and Habitat Management for Bobolink/Eastern Meadowlark and Open Country Birds Interim Report (Year 1) ESA C-Permit #PT-C-011-13. Prepared for BlueEarth Asset Management Inc.
- MNR. 2013. Issuance of Permit # PT-C-011-13 to 2241656 Ontario Corp. as the general partner of GoodLight LP.

APPENDIX 1. Bird Survey Data

10 Minute Point Count

Project Name: Blue Earth

Project #

BARR at 5 AM

Wind speed: 0

Station: 132

Date: 3 June 19

Cloud cover: 20 %

Visit #: 1 2 (circle)

Air Temp. 53 °C \neq 125

Start Time: 05:15 h

Precip.

Observers: Chris Grooms

UTM

[illegible]

Comments: Frost

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name:

Project #

Station: 137

Date: 3 June 15

Wind speed: 0

Cloud cover: 20 %

Air Temp. 3 °C

Precip.

Visit #: 1 2 (circle)

Start Time: 0520

Observers: C. Grooms

UTM

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
X - No evidence of breeding
Possible
H - Suitable nesting habitat
S - Singing male
Probable
P - Pair
T - Permanent territory
D - Courtship or display
V - Visiting prob. nest
A - Agitated behaviour, or anxiety calls
B - Brood patch/clotical protuberance
N - Nest building or excavation
Confirmed
DD - Distraction display
NU - Used nest or egg shell
FY - Fledged young
NE - Nest empty
AS - All occupied nest
FS - Faecal sac
CF - Carrying food
NE - Nest containing eggs
NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name:

Project #

Wind speed:

Cloud cover: 20 %

Air Temp. 4 °C

Precip.

UTM

Station: 135

Date: 3 June 19

Visit #: 1 2 (circle)

Start Time: 0605

Observers: C. Groom

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth Project #

Wind speed: \hat{t}

Cloud cover: 10 %

Air Temp. 56 °C

Precip. $\frac{1}{2}$

UTM

Station: 136

Date: 3 Jun 15

Visit #: 1 2 (circle)

Start Time: 0630

Observers: C. Grooms

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
X - No evidence of breeding
Possible
H - Suitable nesting habitat
S - Singing male
Probable
P - Pair
T - Permanent territory
D - Courtship or display
V - Visiting prob. nest site
A - Agitated behaviour or anxiety calls
B - Brood patch/ovocal protuberance
N - Nest building or excavation
Confirmed
DD - Distraction display
NU - Used nest or egg shell
NY - Fledged young
AE - Adults at occupied nest
FS - Fecal sac
CF - Carrying food
NE - Nest containing eggs
NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth Project #

Station: 137

Date: _____

Visit #: 1 2 (circle)

Start Time: 0649

Observers: C. G. Grooms

Wind speed: 2

Cloud cover: 10 %

Air Temp. 7 °C

Precip.

UTM

CHSP

14048

17 LJA 1

AMKE

First 111

G C F L

076 Done 2.4 km

[illegible]

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name:

Project #

Station: 132

Date: 24 JUN 2019

Visit #: 1 2 (circle)

Start Time: 0907

Observers: C. F. VEDER

Wind speed: 3

Cloud cover: 0 %

Air Temp. 15 °C

Precip.

UTM

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence

Codes Observed
X - No evidence of breeding
Possible
H - Suitable nesting habitat
S - Singing male
Probable
P - Pair
T - Permanent territory
D - Courtship or display
V - Visiting prob. nest site
A - Agitated behaviour or anxiety calls
B - Brood patch/ cloacal protuberance
N - Nest building or excavation
C - Courtship
DD - Distraction display
NU - Used nest or egg shell
FY - Fledged young
AE - Adults at occupied nest
FS - Faecal sac
CF - Carrying food
NE - Nest containing eggs
NY - Nest with young

Comments:

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name:

Blue Earth

Project #

Station: 133

Date: 24 Jun 15

Visit #: 1 (2) (circle)

Start Time: 0915

Observers: C. Grooms

Wind speed. 3

Cloud cover: 67 %

Air Temp. 14 °C

Precip.

UTM

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
 X - No evidence of breeding
Possible
 H - Suitable nesting habitat
 S - Singing male
Probable
 C - ♀
 T - Permanent territory
 D - Courtship or display
 V - Visiting prob nest site
 A - Agitated behaviour or anxiety calls
 B - Rorod patch/callous protuberance
 N - Nest building or excavation
Confirmed
 DD - Distraction display
 NU - Used nest or egg shell
 FY - Fledged young
 AE - Adults at occupied nest
 FS - Faecal sac
 CF - Carrying food
 NE - Nest containing eggs
 NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth Project #

Station: 134

Date: 24 Jun 19

Visit #: 1 (2) (circle)

Start Time: 0530

Observers: C. G. Groom

Wind speed: 3

Cloud cover: 0 %

Air Temp. 14 °C

Precip.

UTM

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
 X - No evidence of breeding
Possible
 H - Suitable nesting habitat
 S - Singing male
Probable
 P - Pair
 T - Permanent territory
 D - Courtship or display
 V - Visiting prob. nest site
 A - Agitated behaviour or anxiety calls
 B - Brood patch/ cloacal protuberance
 N - Nest building or excavation
 Confirmed
 DD - Distraction display
 NU - Used nest or egg shell
 FY - Fledged young
 AE - Adults at occupied nest
 FS - Faecal sac
 CF - Carrying food
 NE - Nest containing eggs
 NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth

Project #

Wind speed: 2

Cloud cover: 0 %

Air Temp. 14 °C

Precip. ☒

UTM

Station: 135

Date: 24 Jun 19

Visit #: 1 (2) (circle)

Start Time 5' 44"

Observers: C. Groom &

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
 X - No evidence of breeding
Possible
 H - Suitable nesting habitat
 S - Singing male
Probable
 P - P -
 T - Permanent territory
 D - Courtship or display
 V - Visiting prob. nest site
 A - Agitated behaviour or anxiety calls
 B - Brood
 patch/loocal
 perturbation
 N - Nest building or excavation
Confirmed
 DD - Distraction display
 NU - Used nest or egg shell
 FY - Fledged young
 AE - Adults at occupied nest
 FS - Faecal sac
 CF - Carrying food
 NE - Nest containing eggs
 NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name:

Project Name: Blue Earth

Project #

Wind speed: 2

Cloud cover: 0 %

Air Temp. 14 °C

Precip. ~~8~~

UTM

Station: 136

Date: 24 Jun 19

Visit #: 1 (2) (circle)

Start Time: 603

Observers: C. Froom

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
X - No evidence of breeding
C - Courtship
H - Sullate nesting habit
S - Singing male
T - Territorial
P - Pair
T - Permanent territory
D - Courtship or display
V - Visiting prob nest site
A - Agitated behaviour or anxiety calls
B - Brood patch/clasical protuberance
N - Nest building or excavation
Confirmed
DD - Distraction display
NU - Used nest or egg shell
FY - Fledged young
AE - Adults at occupied nest
FS - Faecal sac
CF - Carrying food
NE - Nest containing eggs
NY - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth Project #

Station: 137

Date: 24 Jun / 9

Visit #: 1 ② (circle)

Start Time: 627

Observers: C. Grooms

Wind speed: 0

Cloud cover: 0 %

Air Temp. 14 °C

Precip.

UTM

BOBO
STSP II
~~BOBO~~
NOHA 2
AMRO III
EUST.
OFFS. TO 0845

[illegible]

Wind Scale
0 Calm
1 Smoke drifts
2 Wind felt on face
3 Leaves in motion
4 Sm branches move
5 Sm trees sway
6 Lrg branches move
7 Whole trees in motion
8 Twigs break off, hard to walk
9 Light structural damage
10 Trees uprooted

Breeding Evidence Codes
Observed
 X - No evidence of breeding
 P - Possible
 H - Suitable nesting habitat
 S - Singing male
 ProbAbn
 P - Pair
 T - Permanent territory
 D - Courtship or display
 V - Visiting prob nest site
 A - Agitated behaviour or anxiety calls
 B - Brood patch/clasical protuberance
 N - Nest building or excavation
 Confirmed
 DD - Distraction display
 NU - Used nest or egg shell
 FY - Fledged young
 AE - Adults at occupied nest
 FS - Faecal sac
 CF - Carrying food
 NE - Nest containing NE - Nest with young

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)

10 Minute Point Count

Project Name: Blue Earth Project #

Station: 140 132

Date: 3 ~~June~~ July 15

Visit #: 1 2 3 (circle)

Start Time: 0604

Observers: C. Green

Wind speed: 0

Cloud cover: 0 %

Air Temp. 12 °C

Precip.

UTM

[illegible]

Comments

* Note: this column gets entered in as incidental species (Point Count radius is 100m)