

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

**Annual Report (Year 1)**

**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**

**Oct 16, 2014**

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## **1.0 Summary**

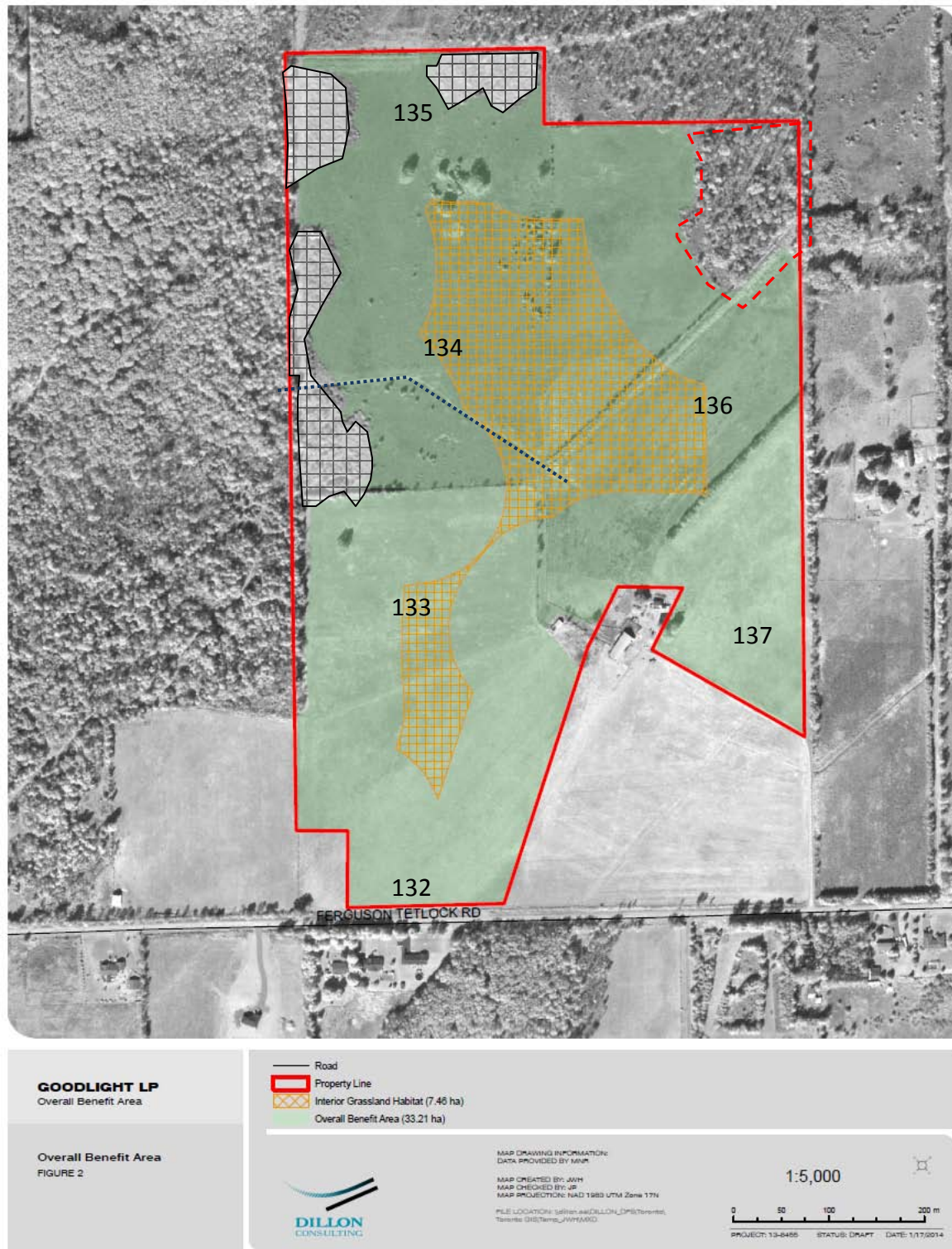
This report details the 2014 results of bird monitoring and habitat management work at a BlueEarth Asset Management Inc. ('BEAM') property near Smith's Falls, Ontario. This property was originally approved for GoodLight LP as an *Overall Benefit Area (OBA)* for Bobolink/Eastern Meadowlark under C-Permit #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, breeding bird surveys conducted in the spring and summer of 2014 revealed a substantial breeding population of Bobolink and Eastern Meadowlark, but few other Open Country species. One or possibly two Common Nighthawk were heard in late May, but there was no evidence of on-site nesting (suitable nesting habitat in the form of open soil patches or exposed bedrock do not occur on the property).

Habitat improvement actions (mowing of weedy forbs, removal of shrub and young tree regen) were undertaken in September 2014 by Tim Allen Aerial Services (3078 Hwy 29 Brockville, ON K6V 5T4 613-345-2345). This work was subsequently assessed by Ecological Services in October and will influence the recommendations for future actions at this site.

## **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 patchy shrub and tree regen targeted for remedial action (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 separate standardized OBBA point count bird monitoring 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**

One or possibly two Common Nighthawk were heard calling as they foraged over the property on the evening of May 25<sup>th</sup>, 2014. Conditions were suboptimal (light rain, overcast, 23 C) on this particular evening, and subsequent surveys on June 7<sup>th</sup>, and July 3<sup>rd</sup> did not result in any additional observations. 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**

At least 35 Bobolink were observed or heard calling on the property during the initial survey on May 26<sup>th</sup>, 2014. Individuals of both sexes were present at 5 of 6 stations (none at Station 135), with the greatest abundance at stations located within upland hayfields to the south and east. Similar numbers were encountered during the second survey on June 7<sup>th</sup>, 2014, with a possible increase in numbers at Station 137. A third survey on July 3<sup>rd</sup> resulted in a much reduced number of observations (7 in total), likely reflecting reduced calling and display activity associated with nesting and brood rearing.

#### **3.3 Eastern Meadowlark**

A total of 12 Eastern Meadowlark were observed or heard calling from across much of the site during the initial survey on May 26<sup>th</sup>, 2014. Individuals were present at 5 of 6 stations (none at Station 135), similar to the Bobolink encounters. Similar numbers were encountered during the second survey of June 7<sup>th</sup>, 2014. A third survey on July 3<sup>rd</sup> resulted in a reduced number of observations (6 in total), but a family group of 5 was identified which confirmed active breeding.

While conducting a habitat assessment on October 10<sup>th</sup> (post-mowing), 4 Eastern Meadowlark were observed, 3 near Station 134, and 1 near Station 133.

#### **3.4 Other Grassland Species**

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, Black-billed Cuckoo, Song Sparrow and Yellow Warbler.

#### **4.0 Habitat Improvement Actions Undertaken in 2014**

As part of the OBA development strategy, the initial condition of the OBA site was assessed in July in order to identify if management actions were needed to maintain and/or improve habitat quality for target species. The exceptionally high numbers of Bobolink and Eastern Meadowlark observed near survey stations across upland meadow habitat (Stations 132, 133, 136, 137) strongly suggests that these areas should continue to be maintained in their present state as managed hayfields (see Photo 1). Alternatively, as neither target species was encountered within areas dominated by lowland shrub and ash/elm regen around Stations 135 and west of Station 134, cutting was recommended by Ecological Services (July 16, 2014) to increase the amount of open grassland habitat (see Photo 2). Accordingly, Tim Allen Aerial Services of Brockville was retained by BEAM to conduct the work. Site conditions across the north and west sections of the OBA property were initially deemed to be too wet for equipment to be moved across the site without causing excessive site damage (soil rutting). Once these areas had dried up somewhat by mid-September, the following work was undertaken:

- An attempt was made to remove approximately 2 ha of shrub and tree cover from within the 3 patches of lowland regen identified in Figure 1 west of Stations 134 and 135. Approximately half of these patches were cut and remaining weedy forbs were mowed down. However, due to localized flooding and wet soils, several small patches of willow and reed canary grass had to be left intact (see Photos 3 and 4). Attempts to establish a viable hayfield crop via direct seeding of upland grass species was not recommended in these areas given the poor drainage and existing dominance by wet meadow species including sedges, rushes and reed canary grass. Regardless, the continued suppression of shrub and tree succession in these areas will be of some benefit to the target species by maintaining a larger open expanse of meadow habitat.
- Remaining open expanses of weedy meadow with patchy shrub growth between Stations 134 and 135 were mowed down to a height of approx. 12".
- Managed hayfield from across the remaining upland portions of the property were left intact. Plans are underway to have hay removed or mulched on a biennial basis.
- Over-seeding of selected grass and forb species to improve meadow establishment (as suggested in the Dillon letter of June 26, 2013) was not required in any part of the OBA



as the existing herbaceous cover is already quite dense and largely appropriate to the site conditions.



*Photo 1. Managed upland hayfield near Station 132 (May and October 2014)*



*Photo 2. Shrub/regen near Station 134 before mowing on left, after mowing on right.*



*Photo 3. Flooded zone along west edge of property (left) and wet patch of reed canary grass bordering cedar rail fence between Stations 134 and 133 (right).*



*Photo 4. Remnant patches of willow remaining within wet meadow areas following brush-cutting activity.*

## **5.0 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, if a local farmer cannot be contracted to take hay from the site on an annual basis, then mowing/mulching of the



meadows will be undertaken biennially 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 (Savannah Sparrow), 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.

## **6.0 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
- MNR. 2013. Issuance of Permit # PT-C-011-13 to 2241656 Ontario Corp. as the general partner of GoodLight LP.



### 10 Minute Point Count

Project Name: Hue Earth Landsc Project #

Wind speed: 0

Cloud cover:  %

Air Temp. 9-10 °C

Precip. 

UTM

Station: 132

Date: 7 Jun 14

Visit #: 1 2 (circle)

Start Time: 0504

Observers: C. FRODOG

[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/local 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: AMRO + RBGR calling from woods  
in too many voices to count.

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

### 10 Minute Point Count

Project Name:

Blue Earth

Project #

Cloud cover: 100 %

Air Temp. 16 °C

Precip. *Trace*

UTM 18T WFS84 416127 49 77629

Station: 133

Date: 26 May 14

Visit #: 1 2 (circle)

Start Time: 530

Observers: C. Grooms D. Kristensen

**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  
 S - Suitable male habitat  
 N - Suitable nesting habitat  
Probable  
 S - Singing male  
 P - Pair  
 T - Permanent territory  
 D - Courtship or display  
 V - Visiting prob nest site  
Visible  
 A - Agitated behaviour or anxiety calls  
 B - Brood patch/aloeal 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: BLEF EARTH Project #

Station: 133

Date: 7 Jun 14

Visit #: 1 (2) (circle)

Start Time: 0520

Observers: C. Grooms

Wind speed: 

Cloud cover: 0 %

Air Temp. 9-10 °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 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 - Buried  
P - Probable psychical disturbance  
N - Nest building or excavation  
Confirmed  
DD - Distraction display  
NU - Used nest or egg shell  
FY - Feeding young  
AE - Adults at occupied nest  
FS - Faecal sac  
CF - Carrying food  
NE - Nest containing eggs  
NY - Nest with young

Comments: Background Pin From RBGA + AMRO  
From woods - Too many to count

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

### 10 Minute Point Count

Project Name: Blueearth

Project #

Cloud cover: 100 %

Air Temp. 16 °C

Precip. *Light*

UTM 18T 415997 4977845

Station: 134

Date: 26 May 14

Visit #: 1 2 (circle)

Start Time: 546

Observers: C.G. D.K.

**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/local 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 with young 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 Landsc Project #         

Station:	134
Date:	7 Jun 14
Wind speed:	0
Cloud cover:	0 %
Air Temp.	10 °C
Precip.	0
UTM	
Visit #:	1 (2) (circle)
Start Time:	0536h
Observers:	C. Grooms

[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 #

Station: 135

Wind speed: 2

Date: 26 May

Cloud cover: 100 %

Visit #: 1 2 (circle)

Air Temp. | 6 °C

Start Time: 605

Precip.	<del>0</del>
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Observers: DK CG

UTM 18T 415820 4978027

[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 Lamp Project #           

Wind speed: 

Cloud cover: ☐ ☒ %

Air Temp. 10 °C

Precip. ☒

UTM

Station: 135

Date: 7 Jun 14

Visit #: 1 (2) (circle)

Start Time: 0549

Observers: C. Grooms

[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  
 S - 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/local 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: Concord, Blue Earth Project #

Station: 135	
Date: 03/07/14	
Wind speed: < 5 km/h	Visit #: 1 2 (circle)
Cloud cover: 90 %	Start Time: 7:46
Air Temp. 19 °C	Observers: Kurt Herwig
Precip. 0	
UTM 415820/4978027	

[illegible]

Comments:

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

### 10 Minute Point Count

Project #

UTM 18T 496194 4977984

**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

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



### 10 Minute Point Count

Project Name: Blue Earth-Learn Project #

Wind speed: 0

Cloud cover:  $\triangle$  %

Air Temp. 10 °C

Precip. 

UTM

Station: 136

Date: 7 Jun 14

Visit #: 1 (2) (circle)

Start Time: 06 05

Observers: 1 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 - Evidence of breeding  
**Possible**  
 I - 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/cooal 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: LANARK SITE Project #

Station:	136
Date:	03/07/14
Wind speed:	< 5 km/h
Cloud cover:	90 %
Air Temp.	19 °C
Precip.	0
UTM	416386 4977840
Visit #:	1 2 (circle)
Start Time:	8:03
Observers:	Kurt Hennige

[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 - Probable  
 T - Permanent territory  
 D - Courtship or display  
 V - Visiting prob nest site  
 A - Agitated behaviour or anxiety calls  
 B - Brood patch/doalcal 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 #

Date: 26 May 14

Wind speed: 2

Cloud cover: 100 %

Visit #: 1 2 (circle)

Air Temp. 16 °C

Start Time: 6:51

Precip. 0

Observers: CG DK

UTM 18T 416 386 49 779840

**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/loocal 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 Lingo Project #

Cloud cover: 1 %

Air Temp. 10 °C

Precip.  $\phi$

UTM

Station: 137

Date: 7 Jun 14

Visit #: 1 (2) (circle)

Start Time: 6 20

Observers: C. Grooms

[illegible]

Comments: Many distant BOBOs swoof this station - hard to count.

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



### 10 Minute Point Count

Project Name: Lenape, Blue Earth Project #

Station: 137

Date: 03/07/14

Visit #: 1 2 (circle)

Start Time: 8:39

Observers: Kurt Hennig

Wind speed: < 5 KM

Cloud cover: 100 %

Air Temp. 20 °C

Precip. 

UTM 416386 4977840

[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  
CodesObserved

- 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 brood nest site  
A - Agitated behaviour or anxiety calls  
B - Brood patch/aloeal 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 scap  
CE - Carrying food  
NF - Nest with young  
NY - Nest with young

Comments:

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